

TENTATIVE SYLLABUS
BIOL 5301-031
HISTORY OF ECOLOGICAL THOUGHT AND CONSERVATION PRACTICE
Spring 2021
Wednesday 17:30–20:20; Zoom

Instructor:

Markus J. Peterson, Biology 406

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Course Description:

This course provides a survey of the philosophical roots and evolution of ecological thought and conservation practice. Emphasis is placed on theoretical foundations, seminal concepts, classic papers, and historic trends.

Prerequisites:

An undergraduate course in ecology and graduate classification, or instructor approval.

Course Objectives:

Upon course completion, students should understand and, where appropriate, be able to rigorously utilize:

1. Key theoretical and methodological concepts and terminology associated with ecology and conservation.
2. History and development of ecological thought and conservation practice.
3. Basic principles of population ecology and conservation.
4. Theoretical and practical concepts associated with community organization and structure.
5. The limitations and merits of these principles as the underpinnings for currently popular applications of ecology, such as adaptive resource management, biodiversity conservation, ecosystem management, ecosystem services to humanity, and sustainable development.

Required Texts:

Real, L. A., and J. H. Brown, Editors. 1991. *Foundations of ecology: Classic papers with commentaries*. University of Chicago Press, Chicago, Illinois, USA. (ISBN: 0226705943)

Worster, D. 1994. *Nature's economy: A history of ecological ideas*. Second edition. Cambridge University Press, Cambridge, United Kingdom. (ISBN: 0521468345)

Recommended/Optional Texts:

Begon, M., C. R. Townsend, and J. L. Harper. 2006. *Ecology: From individuals to ecosystems*. Fourth edition. Blackwell Publishing, Malden, Massachusetts, USA. (ISBN: 1405111178)

McIntosh, R. P. 1985. *The background of ecology: Concept and theory*. Cambridge University Press, Cambridge, United Kingdom. (ISBN: 0521270871)

Readings:

See page 5 for a list of recommended readings. Those required for the class (page 4) are either in the required textbooks or available on Blackboard. Please bring either a paper or electronic version of relevant required readings to each class.

All written assignments must follow *Conservation Biology* style guidelines. See [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1523-1739/homepage/ForAuthors.html](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1523-1739/homepage/ForAuthors.html) and recently published articles for details. Assignment instructions will be handed out in class and available on Blackboard.

Grading:

The concept papers are worth 150 points each (total 450). The group project, including outline, written report, and summary (250 points) and class presentation (100 points) total 350 points. Class participation (200 points) brings the course total to 1000 points. Assignment details are presented in separate handouts. See page 4 for due dates.

<i>Scale:</i> 90–100% = A	<i>Point Distribution:</i>	Exams	0% (or 30%)
80–89% = B		Concept Analyses	45% (or 30%)
70–79% = C		Participation	20% (or 10%)
60–69% = D		Group Project	35%
≤59% = F			

Important UTEP Dates:

18 January	MLK day; university closed
19 January	First day of spring semester classes
19–22 January	Late registration
20 January	First day BIOL 5301
03 February	Spring census Day
15–19 March	Spring break
26 March	Cesar Chavez observance (no classes)
01 April	Spring drop/withdrawal deadline
06 May	Last day of spring classes
07 May	Dead day
12 May	Final exam period—19:00–21:45
15–16 May	Spring commencement

Examinations:

- You must take examinations during class on the dates listed in the syllabus.
- No “makeup” examinations will be given.
- An exam may be taken early if you must miss class for a university approved reason. Written proof must be provided.

Expectations:

- Attend *every* class; there is no room for random absences because each lecture builds on previous work. **Attendance for the entire class period will form part of your class participation grade.**
- Be on time. I expect you to be in your seat when the class *begins*. **Punctuality will form part of your class participation grade.**
- Read assigned materials *before* class. **This, as evidenced by your participation in class, will form the majority of your class participation grade.**
- Participate in all class discussions (see above).
- Submit all assignments electronically before class on the date due.
- Adhere to UTEP expectations regarding academic integrity; do not plagiarize. See details and website listed below for relevant definitions and rules.

Academic Integrity:

Academic dishonesty is prohibited and considered a violation of the UTEP *Handbook of Operating Procedures*. It includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. More information on academic dishonesty can be found at <http://academics.utep.edu/Default.aspx?tabid=23785>. All forms of academic dishonesty will be reported and result in the allocation of an automatic failing final grade in this course.

Civility:

Students are expected to conduct themselves in a professional manner in class. Text messaging and the use of cell phones while lectures are in progress will not be tolerated. Students should voice concerns to me via email.

