



# Course Approval Form

For approval of new courses and deletions or modifications to an existing course.

More information is located on page 2.

### Action Requested:

Create new course       Delete existing course

Modify existing course (check all that apply)

Title       Credits       Repeat Status       Grade Type

Prereq/coreq       Schedule Type       Restrictions

### Course Level:

Undergraduate

Graduate

College/School:       Department:

Submitted by:       Ext:       Email:

Subject Code:       Number:       Effective Term:  Fall       Spring       Summer

(Do not list multiple codes or numbers. Each course proposal must have a separate form.)      Year

Title: Current

Banner (30 characters max including spaces)

New

Credits:  Fixed  Variable            or      to      Repeat Status:  Not Repeatable (NR)

Repeatable within degree (RD)      Total repeatable credits allowed:

Repeatable within term (RT)

Grade Mode:  Regular (A, B, C, etc.)       Satisfactory/No Credit       Special (A, B, C, etc. +IP)

Schedule Type Code(s):  Lecture (LEC)       Lab (LAB)       Recitation (RCT)       Internship (INT)

Independent Study (IND)       Seminar (SEM)       Studio (STU)

Prerequisite(s):

Corequisite(s):

Special Instructions: (restrictions for major, college, or degree; cross-listed courses; hard-coding; etc.)

### Catalog Copy for NEW Courses Only (Consult University Catalog for models)

Description (No more than 60 words, use verb phrases and present tense)	Notes (List additional information for the course)
Provides an overview of threats to the marine environment, and discusses the scientific, socioeconomic, and political issues behind marine conservation. Covers categories of marine pollutants (chemical, biological, and physical contaminants) and their impacts on the marine ecosystem, as well as impacts on humans (health, social, and economic), threats to key marine species (e.g., coral, sharks, turtles, and marine mammals) and initiatives and laws developed to reduce these threats. Scientific and socioeconomic problems that hinder sustainable fisheries management and the science and policy behind the global warming debate are also discussed. The course also provides an overview of marine environmental law and policy issues related to marine conservation policy.	.
Indicate number of contact hours: Hours of Lecture or Seminar per week: <input type="text" value="3.0"/> Hours of Lab or Studio: <input type="text"/>	
When Offered: (check all that apply) <input type="checkbox"/> Fall <input type="checkbox"/> Summer <input checked="" type="checkbox"/> Spring	

## Approval Signatures

Department Approval \_\_\_\_\_ Date \_\_\_\_\_      College/School Approval \_\_\_\_\_ Date \_\_\_\_\_

If this course includes subject matter currently dealt with by any other units, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

### For Graduate Courses Only

Graduate Council Member \_\_\_\_\_      Provost Office \_\_\_\_\_      Graduate Council Approval Date \_\_\_\_\_

**Course Proposal Submitted to the Graduate Council  
by  
The College of Science**

**1. COURSE NUMBER AND TITLE:**

BIOL 450 marine conservation

**Course Prerequisites:**

BIOL 309 or permission of instructor

**Catalog Description:**

Provides an overview of threats to the marine environment, and discusses the scientific, socioeconomic, and political issues behind marine conservation. Covers categories of marine pollutants (chemical, biological, and physical contaminants) and their impacts on the marine ecosystem, as well as impacts on humans (health, social, and economic), threats to key marine species (e.g., coral, sharks, turtles, and marine mammals) and initiatives and laws developed to reduce these threats. Scientific and socioeconomic problems that hinder sustainable fisheries management and the science and policy behind the global warming debate are also discussed. The course also provides an overview of marine environmental law and policy issues related to marine conservation policy.

**2. COURSE JUSTIFICATION:**

**Course Objectives:**

As noted above this course provides an overview of threats to the marine environment. It discusses the *scientific*, *socioeconomic* and *political* issues behind marine conservation and the preservation of marine species and marine ecosystems (such as coral reefs, polar ecosystems, estuaries, turtles, marine mammals, fish stocks etc). The course is very applied and seeks to be both inter-disciplinary and also promote “out of the box” innovation, and “real world” exercises - presentations in this course are much more interactive and involve more discussion than standard lecture presentations. Although the course tests written communication with a major written assignment and essay examinations it includes, however, it includes several multidisciplinary, highly interactive roleplaying exercises on practical marine conservation requiring oral communication, innovation and team work and such as a mock oil spill emergency response, a mock marine conservation convention/forum and a roleplayed marine environmental education workshop. The course also includes guest speakers that are acknowledged leaders in the fields of marine conservation science and policy.

**Course Necessity:**

A large number of participants (approximately one third to two-thirds each semester) in the current course (EVPP 421) are currently biology students, and the course is a core course for one biology concentration. Therefore we wish to have the course cross-listed under BIOL for logistical reasons.

**Course Relationship to Existing Programs:**

Will be eligible for elective credit for the BS in Environmental Science (aquatic ecology and conservation concentrations) and the BS in biology (marine biology and environmental and conservation biology concentrations)

**Course Relationship to Existing Courses:**

The course is currently being taught as EVPP 421, and co-meets with EVPP 521 (graduate students in the course are graded separately and have different assignments)

**3. APPROVAL HISTORY:**

Approved as EVPP 421/521 in 2006.

