**LECTURE SYLLABUS**
**BIOL 4404/5407 Ornithology Spring 2019**


**Instructor:** Dr Sean P. Graham
**Lectures:** MWF 9-950 WSB 101
**Laboratory:** M 3-450 WSB 107
**Office:** WSB 221

**Office Hours:** T-Th 9-11am F 11-12
**Office phone:** 432-837-8084
**Email:** sean.graham@sulross.edu


**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 |
| 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 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 |
| 7 | | **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 |
| 12 | 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: 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.**