EVSS 506 *Conservation Biology*
College of Charleston- Spring Semester 2019
Tuesday and Thursday 8:00-9:15 am; RITA 102

Instructor: Erik Sotka, Professor (sotkae@cofc.edu).
Office hours: 930-11 Tuesdays RITA 226 or 228

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, and group discussion.

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.
- Reading materials at OAKS

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.*

Attendence: Attendence is mandatory for all classes.

Grading policy:
Midterm take-home exam (15%)
Final take-home exam (25%)
Weekly homework (20%)
Case-study presentation (10%)
Weekly discussion (30%) – co-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

Week	Tuesday.Date	Tuesday	Thursday
1	8-Jan	What is Cons Bio?	Biodiversity (lecture)
2	15-Jan	Valuing biodiversity	Discussion
3	22-Jan	Habitat loss and degradation	Discussion
4	29-Jan	Climate change, invasion, disease	Discussion
5	5-Feb	Overexploitation	Discussion
6	12-Feb	Extinction	Discussion
7	19-Feb	Stochasticity	Discussion
8	26-Feb	Applied Pop Bio	Discussion
9	5-Mar	Species Recovery	Discussion
10	12-Mar	Protected Areas	Discussion
11	19-Mar	SPRING BREAK	SPRING BREAK
12	26-Mar	Restoration ecology	Discussion
13	2-Apr	Conservation genetics	Discussion
14	9-Apr	Moving forward	Discussion
15	16-Apr	Catch up	Catch up