

BIO 7 - ENVIRONMENTAL BIOLOGY AND CONSERVATION

Fall, 2010

Instructors: Dr. Michael Reed michael.reed@tufts.edu

Dr. Colin Orians colin.orians@tufts.edu

Teaching Assistant: Tegan Morton (tegan.morton@tufts.edu)

Class Hours: Tues, Wed, Fri 9:30-10:20 a.m.; in Barnum 008

Office Hours: Reed: Dana 218, Tuesday 10:30-11:30, or by appointment

Orians: Barnum 203, Tuesday 10:30-11:30, or by appointment

Morton: Barnum 216D, Wednesday 10:30-12:30, or by appointment

Reading: Sustaining Life by E. Chivian and A. Bernstein. We also will require additional readings – they will be posted on blackboard and announced in class.

Course Requirements:

- 1) Completion of three exams. (Note: there is no final, only a 3rd exam.)
- 2) Written, in-class participation in 10 Breakout discussions.
- 3) Completion of group Digital Project (video) (see detailed instructions on Blackboard)

Grading:

- Each exam = 20% of grade (60% of total); breakouts = 20%; Group digital project = 20%
- Exams will be multiple choice.
- Exams are based on lectures, class discussions, and reading assignments.
- Exams will not be cumulative, except when material is repeated in the new exam period.
- We will grade on straight percentages, unless we find a reason to curve.
- If you have questions about your grades on particular questions from an exam, you have at most 1 week (weekend & vacation days included) from the day we first return exams to the class to return your exam plus a written explanation of why you believe your answer might deserve more points, comparing it to the posted key.
 - Exam keys will be posted in the hallway outside Barnum 216 (not on Blackboard).
- Make up exam policy: No make up exam without Doctor's excuse or equivalent; make up exams might have essay questions.
- No, there is no extra credit – please don't ask (in fact, it is against Tufts' rules to provide graded opportunities that are not on the syllabus).
- No, there is no way to make up missed breakouts – please don't ask.

Blackboard: We will put outlines for each lecture, old exams, and announcements on the University's Blackboard site. Outlines will include definitions and diagrams. We will not post entire class presentations on the Blackboard. These are ONLY outlines – studying them will NOT be sufficient to pass the exams! ** If you add the class, email Dr. Reed so he can add you to the Blackboard site. **

Breakout Discussions

Regularly during the semester we will pose a problem to the class. Students will then form groups of 4-5 people to discuss the problem (during class) for ~10-15 min and summarize the answer(s) on a sheet of paper (a few sentences, bulleted points where appropriate). Each member of the group will write his/her own name on the page and hand in the page before we discuss the problem as a class. If multiple names are written by the same person, those names will receive a score of 0 for the breakout. Groups of >5 students also will receive a score of 0 for the breakout. For what we consider a reasonable effort by the group to address the problem, 5 points will be awarded; for less effort or incomplete answers 4 points; lower scores for poorer efforts. You must be present in class to take part in the group discussion. There are 12 Breakouts during the semester, and you will get credit for up to 10; if you participate in more than 10 breakouts, your 10 best scores will make up that grade.

Digital Project Due dates

Deadlines: meeting the deadlines is your responsibility

Sept. 21 – Groups formed and topic chosen –Topic needs to be approved by Orians; names and roles of group members sent to Orians; due by start of class

Oct. 5 – Determine the purpose and focus of your story. Will it explain, illustrate, narrate or persuade? Begin process of collecting and evaluating resources.

Oct. 19 – Hand in by start of class a type-written bibliography of resources (books, lecture notes, articles, etc.). Begin process of choosing words/facts, visuals/images and audio/sounds to be included.

Nov. 5 – Hand in completed Storyboard, due by start of class

Nov. 12 – Finalize images, narrative and music. Determine the pace, tone and emotion

Nov. 23 – Completed project due by start of class for Peer Review

Dec. 3 – Peer review forms due by start of class

Dec. 14 – Final, revised project due by noon – revisions based on peer reviews (Go ahead and share it with family, friends, and the public)

Late projects will be docked 5% / day for every deadline date missed

Date:	Topics:	Readings	Breakout
Sept. 7	Course Intro		
	Unit 1 – Biodiversity and Conservation		
8	Biodiversity & Ecosystems I	Chapt. 1	
10	Biodiversity & Ecosystems II	Chapt. 3	*
14	What is science		*
15	Lies with statistics		
17	Threats to biodiversity	Chapt. 2	
21	Human-Wildlife conflict		*
22	Feather fashion; Illegal wildlife trade		
24	Species distributions; Island biogeography		
28	Exotic species		*
29	Cane Toad (movie)		
Oct. 1	Balance of nature		
5	EXAM 1		
	Unit 2 – One Health		
6	Human population growth		*
8	Biodiversity and human health	Chapts. 4, 5	
12	Threatened groups	Chapt. 6	
13	Evolutionary perspectives		
15	Emerging and re-emerging diseases: A short guide		
19	Ecosystem disturbance and disease	Chapt. 7	*
20	Biodiversity and food production	Chapt 8	
22	Global warming I: Evidence and mechanisms		
26	Global warming II: Pest outbreaks		*
27	Climate change: water & desertification		
29	GM crops: What, how and costs/benefits	Chapt. 9	*
Nov. 2	Bt crops: A case study		
3	EXAM 2		
	Unit 3 - Sustainability		
5	Sustainability	Chapt. 10	*
10	Fisheries I		
12	II		*
16	Deforestation		
17	Managing species and ecosystems I		
19	II		*
23	Marine conservation, reserves		
30	Hunting & Restoration I		*
Dec. 1	II		
3	Energy & Pollution I		
7	Energy & Pollution I; life cycle assessment		
8	Green industry & jobs; Course evaluation		
10	EXAM 3		