

Conservation Biology (Biol 381)
Course Information
Spring 2011

Instructor:	Ken Prestwich
Office:	108 O' Neil
Office Hours:	Mondays 4-6 PM Tuesdays & Thursdays 7:30 – 9:00 AM Wednesday and Friday 3-5 PM Please note that I often need to cancel office hours due to chairmanship responsibilities. But, for this course, you should feel free to come by anytime, including outside of office hours and if I have time I will help you. There is one exception to this – I do not see people with an open door the day before an exam as I strongly disapprove of cramming for exams. I also do not have an open door or office hours on any day when a review session is scheduled.
Review Sessions:	We will have review sessions in the late afternoon/early evening as needed. You are encouraged to attend these. I do not have review sessions in this course unless the students request them and they will always be at least 2 days before an exam.
Required Text:	<i>Conservation Science</i> . First Edition. 2011. Peter Kareiva and Michelle Marvier . Roberts and Company Publishers, Inc. ISBN 978-1936221066. There will be additional readings from the primary literature posted on the CHC intranet (available through the course website.)
Supplemental Text:	For those who want a detailed reference book, especially for those of you who might go on in conservation ecology consider buying <i>Principles of Conservation Biology</i> 3rd Edition . 2006. Martha J. Groom, Gary K. Meffe and C. Ronald Carroll. Sinauer Associates Inc. ISBN 0-87893-518-5. It costs about 65\$ on used textbook websites. (NOT REQUIRED).
Course Website URL:	http://www.holycross.edu/departments/biology/kprestwi/conservation_biology

Please use this very complete handout for questions you have about any structural aspect of the course.

General Information and Course Goals: Conservation biology is the scientific field that (i) documents the effects of human activity on biological populations and ecological systems and (ii) suggests means to minimize the impact of human disturbance so that these systems continue to function or are restored to function. Thus, we will learn how to apply the principles of genetics and ecology to the sustainable use, preservation, and restoration of biological populations and communities. Much of the semester will deal with material that is far more applied than in your other biology courses.

We will deal with more than biology. As mentioned above, conservation biology exists as a field of study solely because of the recent human impact on the natural world. Our numbers, coupled with our demand for natural resources and our incessant release of pollutants have degraded natural systems and populations. As a result ecologists and others have grown increasingly concerned about how what is being changed and lost. We find ourselves on a campus and members of a broader society where the prevalent culture persistently elevates immediate human needs above all others. I hope this course will present a cogent alternative view. This view will explicitly question whether we are the center of creation. I suggest that our concern for the environment should not primarily spring from its direct relationship with human health and material well-being. This "eco-centric" view is not uniquely a product of western science. Nevertheless, it has been advanced most forcefully in developed nations in recent years by biologists.

This said, we will maintain a reasoned and appropriately critical *scientific* approach to conservation biology. **There are numerous cases of advocacy getting the best of good science. No matter how well intended, this sort of thing can lead to bad ideas, poor policy, and ultimately to public suspicion of science. Our job is to learn how to generate the best available conservation science. This means that we will examine experiments, theory and proposed solutions with an informed, critical eye.**

Lecture/Assignment Schedule: The schedule of all assignments can be found at the course website (see box on page 1). The site is updated after each class to reflect our actual progress. There will probably be a number of changes as I have totally reorganized the course to accommodate the new textbook and the backgrounds of the students in the course this semester.

Note that I generally prepare study questions for each reading assignment. These should help you to focus on the most important material and initiate your evaluation of the material and your further reflections.

Class Format: Class will be a mix of lecture and discussion. The majority of classes will be mainly lecture mixed with frequent questions. There will be text, handout, and literature readings assigned before most classes. You will usually be given questions to guide your reading. I fully expect that you will have read the material, answered the questions, and studied **before** coming to class. In class, I will discuss some of the most important and difficult points in the reading and add additional material. I will ask questions during class based on the reading assignments and on what was discussed in previous classes. I have a strong expectation that you will:

- Arrive ready to work and participate
- Be prepared for each class
- Not miss class;
- Not arrive late (although late is always better than not at all)
- Not leave the classroom unless it is absolutely necessary

Learning in this class is a collaborative effort. Following the steps above will be beneficial both to you and to all members of our class community and will maximize everyone's enjoyment and benefit of the course.

