

Conservation Biology, BSC 3864, Summer 2016, Term 3.

“Much education today is monumentally ineffective. All too often we are giving young people cut flowers when we should be teaching them to grow their own plants. “ **John W. Gardner**, Secretary of Health, Education, and Welfare under President Johnson.

with Dr. Colin R. Hughes

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Office Hours: M, W, 9 ‘til 12, and by appointment. I will make every effort to adhere to the chosen times but suggest you contact me ahead of time to make sure I am available. email is a reliable way of contacting me, though it sometimes takes me a day to reply.

Standard details:

Catalog Entry: Conservation Biology (BSC 3864) 3 credits:

Prerequisites: BSC 1010, BSC 1010L, BSC 1011 and BSC 1011L

A survey of the major concepts and current issues in conservation. Lectures address the value of biodiversity threats to biodiversity and what has, and what can be done to stem the loss of biodiversity.

Prerequisites courses must be completed with grades of “C-“ or better.

Overview: I intend to help you understand how to quantify and value biodiversity, recognize and evaluate the various threats to biodiversity, and judge what can be done to ameliorate those threats.

Class time: Class will be held in Davie West, DW107, from 1:00 ‘til 3:50, on M and W. During class we will examine examples, analyze problems, and discuss solutions. This subject is amenable to lively debate and I expect a lot of discussion. To make this work well, I expect you to have read the assigned material, have a positive attitude, be on time, be prepared, and be respectful of other people in class. In addition, I expect to make use of the Blackboard course web site on the FAU server. You should make sure you have regular access to that page.

Required text: Conservation Biology for All, edited by N. Sodhi, and P. Ehrlich. This is a free text, available from a number of sites including this one: [Link to text.](#)

Course schedule.

I will follow the presentation of material in the text (see appendix); however, since the class is largely discussion, the schedule of topics may be changed depending on class interest. Our text, after a brief introduction, discusses that vague term 'biodiversity' and what it is worth. Then it moves on to the most depressing parts of the class: the threats to biodiversity. Chief among these are habitat destruction and fragmentation, but overharvesting affects some species, and now we are seeing threats from invasive species and climate change. Finally we arrive at endangered species, and extinction. However, there are active efforts to manage endangered species, to plan conservation efforts, and avoid extinctions. Humans have a large role to play by making our modified environments more habitable to other organisms, instituting protected areas, and restoring damaged habitat. We will try to end on an upbeat note: humans can make a positive difference.

By the end of class, I expect that you will be able to:

- Explain the meanings of biodiversity
- Evaluate the various values that can be placed on biodiversity
- Discuss why habitat destruction is the major threat to biodiversity
- Explain how habitat destruction leads to fragmentation, and further consequences
- Use examples to illustrate how overharvesting threatens certain species
- Show how invasive exotic species pose a range of threats to native species
- Provide a simple explanation of climate change, and its projected future.
- Express what previous extinctions have revealed about threats to biodiversity
- Evaluate ways in which we humans can ameliorate threats
- Review human responses in light of lessons learned from endangered species
- Judge the contribution the human environment can make to conservation.

Assessment: will be based on a variety of assignments due over the course of the semester. You will build a portfolio of work comprised of:

1. Paragraphs: each day will start with a single paragraph written as an answer to a question I will pose. The question will be one of the ones used to help you with the assigned reading, and involve factual recall of the information. 30% total.
2. Participation: each day will include a discussion of "Conservation in the news", based on a story that caught your eye in the popular press; I expect each person will find one article per week. 10% total
3. Presentation: each of you will be asked to present a Conservation Slide twice over the course of the semester. This will be a **single** powerpoint slide that you will discuss for 5 minutes. It will address an interesting conservation issue relevant to the assigned reading; it could be a story, a species, or some recent scientific finding. 10% total.
4. Project: each of you will be asked to identify a project of interest to yourself, develop that project over the course of the semester. Lots of information is available through the SearchWiSE program linked on the front page of the Library web site.

