LECTURE SYLLABUS
BIOL 4406 Principles of Ecology Spring 2017

Instructor: Dr Sean P. Graham
Lectures: MWF 9-950 WSB 107
Laboratory: W 3-450 WSB 107
Office: WSB 221

Office Hours: M-F 11-12, T-Th 2-3pm
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Course Description:

Ecology is the study of the interactions between organisms and their environment. This course will outline the complex interplay between abiotic and biotic factors which characterize the ecosphere. Using a field-based laboratory approach, this course will be an introduction into the field of ecology, and will ultimately invite students to begin "thinking like a mountain."

Recommended Books/Checklists:

1. *Ecology and Field Biology* (**NOT REQUIRED**).

Exams & Grading: The table below illustrated the grading for this course. I do not give comprehensive exams.

3 lecture exams @ 100 pts ea	300
Lab exams (3 @ 100 pts ea)	300
Field Notebook and checklists	50
Total Credit	**650 points**

A 90 — 100% B 80 — 89% C 70 — 79% D 60 — 69% F 0 — 59%

Attendance is mandatory. I do not post lectures on blackboard, so all material needed to do well in the exams will be provided during lectures and laboratory. **DO NOT MISS EXAMS or LABS** unless you have a documented, university-approved excuse (hospitalization, etc.), and I need to hear about this **BEFORE THE DAY OF THE EXAM**. Otherwise you're out of luck.

Course Objectives. At the end of the semester, students should be able to:

1. Sight-recognize the birds of Texas (especially those in the Trans Pecos), and know their habitat and range.

Program Learning Outcomes (PLOs) for Biology:

1) Demonstrate an understanding of evolution by natural selection.
2) Demonstrate an integration of environmental awareness into everyday modern life.
3) Demonstrate an understanding of how to incorporate molecular biology into the study of the whole organism.
4) Demonstrate utilization of various field techniques toward addressing scientific questions in the discipline.
5) Conduct basic laboratory experiments utilizing standard observational strategies.

Tentative schedule (subject to change)

Week	**Topic**	week of
1	Introduction: Thinking like a mountain	18-Jan
1	Abiotic factors	
2		23-Jan
2	Plant Adaptations	
3	Animal Adaptations	30-Jan
3		6-Feb

4	Population Ecology		
4			9-Feb
5			13-Feb
5	Biotic Factors: Mutualism		
6	Competition		20-Feb
6	Predation		
7	Herbivory		
7	**First test Friday Feb 27**		
8	Community Ecology		6-Mar
8	Patterns of species richness and diversity		
Spring Break		Spring Break	
9	Stability, equilibrium, and non-equilibrium		20-Mar
10	Succession		
10			26-Mar
11	**Second test Friday 31 March**		
11	Trophic structure		3-Apr
12			
12			10-Apr
13	Energy Flow		17-Apr
13			
14			24-Apr
14			
15	Nutrient Cycles		1-May
15			
16	Conservation		
		May 3, last day of classes	
	Final exam (not cumulative)		

Students with any learning disabilities will be provided with accommodations. If you would like to request such accommodation because of a physical, mental, or learning disability, please contact the ADA coordinator at 837-8203, FH 112.