Class Discussion: Discussion has a crucial role in this class since it gives me a chance to be sure that everyone understands the reading material (much of which will not be covered directly in lecture) and because it gives us a chance to deepen our understanding of behavior. Being active in discussion, while difficult for some, will pay great rewards in the long run, not only in this course but also in many of your future endeavors. Respectful, civil honest discourse will be the basic ground rule of all discussion.

Discussion will be largely based on the readings for class and on questions that discussion leaders (see below) and I will bring up for consideration – and, of course, questions that anyone brings up at any time. I will assume that all students in the class should either be able to answer the study questions (by having done the reading) or can formulate a reasonable question seeking more explanation of the reading (*i.e.*, something a little more sophisticated than "please go over that material" -- this smacks of not having done the reading!). Please note that good participation implies more than simply restricting your answers to the "softball" questions I use to start discussion. Therefore, expect to be called on to speak and be ready to volunteer your well-considered ideas or questions.

Please note that I call on students as often as I ask for volunteers to answer. If you are truly unprepared, I would rather have you in class than not. Tell me you did not prepare before class and I will try to avoid calling on you. Please don't do this more than a few times all semester.

Grading of Discussion. You will be graded on class discussion (more grading details are below). Participation (independent of presentations) is about 17% of your grade and is determined each week. I use a one-week basis because some classes have less opportunity than others for participation. Here are general guidelines I use in coming to participation grades.

- Unexcused absences get a zero.
- Showing up for class and saying nothing will earn you 0.4.
- Being obviously prepared and participating by answering questions voluntarily or being called on or by asking good questions that advance class understanding will all earn you something up to maximal points, depending on how I judge the quality of your work and preparation.
- Additional points will be garnered by contributing to the on-line discussion threads that I and other members of the class will post on the class website for Moodle. This is to help the quiet ones still express themselves. Additional information about Moodle can be found in a handout.

You will receive your current participation grade each time I return an exam; it will be a number between 0 and 1 indicating the fraction of participation points you are presently earning. Thus, **participation must be consistent throughout the semester to earn the best possible mark.**

Discussion Leadership: Individuals will organize and lead discussion of case studies or papers that everyone will read. Each person will do this twice and feedback will be provided after the presentations. Additional instructions are given on a handout.

Grading: Grades will be determined as follows:

Project	Points
1. Exams (55% of total grade)	
Mid-term exams (100 pts. each – second is comprehensive)	300 (~39%)
Comprehensive Final Exam	150 (~19%)
2. Writing Assignments (27% of total grade)	
Short Essays (30 pts. each)	60 (8%)
Research Paper (graded in parts)	100 (13%)
Poster based on research paper	30 (~4%)
3. Class Discussion & leadership (18% of total grade)	
Literature/Case study discussion leadership (20 pts. each)	130 (~17%)
Total	770

Grading Scale: Grades are based on a scale, not a curve. I use the following scale (averaged to whole percentages): above 93% = A, 93 to 90% = A-, 89 to 87% = B+, 86 to 83% = B, 82 to 80% = B-, 79 to 77% = B+, 76 to 73% = B, 72 to 70% = C, 69 to 67% = D+ and 66 to 60% = D. Any average below 60% fails. Thus to earn an A in this course you will need at least 679 points ($730 * 0.93$). Similar calculations can be made for other grades.

Exams: Exams will consist of a **multiple choice, fill-ins, problems, short answer (a couple of sentence) and long answer** questions. "Long answer" questions might in some quarters be called essays but you need not write nice unified essays under the time constraints of an exam. I would prefer a series of related statements, annotated equations or figures and graphs (which you use would of course depend on the question.) This saves you time and lets you get to the point quickly.

