

# Conservation Biology – Spring 2009 – Syllabus (subject to revision; version 2/1/09)

## BIOL 4800 (Section 3) – 3 credit hours

Tues. & Thurs., 10:40 a.m. - 12:00 noon, Room 210 Williams

**Instructor:** Dr. Kyle E. Harms, Room A312 Life Sci. Annex, Dept. Biol. Sci., LSU;  
Tel.: 225-578-7566; e-mail: kharms@lsu.edu  
Office hours: 9:30 - 10:30 a.m. T, W, Th (it is best to phone first) and by appointment

**Teaching Assistants:** Becky J. Carmichael (Tel.: 225-578-2635; e-mail: bcarmi1@lsu.edu) &  
Jonathan A. Myers (Tel.: 225-578-7567; e-mail: jmyer19@lsu.edu)

**Course Web site:** <http://www.biology.lsu.edu/webfac/kharms/BIOL4015Spring2009.htm>

**Textbook:** *Principles of Conservation Biology* (PCB), Third Ed. (2006), by M. J. Groom, G. K. Meffe, C. R. Carroll & Contributors

**Course Objectives:** If there is a single overriding goal of the course, it is to make students aware of the enormous responsibility humans have as global land stewards. Humans alone determine the fate of earth's rich natural heritage. Huge changes are occurring in almost every corner of the world, most of them brought on by us. Human activities are changing atmospheric gases and likely contributing to global climate change. We have caused so many extinctions that some say we've entered the sixth mass extinction of life on earth. The field of Conservation Biology is focused on protecting our remaining biological diversity. Specifically, this course focuses on ethics and scientific principles relevant to conservation, threats to biodiversity, and practical aspects of conservation. Students will be exposed to:

- 1) Principles of Ecology and Evolution important for conceptualizing and practically applying the science of Conservation Biology
- 2) Current questions being addressed by conservation-oriented research
- 3) Major threats to biological diversity
- 4) Strategies and management aimed at protecting ecosystems, biodiversity, and endangered species
- 5) Current political and economic concerns of conservation, the players involved, and their roles and methods
- 6) Important conservation concerns in Louisiana

Conservation biology is an interdisciplinary field, drawing from biological disciplines that include ecology, evolution, genetics, biogeography, systematics, forestry, wildlife biology, fisheries and marine science, as well as physical sciences like soil science, water chemistry, geography, and geology. These scientific disciplines are combined with social sciences such as sociology, political science, economics, and anthropology. The practitioners include scientists, governmental agencies, private organizations, businesses, and the general public (in short, just about all humans, in one way or another). Conservation advocates from these diverse groups work together to advance science, educate laymen, and affect policy with respect to protecting biodiversity.

Conservation biology issues have broad ramifications. Decisions by governments and policy makers can have huge economic impacts. This, in turn, leads to battles among groups with competing interests and distortion of information. To be an informed and responsible citizen, you have to evaluate ideas and information critically, separate facts from opinions, and recognize biases and propaganda. Our goal is to help you develop these skills. In addition, we expect to enhance your appreciation for and knowledge of nature, to make you more open to

new ideas and better able to think holistically, to improve your writing and speaking skills, to boost your commitment to personal achievement, and to enhance your interest and concern about contemporary social issues.

**Teaching Philosophy and Course Structure:** My teaching philosophy and approach incorporate active learning. We'll keep you busy, but you'll learn a lot through discussions, writing assignments, and lectures.

Lecture Class: I will present material during the first 40 - 60 minutes of class. The last 20 - 30 minutes of most classes will be devoted to discussions of topics relevant to the reading assignments and lectures. Informal writing assignments for each class period are designed to encourage preparedness and in-class discussion.

**Grading and Evaluation:** The grading system is based on exams and class participation. Two thirds (~67%) of your grade is based on three exams and one third (~33%) is based on other assignments, according to the following point system:

<b>Exams</b>	<b>200 pts</b>
First Exam	60 pts
Second Exam	60 pts
Final Exam	80 pts
<b>Class Participation</b>	<b>100 pts</b>
Formal Written Assignment (5 pages)	40 pts
Informal writing & in-class discussion (questions from journals)	20 pts
Informal writing & in-class discussion (one contributed news item)	20 pts
Informal writing & in-class discussion (summary of a substantive contribution)	20 pts
<b>Total Points</b>	<b>300 pts</b>

Grading Scale (based on total points earned):

A = 300-270; B = 269-240; C = 239-210; D = 209-180; F < 180

Moodle:

I anticipate posting your grades on Moodle.

**Exams:**

There will be two exams during the semester and a final exam at the end. All exams will have a similar format. Exams will contain a small number of multiple choice, fill-in-the-blank, and true/false questions. Most of the questions will be short-answer questions of variable value. Questions will be taken from lectures, discussions, text chapters, and any other source that I will clearly point you towards in class.

Missed exam policy: There are no make-up exams. If a student misses an exam for any reason, the final exam score will be used as the score for the missed exam. The final exam will be partially comprehensive and is required. Students missing more than one exam will be given a score of zero on the second and subsequently missed exams. Since the final exam grade can count towards one of the other two missed exams, your final exam grade can also substitute for a lower, positive exam grade on the other two exams.

**Class Participation:**

Formal Written Assignment: There is one formal writing assignment of five pages. The assignment is focused

on some of the most important take-home messages from the course, such as valuing nature and civic responsibility. Details on the assignment will be provided in class in a timely manner.