Disabilities:

If a student has or suspects s/he has a disability that needs accommodation, s/he should contact Disabled Student Services (DSS) office at 747-5148 or dss@utep.edu, or go to Room 106 Union East Building. Student are responsible for presenting me with any DSS accommodation letters and instructions.

Military Statement:

If you are in the military and anticipate deployment, contact me as soon as possible.

Need help with academic, career, or personal issues? These people will help.

University Counseling Center	202 Union West	747-5302
Center for Accommodations and Support Services	106 Union East	747-5148
University Career Center	103 Union West	747-5640

TENTATIVE SYLLABUS
BIOL 5301-031
HISTORY OF ECOLOGICAL THOUGHT AND CONSERVATION PRACTICE
SPRING 2021

Day	Mo.	Topic	Readings	Due Dates
20	Jan	Introductory Material ¹ (pretest, survey) Philosophy and Terminology	[Begon et al. 2006: 1–15, 17–18 ²] Morrison et al. 2008: Chapter 1 ³	
27		Philosophy; ‘Ecology’ and Human Society Protoecologists Historical & Philosophical Perspectives ¹	Morrison et al. 2008: Chapter 1 ³ ; Naess 1973 ³ , Peterson & Peterson 1996 ³ Kingsland 1991 ⁴	
03	Feb	Arcadian and Imperial Traditions of Ecology The Subversive Science	Worster 1994 ⁵ , Part I Worster 1994 ⁵ , Part II	
10		The Dismal Science	Worster 1994 ⁵ , Part III; Darwin & Wallace 1858 ³	Project title and paragraph-length summary/outline
17		Post Darwinian Ecology Ecological Pioneers	Worster 1994 ⁵ , Chap. 10 Forbes 1887 ⁴ , Cowles 1899 ⁴	
24		Succession Ecologists Come Out of the Closet	Worster 1994 ⁵ , Chap. 11, Weaver & Clements 1938 ³ , Gleason 1926 ⁴ Worster 1994 ⁵ , Chap. 12	Concept paper I
03	Mar	The New Ecology ¹	Tansley 1935 ⁴ , Lindeman 1942 ⁴ Worster 1994 ⁵ , Chaps. 13–14	
10		Ecological Theory, Theses, Antitheses, and Syntheses	Worster 1994 ⁵ , Chap. 15, Hutchinson 1957 ⁴ , 1959 ⁴	Detailed outline, literature cited
17		Spring Break		
24		The Age of Ecology	Worster 1994 ⁵ , Part VI Naess 1986 ³	
31		Population Ecology ¹ Population Ecology Review	Cole 1954 ⁴ , May 1974 ⁴ [Begon et al. 2006: 1–15 ²]	Concept paper II
07	Apr	Community Organization & Structure ¹ Nature of Community Pop. Interaction & Community Structure	Begon et al. 2006: 16 ⁶ [Begon et al. 2006: 17–18 ²] Begon et al. 2006: 19 ⁶	
14		Food Webs Patterns in Species Richness	Begon et al. 2006: 20 ⁶ Begon et al. 2006: 21 ⁶	
21		Ecological Applications—Communities Ecology, Human Society, & Conservation ¹	Begon et al. 2006: 22 ⁶ White 1967 ³ , Hardin 1968 ³ , Lui et al. 2003 ³	Concept paper III
28		Household Dynamics Environmental Conflict	Peterson et al. 2007 ³ , 2008 ³ Peterson et al. 2005 ³ , Leach 2006 ³ , Peterson et al. 2006a ³ , 2006b ³ , 2010b ³ , 2013 ³	
05	May	Group Presentations—Applications of Ecology; Conservation		Group Papers & Presentations
12		Final Exam Period (19:00–21:45)		

¹ **Boldfaced type** indicates major topics.

² Recommended reading for those with limited background on ecology of organisms, populations, and population interactions, **or** for those studying for Ph.D. preliminary exams in ecology, from *Ecology: From Individuals to Ecosystems* (Begon et al. 2006)—listed by chapter.

³ Required reading available on Blackboard.

⁴ Required readings from *Foundations of Ecology* (Real and Brown 1991).

⁵ Required readings from *Nature's Economy: A History of Ecological Ideas* (Worster 1994)

⁶ Required readings from *Ecology: From Individuals to Ecosystems* (Begon et al. 2006)—listed by chapter.

REFERENCES¹

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- Clements, F. E. 1936. Nature and structure of the climax. *Journal of Ecology* **24**:252–284.²

¹ For *required* readings, see schedule on page 4 of the Tentative Syllabus. For your convenience, this list includes citations for required readings as well as most other articles I shall refer to in class.

² Reprinted in Real, L. A., and J. H. Brown, editors. 1991. *Foundations of ecology: Classic papers with commentaries*. University of Chicago, Chicago, Illinois.

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