

LECTURE SYLLABUS

BIOL 4404/5407 Ornithology Spring 2021

Instructor: Dr Sean P. Graham

Office Hours: T-Th 9-11am F 11-12

Lectures: MWF 9-950 WSB 101

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Laboratory: M 3-450 WSB 107

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Course Description:

Ornithology is the study of birds, one of the most spectacular, successful, and best-studied animal groups. This course will survey the origin, evolution, diversity, physiology, and behavior of birds. The laboratory component of this course will make use of preserved museum specimens, dissections, and field trips to illustrate morphology, taxonomy, identification, natural history, reproduction, and other aspects of bird biology. A separate syllabus is available for laboratory. Many materials associated with this course (e.g. this syllabus, lecture and lab handouts, grades) will be distributed through the Blackboard web site.

Recommended Books/Checklists:

1. *Ornithology*, 3rd ed. (2009).

This text is a large and comprehensive view of Ornithology. We will not have the opportunity to cover every chapter, but purchasing this text will greatly enhance your understanding of the lecture material. I will be basing the lectures and tests in large part on this text.

2. Birds of the Trans Pecos (checklist)
3. Birds of Big Bend National Park (checklist)
4. Birds of Big Bend National Park (book)
5. *National Geographic Field Guide to Birds of North America*, 6th Ed. Dunn and Alderfer
(Highly recommended! Buy it used online)

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
<u>Field Notebook and checklists</u>	<u>50</u>
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 the habitat and range in which each would be encountered.
2. Know the families of North American birds.
3. Know the orders of birds around the world.
4. Explain the basic external and internal anatomical/physiological features of birds.
5. Understand the reproductive biology and behavior of birds.

6. Use a standard field guide to identify bird species.
7. Understand the evolution of birds.
8. Understand bird migration.

Student Learning Outcomes (SLOs) for Biology:

1. Demonstrate an understanding of evolution by natural selection.
2. Demonstrate an integration of environmental awareness into everyday modern life.
3. Understanding 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.

Student Learning Outcomes (SLOs) for Biology, MS:

1. Understanding and implementation of scientific methodology
2. Utilization of field techniques toward addressing scientific questions*
3. Be able to utilize statistics toward the analysis of data within the discipline
4. Be able to effectively disseminate scientific findings using both written and oral communication.

Tentative schedule (subject to change)		Day
Week	Topic	
1	Introduction: Diversity of birds	Jan 23 Jan 25
1		Origin of birds Jan 28
2		Jan 30
2		Form and function I: Feathers Feb 1
3		Feb 4
3	II: Flight	Feb 6

4	III: Physiology	Feb 8	
4			IV. Brains and senses Feb 11
5			Feb 13
5			Feb 15
6			V. Feeding Feb 18
6			Feb 20 Feb 22
7	Behavior and communication I: Visual Communication		Feb 25 Feb 27 First test Friday Mar 1
8			II: Vocal Communication Mar 4 Mar 6
8			Mar 8 Mar 11
9	Behavior and the Environment I: Annual Cycles		Mar 13 Mar 15
10	Spring Break	No classes Mar 18-22	
10	II. Migration	Mar 25	
11	Second test Friday 29 March	Mar 27	
11			III. Navigation Apr 1 Apr 3 Apr 5
12	Reproduction and Development: I Reproduction		Apr 8 Apr 10 II. Nests and Development Apr 12
13			Apr 15

13		III. Mating systems Apr 17
14		Apr 19 Good Friday
14		IV Parental care Apr 22
15	Ecology and Conservation I:	
15	Communities	Apr 24 Apr 26
15		May 1 May 3
16		Conservation May 6 May 8
		May 8, last day of classes
	Final exam (not cumulative) Tuesday May 14 8-10am	

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