**Informal Writing Throughout the Semester, Linked to Informal, In-class Discussions:** Each student will be expected to keep a written journal of thoughts, ideas, questions, and observations relevant to course content throughout the semester. The journal (which should be separate from your class notes) should contain brief summaries of our in-class discussions, questions regarding material that may serve as fodder for in-class discussion, current conservation-related news items of interest to the class (with references), *etc.* Periodically during the semester I will ask students to turn in their journals to me for evaluation. Please put your name at the top of each page and date your entries. Three items in particular will be required:

1. Questions from journals –  
There should be at least one question that could spark discussion for each day of class.
2. At least one contributed news item –  
There should be several brief summaries of news items relevant to conservation, at least one of which you have brought up in a class discussion.
3. At least one substantive contribution –  
There should be several brief summaries of substantive contributions that you made to in-class discussions, at least one of which is highlighted within the context of the other substantive contributions made by other students concerning the focal topic.

### **Other Course Requirements, Options and Information:**

**Policy on Late Work:** For every class day an assignment is turned in late, your grade will be lowered by 10%, unless instructed otherwise.

**Study Hints:** To study for exams, students should do more than just read the material. They should quiz themselves as they move through the reading material and as they go through their notes and journals. A good habit to develop is reading a few paragraphs or a section, then paraphrasing what it was about or the main conclusions. Answering questions at the end of each chapter before looking up the answers will also help. Finally, the LSU Center for Academic Success or CAS (<http://appl003.lsu.edu/slas/cas.nsf/index>) exists to help students do well in their classes. At the Web site, consider taking their “Test Your Learning Style,” to see how you learn best. It’s fun and helpful.

**Academic Civility:** Meaningful and constructive dialogue is encouraged in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. Respect for individual differences and alternative viewpoints will be maintained at all times in this class. One’s words and use of language should be temperate and within acceptable bounds of civility and decency. Friendly persuasion wins friends and influences people. Aggressively arguing your point often does the opposite and stops dialogue.

**Plagiarism and Cheating:** You are expected to do original work. This means stating, in your own words, the information you research for your written work and properly referencing words and ideas of others. It also means performing independently on exams and non-group assignments. This is serious business and infractions can severely interfere with your career aspirations. Please see the LSU Code of Student Conduct on the LSU website if you are unclear about any aspects of student conduct ([http://appl003.lsu.edu/slas/dos.nsf/\\$Content/Code+of+Conduct?OpenDocument](http://appl003.lsu.edu/slas/dos.nsf/$Content/Code+of+Conduct?OpenDocument)).

### Schedule of Topics, Readings, *Etc.*

Date	Class #	Topics for Lecture & Discussion	Reading & Writing Assignments
<b>Part I: Ethical and Scientific Foundations of Conservation</b>			
T - 1/13/09	1	Course Overview	
Th - 1/15/09	2	What is Conservation Biology?	PCB Ch. 1
T - 1/20/09	3	To be announced...	PCB Ch. 2
Th - 1/22/09	4	To be announced...	
T - 1/27/09	5	Biodiversity: Levels, Patterns & Processes	
Th - 1/29/09	6	Threats to Biodiversity	PCB Ch. 3
T - 2/3/09	7	Conservation Values & Ethics	PCB Ch. 4
Th - 2/5/09	8	Ecological Economics & Nature Conservation	PCB Ch. 5
T - 2/10/09	9	<b>Exam 1</b>	Material from Part I
<b>Part II: Primary Threats to Biodiversity</b>			
Th - 2/12/09	10	Habitat Degradation & Loss	PCB Ch. 6
T - 2/17/09	11	Habitat Fragmentation	PCB Ch. 7
Th - 2/19/09	12	Overexploitation	PCB Ch. 8;
T - 2/24/09		Mardi Gras Holiday	
Th - 2/26/09	13	Species Invasions	PCB Ch. 9
T - 3/3/09	14	In-class student presentations of "Hot Topics"	
Th - 3/5/09	15	In-class student presentations of "Hot Topics"	Writing Assignment due
T - 3/10/09	16	Climate Change	PCB Ch. 10
Th - 3/12/09	17	Conservation Genetics	PCB Ch. 11
T - 3/17/09	18	<b>Exam 2</b>	Material from Part II
<b>Part III: Solving Environmental (&amp; Other Complex) Problems</b>			
Th - 3/19/09	19	Species & Landscape Approaches to Conservation	PCB Ch. 12
T - 3/24/09	20	Ecosystem Approaches to Conservatoin	PCB Ch. 13
Th - 3/26/09	21	Protected Areas	PCB Ch. 14
T - 3/31/09	22	Restoration	PCB Ch. 15
Th - 4/2/09	23	Sustainable Development	PCB Ch. 16
T - 4/7/09		Spring Break	
Th - 4/9/09		Spring Break	
T - 4/14/09	24	Integration of Science & Policy	PCB Ch. 17
Th - 4/16/09	25	Conservation Challenges in the 21 <sup>st</sup> Century	PCB Ch. 18
T - 4/21/09	26	In-class student presentations of "Hot Topics"	
Th - 4/23/09	27	In-class student presentations of "Hot Topics"	
T - 4/28/09	28	In-class student presentations of "Hot Topics"	
Th - 4/30/09	29	Review	
T - 5/5/09	30	<b>Exam 3 (Final Exam), 3:00 – 5:00 p.m.</b>	Comprehensive, but emphasizing material from Part III

Revised 2/1/09