I am very concerned that you take something away from this course. The best way to become a good student of conservation biology is to constantly review old material in addition to learning new material. To encourage this, **all exams after #1 are comprehensive and the final is nearly exclusively so** -- any significant material covered at any time previously may show up on a test. The most likely candidate materials for retesting are topics that a significant number of individuals did poorly on (you will be told this). Do not panic over the comprehensive nature of the exams! Most of the material on each exam will be "new" since the previous exam. I do not have a reputation as an unfair tester -- so, please rest assured that comprehensive questions will not deal with insignificant details. Keep up and review often!

Short Essays: On two occasions you will be given 30-point take-home questions whose purpose is to allow you sharpen your explanations of a few especially

important topics. Detailed instructions will be given with the assignments. Note that late essays are penalized 3 pts per day, starting at 8AM the due day.

Research Paper: To give you a bit of ownership of the material, you will be required to write an 8-page "Nature-style" research paper on a topic of your choosing (and my approval). This will be a chance for you to become familiar with the conservation biology literature. The paper has four phases – an initial proposal (title and summary + literature list) (5 pts), first submission (60 pts), and final submission after my comments (35 pts); these are followed by a meeting-style poster (30 pts). You will receive an information sheet about the paper sometime in the first two weeks of the course; due dates are on the website. Late proposals will not be accepted for a grade but must eventually be turned in. Late papers (either initial or final draft) are penalized 5 pts per day counting from 8AM; weekends are days. Message: do not turn in the assignment late without a valid excuse. The reasons for my strict policy are that I want to be able to get them back to you in a timely manner and also encourage you to develop good work habits.

Problem Sets: A number of aspects of this course are mathematical (especially late in the course) and so some problems will be assigned. There will be no credit attached to these assignments; they are purely for study purposes. This said, a fatal error that is commonly made is to put little effort into solving the problems and then assume that looking at and understanding the posted solutions will suffice. It hardly ever does. Please be responsible and try hard to do the problems and come for help immediately if you cannot solve them.

Academic Honesty: I am a person who values honesty and personal responsibility very, very highly. Please adhere to the highest standards of academic honesty at all times.

Exams: I do not think I need to explain to you what constitutes honesty on an exam. Beyond this, the appearance of honesty is always important. Therefore, if you have a habit of writing names and appointments on your body or clothes, as many do, please be sure that you have not done so on the day of an exam. I will ask you to leave and remove them (on your exam time).

If you take an exam early or late I expect that you will NOT discuss the exam – not even to the extent of telling others that you believe that it was hard or easy. I consider it an honor violation to do so as it provides information about the exam and also encourages further probing.

Regarding papers: the rules for discussion and consultation are posted with each assignment. If you have any questions about how to properly paraphrase and cite others' works, please ask me. Likewise, all posts on Moodle must be your own.

False excuses: Please note that I consider giving a false excuse in order to gain an extension to be serious dishonesty. It amounts to nothing more than taking advantage of everyone else in the class. Extensions are to be based on true evidence and not some manufactured excuse. Again, it is not fair to others who could well be experiencing the same pressures.

The College's Policy: If you have additional questions about the College's Academic Honesty Policy please look it over at the Class Dean's website <http://www.holycross.edu/catalog/academic-honesty-policy.pdf>. I must add

that CHC's policy is, frankly, minimal compared to many schools. I expect a lot more from you and you should from yourselves and each other. You will be better persons and professionals if you always adhere to the highest possible ethical standards, even if doing so might disappoint a friend who is trying to game the system.

Distribution of Course Materials is via the worldwide web, CHC intranet (local web) and (rarely) via e-mail. I DO NOT USE MOODLE except for discussions. All study questions, problems, and the readings will be distributed electronically. These materials will be available well before we will discuss them in class. All of these files will be in Adobe Acrobat format. Note that files on the intranet are only available on campus.

On the rare occasions when I e-mail files to you as attachments, please **save the file first onto your P-Drive or desktop.** Then **launch Acrobat reader** and **open the file from within reader** or drag and drop the file on the Reader Icon. If you try to double click the files to open them or if you try to view them with the GroupWise reader, the results are unpredictable.

PowerPoint: PowerPoint lectures will be available before the lectures on the website. An updated version (in light of class) is typically posted sometimes afterwards. Note – the exams do not by any means come entirely from the PowerPoint notes and so the PP is no substitute from coming to each class prepared and ready to participate.