**4. SCHEDULING AND PROPOSED INSTRUCTORS:**

**Semester of Initial Offering: Fall 2011**

**Proposed Instructors: ECM Parsons**

**5. TENTATIVE SYLLABUS:** See attached.

# MARINE CONSERVATION

## BIOL 450

FALL 2011

Mon. 4:30-7:10 pm

Innovation Hall 327

3.0 Credits

### Catalogue Summary

Categories of marine pollutants and their impacts on the marine ecosystem. Conservation of key marine species (e.g. coral, turtles and marine mammals). Case studies on conservation in estuaries Marine conservation policy and marine environmental law. Interactive exercises on practical marine conservation.

Undergraduate Prerequisites: BIOL/GEOL 309 Introduction to Oceanography and/or BIOL 449 Marine Ecology or Instructor's permission

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DATE	LECTURE TOPIC
Aug 30	Introduction to Marine Conservation Pollution 1 (heavy metals)
Sept 6	<b>LABOR DAY HOLIDAY</b>
Sept 13	Pollution 2 (TBT & organohalogens) Pollution 3 (oil)
Sept 30	Role playing exercise: <i>oil spill response</i>
Sept 27	Pollution 4 (nutrients =) Pollution 5 (sewage pathogens)
Oct 4	Pollution 5 (marine debris) Pollution 6 (noise)
Oct 11	<b>COLUMBUS DAY HOLIDAY</b> – <i>Classes moved to Tuesday</i>
Oct 12	<b>MID-TERM EXAMINATION</b>
Oct 18	<i>Video session - fisheries</i> Fisheries & conservation
Oct 25	<i>Shark conservation</i>
	<i>Turtle conservation</i>
Nov 1	<i>Coral Conservation</i>
	<i>Marine mammal conservation</i>
Nov 9	<i>Whaling &amp; the IWC</i>
Nov 15	Marine environmental law & policy Marine Protected Areas
Nov 22	Global warming
Nov 29	Role playing exercise: <b><i>International Marine Conservation Forum</i></b>
Dec 6	<i>Public attitudes to marine conservation – Scotland case study</i>

*Role playing exercise: educating the public and changing attitudes – developing a marine environmental education program*

Dec 13

**FINAL EXAM & Assignment Submission**

Instructor: Dr Chris Parsons 3033 David King Hall  
Office hours: Monday 1pm - 4 pm  
E-mail: ecm-parsons@earthlink.net  
Website: www.marinepolicy.net/cparsons

**Background reading & recommended texts:** Each section of the course will provide a list of referenced journal articles, reports and/or websites that will provide further background material on the topics covered in lectures.

Suggested books include:

- E.A. Norse & M.E. Soule. 2005. Marine Conservation Biology. Island Press.
- G. Helfman. 2007. Fish Conservation. Island Press.
- R.B. Clark. 2001. Marine Pollution. 5th Ed. Oxford University Press.
- C. Roberts. The Unnatural History of the Sea. Island Press.
- G. Moore & S. Jennings. Commercial fishing: the wider ecological impacts. Blackwell Scientific.

**Grading procedure:** The midterm, assignment and the final examination are each worth 90 points [for 270 points total]. The three role-playing sessions will also be graded [10 points per session]. The mid-term and final will involve a choice of questions to be answered in an essay format. The final assignment will be a written report on marine conservation actions and policy incorporating various aspects of lectures and personal research. University grading procedures will be followed, i.e. 90 - 100 = A; 80 - 89 = B; 70 - 79 = C etc.

**Graduate students and undergraduate students taking Marine Conservation, although the courses co-meet, for grading purposes and assessments will be treated differently. For the assignment undergraduates are expected to deliver a 3000 word minimum and graduate students have a 6000 word minimum. Graduate and undergraduate assignments and exams will be graded separately and to different standards.**

**Materials:** Lecture notes and other materials will be posted on WebCT/Blackboard in pdf or ppt format.

**Examinations:** Tests and exams will cover text readings, lectures (including guest lectures), and any handouts. Make-ups will not be given except in exceptional circumstances as agreed prior to the exam date. Make-up exams will be all essay questions. Any missed exams will be scored as zero.

**Exercises:** Three sessions are noted as role-playing sessions – one involving the class working together to develop an emergency oil spill response, acting as members of contracting governments on an international conservation forum and developing ideas and a strategy for a marine environmental awareness program (local, national or international). Participation in these exercises will be graded and the marks will contribute to the final grade.

**Honor Code:** Adherence to the *GMU Honor Code* is expected of all students.

# MARINE CONSERVATION

EVPP 421/521 / BIOL 450

## FINAL ASSESSMENT

### INTRODUCTION

The recent Gulf of Mexico oil spill was one of the most publicized marine pollution events in recent years. Write a review and assessment of the spill and the US government's current policy with respect to oil pollution.

Questions that should be answered in the review include:

- 1) Describe the circumstances behind the Gulf spill?
- 2) Was the response to the spill effective?
- 3) How damaging was the spill to the marine and coastal ecosystem? How does this scale to other pollution problems in the region?
- 4) Could the spill have been avoided?
- 5) What could be done to reduce the likelihood of such a spill happening again?

- Papers should be written, as far as possible, in the style of the scientific (e.g. *Conservation Biology*, *Aquatic Conservation*) or policy (e.g. *Marine Policy*) journal.
- The assignment will be marked according to depth of knowledge and the level of understanding of issues involved as well as presentation.
- The paper will account for 90 marks from a total course mark of 300
- *The length of the report should be at least 3,000 words for undergraduates and 6,000 words for graduate students.*

**Final submission date: Monday December 13<sup>th</sup>**