APPLIED ECOLOGY
AND ECOSYTEM MANAGEMENT

EVPP 677-001
Wed. 7:20-10:00 pm
FALL 2008
Robinson B220
3. Credits

This course aims to create and empower a cadre of applied ecology practitioners and innovators.

It shall assist students in applying their ecological expertise to understand and address real world problems and create ecologically-beneficial innovations, including applications to ecosytem-based management of natural resources.

Through the course, students will:

1. Know means for and challenges in applying ecology to environmental problems.
   Convey familiarity with the variegated ways in which ecological knowledge can be applied to environmental problem-solving and environmental management at various spatio-temporal and organizational scales, as well as the challenges in doing so effectively.

2. Practice applied ecological problem solving.
   Use an applied ecology approach to identify, assess and address a set of critical and interesting environmental and ecosystem management questions.

3. Practice adaptive ecosystem-based management.
   Examine and practice one iteration in a process of adaptive ecosystem-based management.

4. Create ecological innovations
   Use applied ecology knowledge to develop an innovative product or service which addresses one or more important environmental problems.

5. Produce publishable applied ecology paper or ecological business plan.
   Obtain practice in critical thinking required to produce a peer-reviewed scientific paper and/or a "triple-bottom line" ecological business plan.

Course website:		http://courses.gmu.edu Updated syllabus, all assignments (including deadlines), submissions and professor's presentations and notes will be posted to this site
Instructor:	Dr. Dann Sklarew	3041 David King Hall
	Office hours:	Wednesdays and Thursdays, 4:30-6:30pm, or by appointment
	Phone number:	(703) 993-2012
	E-mail:	dsklarew@gmu.edu
	Website:	http://mason.gmu.edu/~dsklarew

	DATE	TOPIC	READ IN ADVANCE
1.	Aug 27, 2008	Introduction and Overview	**[Chapt 1]**
2.	Sept 3	Energy, Biogeochemistry and Global Climate Change	**[Chapt 2]**
3.	Sept 10	Water	**[Chapt 3]**
4.	Sept 17	Pollution	**[Chapt 9]**
5.	Sept 24	Restoration of Communities	**[Chapt 11]**
6.	Oct 1	Conservation and Wildlife Management	**[Chapt 10]**
7.	Oct 8	**MIDTERM EVALUATION**	
8.	Oct 15	Marine Fisheries	**[Chapt 5]**
9.	Oct 22	Forest Management	**[Chapt 7]**
10.	Oct 29	Pest Control and Epidemiology	**[Chapt 8]**
11.	Nov 5	Soil	**[Chapt 4]**
12.	Nov 12	Rangeland Management	**[Chapt 6]**
13.	Nov 19	Teamwork Day / Catch-up / Special Topics	
	Nov 28	Thanksgiving Holiday	
14.	Dec 5	Student Presentations	
15.	Dec 11	**FINAL EVALUATION**	

Recommended text & background reading:

Primary text:

> E.I. Newman. 2000. Applied Ecology and Environmental Management, 2nd Ed. Blackwell Science. ISBN 9780632042654

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
>
> M. Molles. 2006. *Ecology: Concepts and applications*. 3rd Ed. McGraw Hill. ISBN-10: 0073309761 | ISBN-13: 978-0073309767
>
> R.L. Smith & T.M. Smith. 2001. *Elements of Ecology*. 6th Ed. Benjamin Cummings. ISBN-10: 0805348301 | ISBN-13: 9780805348309

Materials: 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.)

Performance Assessment: The mid-term evaluation is worth 30% of the final grade and will include an in-depth analysis of a specific applied ecology or ecosystem management challenge. The final evaluation will include either an ecological business plan or a journal article-style summary of an adaptive [ecosystem] management demonstration project (actions, impact and lessons learned), and will account for an additional 30%. Weekly assignments will count for 30% of the grade, while 10% of the class mark will be awarded for class participation (both face-to-face and on-line).

Evaluations: Beyond oral outputs from team projects, mid-term and final evaluations will be in a written essay format. These will cover lecture, textbook and electronic information (in various formats), as well as other students' contributions to our course, and may 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 evaluations will be scored as zero.

Weekly Assignments: Class members will be expected to submit weekly assignments related to the text and topics of the following week. A total of 11 weekly assignments are required, with the lowest grade dropped. Students are also encouraged to post or bring current newspaper/magazine articles that they find, related to applied ecology and ecosystem management, into the class for discussion.

Participation: You can only refine the skills and knowledge to apply ecology in your careers and studies if you practice, and that practice requires participation. For this course, participation is both face-to-face and on-line via our course site. Those who actively contribute to course discussion, share their perspectives, insights and inquiries will receive credit which reflects their involvement. By contrast, those who remain unknown and unheard/unread from in either medium will not receive full credit. In the event that your outside career, illness or immovable external obligations prevents you from either attending class or participating in weekly assignments, it is your obligation to make prior arrangements to ensure you stay current and involved in this fast-paced course. Failure to do so will certainly reduce the credit you are eligible to receive for participation, as we as the benefits you derive from this course.

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.