Through that, or directly, you can also use the Web of Science to find original scientific articles, most all of which are available full text. After identifying a question, you can search for information, then submit an initial annotated bibliography on 8 July (5%), an expanded annotated bibliography on 15 July (10%) first draft of your paper on 22 July (15%), and a final draft if necessary on 3 Aug. Please restrict your paper to 4pp single-spaced, with bibliography as an appendix. 30% total.

5. Final: there will be a written final, take-home, open book, due by 9:00 AM on 4 Aug. 2015. 20% of the total.

n.b. much of your grade is determined from in-class work, yet the summer is a time when other events may demand that you be elsewhere. Therefore, each person will be allowed one unexcused absence, so long as there is evidence that the reading, and web searching has been accomplished.

Appendix: Tentative schedule for Conservation Biology, BSC 3864, Summer 2016.

Date	Topic	Material to be read prior to class
23 June	Introduction, Organization.	
29 June	Biodiversity	Chapter 2
1 July	Ecosystem services	Chapter 3
6 July	Habitat destruction	Chapter 4
8 July	Habitat fragmentation	Chapter 5 Project idea due, with 5 primary ref.s
13 July	Overharvesting	Chapter 6
15 July	Invasive Species	Chapter 7 Annotated bibliography due, 15 primary ref.s
20 July	Climate change	Chapter 8
22 July	Extinction	Chapter 10 First draft of project due
27 July	Planning to help	Chapter 11
29 July	Endangered species	Chapter 12
3 August 4 August	The human environment	Chapter 13 Final Due 9:00 AM

Grading Details:

Grading will be based on the cumulative sum of all assignments and participation.

Grades will then be determined on the accumulated score:

		93% or more	A	90-92%	A-
87-89%	B+	83-86%	B	80-82%	B-
77-79%	C+	73-76%	C	70-72%	C-
67-69%	D+	60-76%	D		
		less than 60%	F		

'Incomplete' grades are given at FAU only to: a student who is passing a course but has not completed all the required work because of exceptional circumstances. In such a case the student, may, with the approval of the instructor, temporarily receive a grade of I (**Incomplete**). The grade of I indicates a grade deferral and must be changed to a grade other than I within a specified time frame, not to exceed 1 calendar year from the end of the semester during which the course was taken. The I grade is used only when a student has not completed some portion of the work assigned to all students as a regular part of the course. It is not to be used to allow students to do extra work subsequently in order to raise the grade earned during the regular term. The instructor is required to record on the appropriate form, and file with the Registrar, the work that must be completed for a final grade, the time frame for completion, and the grade that will be assigned if work is not completed. It is the student's responsibility to make arrangements with the instructor for the timely completion of this work.

Make-up assignments will only be given for medical and other serious, uncontrollable, events, or for the religious observation mentioned above. The make-up exams will be short answer format, and administered by Testing Services in room LA244A: 954 236 1220.

FAU, and I, expect complete academic integrity of our students. Academic dishonesty interferes with our goal of ensuring no student enjoys an unfair advantage over any other. It also corrodes the mutual trust among members of the university community. For these reasons, academic dishonesty is subject to harsh penalties. Please see the details in the Undergraduate Catalog, Students Handbook, and University Regulation 4.001. http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf

Accommodations: Students who need reasonable accommodations due to a disability that interferes with their performance, must register with the Office for Students with Disabilities (OSD) to get any such accommodations. In Boca, this office is in SU133 (561 297 3880), in Davie it is in LA240 (954 236 1222), in Jupiter SR110 (561 799 8010), and in Treasure Coast CO117 (772 873 3441). Students are asked to follow procedures explained by the OSD; they are really helpful.

Students, who wish to be excused from coursework and class activities so they can participate in religious observation, must notify the instructor in advance of the event, and request an excused absence. Credit for in-class assignments will not be lost for excused absences.