

BIOL 406 Conservation Biology
College of Charleston
Fall Semester 2018

Course meeting times and place: Trujillo Spain. Two 75 minute classes (exact time TBD).

Instructor: Erik Sotka, Professor (sotkae@cofc.edu).

Office hours: TBD

Instructional Objectives: Conservation biology is an integrated, multidisciplinary scientific field developed in response to the challenge of preserving species and ecosystems. This course will 1) explore the origin and maintenance of biodiversity at all levels: genetic, population, community, and ecosystem, 2) understand the human impact on biodiversity and 3) outline the solutions; that is, the ecological, genetic and evolutionary approaches that help to maintain biodiversity and their functioning within ecosystems. The 1st two of these goals require a relatively dispassionate search for scientific knowledge. At the center of the third of these goals is a core value: that the long-term preservation of species and ecosystems is an ultimate good.

The course is designed to encourage peer-exchange through weekly topics, lectures, group discussion, activities and field trips that overlap with the Natural History of Spain and Environmental Sustainability classes held during the same semester.

Course co-requisite or pre-requisite: BIOL 111/BIOL 111L, BIOL 112/BIOL 112L, BIOL 211/BIOL 211D, and BIOL 305; BIOL 341 or permission of the instructor. MATH 250 or equivalent course in statistics

Required materials: Primack and Sher (2016) *Introduction to Conservation Biology*. Sinauer Associates.

Student Learning Outcomes.

The mission of this course is to provide students with opportunities to learn more about the natural environment, the biology, ecology and evolution of biodiversity, while understanding the impact of human activities on the biodiversity. As part of this mission, this specific course will have at its core the following Student Learning Outcomes:

1. *Students will demonstrate an understanding of how conservation biology is interdisciplinary, and invokes scientific, social, economic, cultural, and/or ethical points of view through their exams, writing and leading discussion*
2. *Students will understand the threats to biodiversity at all levels through their exams, writing and leading discussion.*
3. *Through their exams, writing and leading discussions, students will demonstrate an understanding of the interconnections between agriculture, energy, human carrying capacity, pollution, and consumption patterns and relate how these issues contribute to anthropogenic climate change.*

Attendance: Attendance is mandatory for all classes.

Grading policy:

Midterm take-home exam (15%)

Final take-home exam (30%)

Weekly quizzes (25%)

Weekly discussion (30%) – lead two discussions (paired) + participate

OTHER: We will make accommodations for students with disabilities whenever possible. All students will be expected to adhere to the CofC Honor code (<http://studentaffairs.cofc.edu/honor-system/studenthandbook/>)

Schedule

Monday.Date	Topics	Discussion	Book
9/10/18	What is ConsBio? Biodiversity?		Chp 1-2
9/17/18	Valuing diversity	See OAKS	Chp 3
9/24/18	Habitat destruction. Protected Area	See OAKS	Chp 4 (92-112); Chp 8
10/1/18	Field trip → Andalucía	See OAKS	
10/8/18	FALL BREAK		
10/15/18	Extinction & recovery	See OAKS	Chp 5 & 6
10/22/18	Recovery	See OAKS	Chp 7
10/29/18	Agroforestry & Biodiversity	See OAKS	Chp 9
11/5/18	Fire & Invasive spp	See OAKS	Chp 4 (112-142)
11/12/18	Field trip → Galicia	See OAKS	
11/19/18	Restoration	See OAKS	Chp 10
11/26/18	TBD	See OAKS	TBD
12/3/18	Cons Bio for the future	See OAKS	Chp 12
12/10/18	Final due		