

FUNDAMENTALS OF ECOLOGY

EVPP 607-001/BIO 607-001

Thurs. 7:20-10:00 pm

FALL 2008

Robinson B220

3.0 Credits

The goals of this course are to obtain an informed understanding of the discipline of ecology, developing and improving your skills in critical scientific reading and scientific writing.

Through this course, students will:

1. Develop an appreciation of the modern scope of scientific inquiry in the field of Ecology.
2. Become familiar with the variety of ways that organisms interact with both the physical and the biological environment.
3. Develop an understanding of the differences in the structure and function of different types of ecosystems.
4. Develop an appreciation of the natural world through direct experience with local ecosystems.
5. Become proficient in critically reading and writing a scientific paper in the format of the peer-reviewed journal, Ecology.

Course website:

<http://courses.gmu.edu>

or <https://gmublackboard.com/webct/logon/35986062001>

Instructor:

Dr. Dann Sklarew

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Office hours:

Wednesdays and Thursdays, 4:30-6:30pm, or by appointment

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	DATE	LECTURE TOPIC	READ IN ADVANCE
1.	Aug 28, 2008	The science of ecology	[Chapt 1-2]
2.	Sept 4	Abiotic environment	[Chapt 3-5]
3.	Sept 11	Physiological ecology	[Chapt 6-8]
4.	Sept 18	Population Ecology 1	[Chapt 9-10]
5.	Sept 25	Population Ecology 2	[Chapt 11-12]
6.	Oct 2	Species Interactions	[Chapt 13-15]
7.	Oct 9	MIDTERM EXAM	
8.	Oct 16	Community Ecology 1	[Chapt 16-17]
9.	Oct 23	Community Ecology 2	[Chapt 18-19]
10.	Oct 30	Ecosystem Ecology	[Chapt 20-22]
11.	Nov 6	Biogeographical Ecology 1	[Chapt 23-24]
12.	Nov 13	Biogeographical Ecology 2	[Chapt 24-25]
13.	Nov 20	Human Ecology	[Chapt 27-29]
	Nov 27	THANKSGIVING HOLIDAY	
14.	Dec 4	Catch-up / Special Topics (e.g., Behavioral, Cognitive, or Industrial Ecology)	
	Dec 11	FINAL EXAM	

Recommended text & background reading:

Primary text:

R.L. Smith & T.M. Smith. 2001. *Elements of Ecology*. 6th Ed. Benjamin Cummings.
ISBN-10: 0805348301 | ISBN-13: 9780805348309

Sections for background reading are noted for each class topic. Purchase from [GMU Bookstore](#) or [amazon.com](#), rent from [chegg.com](#) or [bookrenter.com](#), or even borrow from Johnson Center Library (2 hour reserve).

Supplemental texts and suggested references:

P. Calow (ed). 1999. *The Encyclopedia of Ecology & Environmental Management*. Wiley-Blackwell.
ISBN-10: 0632055464 | ISBN-13: 978-0632055463

Cram101. 2009. *Elements of Ecology by Smith*, Cram101 Textbook Reviews.¹ Cram101 Inc.
ISBN-10: 1-4288-5943-8 | ISBN-13: 9781428859432

M. Molles. 2006. *Ecology: Concepts and applications*. 3rd Ed. McGraw Hill.
ISBN-10: 0073309761 | ISBN-13: 978-0073309767

¹ This resource is basically a glossary organized by chapter, useful for review and broadly capturing terms in our primary text; but its definitions and text are not always focussed, accurate or complete, so don't plan to rely upon it exclusively.

Assignments: Class members be expected to bring to each class a one page summary (maximum) of a scientific journal article related to the topics covered in the lectures held in the *following* week. A total of 10 summaries are required, so students can waive providing summaries for two weeks of class topics or else drop the lowest 2 scores. (Note: Focus of assignment may vary some week to week, depending on topic; check “Assignments” section of our Web site for weekly details.) Students are also encouraged to bring current newspaper/magazine articles that they find, related to ecology and ecosystem management, into the class for discussion.

Grading procedure: The mid-term essay examination is worth 30% of the final mark, as is the final essay examination, in format of an Ecology journal article. Marks for the journal article summaries will account for a further 30% of the class mark. A further 10% of the class mark will be awarded for class participation.

Materials: Materials for course have been adapted with permission from a prior iteration developed and delivered by Dr. Chris Parsons of GMU's Department of Environmental Science and Policy. Since the current professor is distinct in his priorities for this course, students should not rely on prior years' materials as predictor of current year's emphases. Lecture notes and other materials will be put on GMU's Blackboard website (<http://courses.gmu.edu>) for on-line access and download as promptly as feasible. (If you have any trouble accessing Blackboard, please inform your professor promptly.)

Examinations: Tests and exams will be in an essay format. These will cover lecture materials and background readings and for the final examination will require independent research of recent ecological papers and articles. Make-ups will not be given except in exceptional circumstances as agreed prior to the exam date. Missed exams will be scored as zero.

Honor Code: Adherence to the [GMU Honor Code](#) is expected of all students, specifically:

Members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.

In all assignments and communications, [plagiarism](#) will not be tolerated. This applies equally to oral and written communications in the context of any evaluated (graded) course assignments. In presenting quotes, paraphrasing statements or logical arguments from others in any medium (on-line, oral or written), students should properly cite their source. Results of team work should only be attributed to those who directly contribute to the final product (even if more than those people were designated as being part of the team). Any or all members of a student team may be held accountable for any Honor Code violations in their shared work. Any public usage of original material from this course (e.g., presentations, images, etc.) without explicit permission of its creator shall be construed as stealing. As stated in the Honor Code, infractions may result in invalidated credit for dishonorable work and lowered grade, including failure from the class, suspension or dismissal. Inquiries for clarification from the professor are welcome. Thank you in advance for your conscious attention to these issues.