

Instructor. Professor Jessica L. Green (jlgreen@uoregon.edu)

Lecture time. Monday and Wednesdays, 10:00 – 11:20 am

Lecture room. 117 Fenton Hall

Office hours. Thursdays 12:00 – 1:30

Office hours room. 301 Pacific

Course website: <http://blackboard.uoregon.edu>



Course Philosophy and Goals. This course should provide a novel, and hopefully fun, way of learning about population ecology. We will learn about population ecology through a combination of reading, problem solving, writing and discussion. My goal is that by the end of the course, all students will be able to 1) use relatively simple mathematical methods (often “back of the envelope” variety) to understand

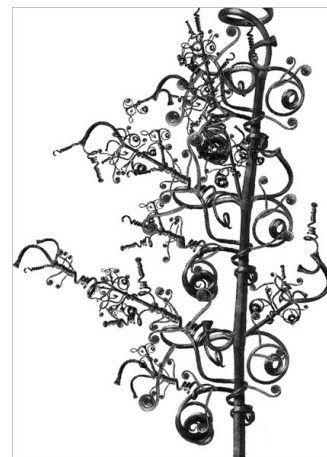
ecological systems, and 2) digest and articulate the salient points on current topics relevant to population ecology. Equipped with these skills, students will be adept at making informed decisions relevant to science policy. My approach throughout the course will be to teach, rather than lecture. Thus, students will be expected to participate in the learning process during class sessions, blog, participate in TED Conversations, and to team-teach one lecture. Adjustments will be made to the following outline based on the needs of the class as we progress.

Readings. There is no comprehensive textbook that covers the breadth of topics we will explore. We will draw upon the textbook below during the first half of the term and it is available for purchase at amazon.com.

Hastings, A. Population Biology: concepts and models. 1997. Springer-Verlag, New York.

Additional required readings will be available for download at <http://blackboard.uoregon.edu>.

Homework. Approximately 7 problem sets will be due in this course. Assignments will be due about one week after the relevant course material has been covered. Assignments are due at the beginning of class. Students are strongly encouraged to collaborate on assignments outside of class. In addition, there will be assignments at the end of the term in conjunction with TED Conversations and team-teaching.



Exams. There will be one take-home midterm. Unlike homework assignments, this exam is not collaborative. You are to work on the exam on your own, without discussion with other students.

TED Conversations. All students will draft and pitch to the class a TED Conversation “starter”. The class will crowd-vote on which conversations to post on TED.com. Details on TED Conversations are posted on the course blackboard site.

Team teaching. All students will be required to team-teach one topic. Team teaching includes choosing relevant class reading or media on the topic & leading a class discussion. Approximately four weeks prior to the day your team is scheduled to lead a topic you will submit a proposal for: 1) the topic, 2) reading and/or media, and 3) a discussion outline. Details on team teaching are posted on the course blackboard site.

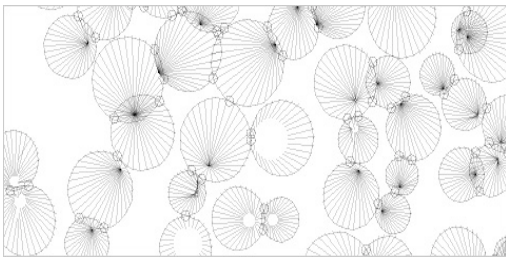
Final project. The final project will be a written synopsis of the material covered in the team teaching component of the class in the form of a blog. Although teaching as a team effort, the final project is to be completed independently by each student. Details on the final project will be posted on the course blackboard site.

Grade determination. Your final grade will be based on $\frac{1}{4}$ homework (problem sets & TED Conversation participation), $\frac{1}{4}$ team teaching (proposal & class delivery), $\frac{1}{4}$ midterm and $\frac{1}{4}$ final project (draft blog, peer reviews, final blog).

Cell phones. All portable electronic devices (e.g. cell phones) must be turned off and put away during class.

Academic Conduct. Academic integrity is the foundation of an academic community and without it none of the educational or research goals of the university can be achieved. All members of the university community are responsible for its academic integrity. Existing policies forbid cheating on examinations, plagiarism and other forms of academic dishonesty. Please refamiliarize yourself with the definitions of cheating and plagiarism (see the “about cheating” sections at http://studentlife.uoregon.edu/programs/student_judi_affairs). If you have doubts or questions about acceptable conduct in any situation, I encourage you to discuss the situation with me in advance. University rules on academic integrity will be strictly enforced.

Images from blog.metaphorical.net/



Below is a *tentative* schedule for this course. It will be updated as the course progresses.

	Date	Title	Content	Readings	Assignment due
Week 1	4/1	Introduction	Course overview Team teaching groups	Hastings 1	
	4/3	Single species dynamics 1	Density-independent population growth TED Conversation overview	Hastings 2.1	
Week 2	4/8	Single species dynamics 2	Density-dependent population growth	Hastings 4.1, 4.2	Assignment 1
	4/10	Single species dynamics 3	Equilibrium analyses	Hastings 4.1, 4.2	
Week 3	4/15	Single species dynamics 4	Lag time & metapopulation model	Hastings 4.3, 4.4, 4.5	Assignment 2
	4/17	Multi-species interactions	Stability and the community matrix	Hastings 6	
Week 4	4/22	Competition 1	Lotka-Volterra models	Hastings 7.1	Assignment 3
	4/24	Competition 2	Lotka-Volterra models	Hastings 7.2, 7.3, 7.4	
Week 5	4/29	Predator-Prey interactions 1	Lotka-Volterra models	Hastings 8.1, 8.2	Assignment 4
	5/1	Predator-Prey interactions 2	Density dependence	Hastings 8.3, 8.4	Team teaching proposals
Week 6	5/6	Predator-Prey interactions 3	Functional response	Hastings 8.5, 8.6	Assignment 5
	5/8	Predator-Prey interactions 4	Metapopulation models	Hastings 8.7, 8.8	
Week 7	5/13	TED Convo student pitches			Assignment 6
	5/15	Take home midterm [no class]			
Week 8	5/20	Diseases and Pathogens 1	Epidemic models	Movie: Contagion	TED Convo 1
	5/22	Diseases and Pathogens 2	Epidemic models	Hastings 10	TED Convo 2 Draft Blog
Week 9	5/27	Memorial day [no class]			
	5/29	Team teaching			TED Convo 3 Draft Blog reviews
Week 10	6/3	Team teaching			TED Convo 4

6/5	Team teaching	TED Convo 5
6/7	Last deadline [no class]	Final Blog