Principles of Zoology
Biology 133.02, Spring 2016

Instructor: Dr. Brent Burt       Class meeting time and place: TR 11:00-12:15, Miller Sci. 233
Department: Biology Phone: 468-2482 E-mail: dbburt@sfasu.edu Office: Miller Sci. 222
Office hours: MF 8-9:30, Th 8-10
Course online resources: D2L

Course Description:
4 semester hours, 3 hours lecture per week, 2 hours lab per week. Fundamental principles of animal life, including invertebrate and vertebrate animals. Required lab fee.

Course Objectives:
1. Provide students with a clear sense of how science works
2. Provide students with an understanding of genetics and evolutionary mechanisms and patterns
3. Provide students with an overview of animal physiological and anatomical diversity
4. Provide students with an overview of animal diversity
5. Zoology labs with provide hands on experience to reinforce concepts introduced in lecture.

Student Learning Outcomes (Course Competencies):
1. Understand basic approaches to testing scientific hypotheses
2. Understand the fundamentals of genetics and evolution
3. Learn the diversity of animal anatomy and physiology
4. Learn animal classification and phylogenies
5. Learn traits, distribution and diversity of each major animal lineages

Program Learning Outcomes:
PLO 1. The student will demonstrate a good knowledge base in biological concepts (Knowledge). This PLO is achieved with SLO 1-5.

General Education Core Curriculum Objectives/Outcomes: Texas State Exemplary Educational Objectives are addressed by the associated Student Learning Outcome listed below.
Objective one requires that students “understand and apply method and appropriate technology to the study of natural sciences”. (SLO 1, 4)
Objective two states that students must be able “To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses, and interpretations both orally and in writing.” (SLO 1, 2, 4)
Objective three states that students must be able “To identify and recognize the differences among competing scientific theories.” (SLO 1, 2, 4)
Objective four states that students must be able “To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.” (SLO 1, 2, 3, 4, 5)
Objective five states that students must be able “To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.” (SLO 1, 2, 3, 4, 5)

Grading Policy:
Your final grade in this course is determined by grades from the laboratory, lecture exams, daily lecture quizzes and participation in the course evaluation.
4 exams 400 pts (100 pts each)
Quizzes (14 @ 5 pts) 70 pts
Online Evaluation 5 pts

The lecture portion of your grade is determined by earning 90%, 80%, 70% and 60% of the available points for the associated traditional letter grade. The lecture portion makes up 3/4 of
your course grade with the lab portion making up the remaining 1/4th.

Example:
Lecture Average: 92, Lab Average: 75
Final grade = 92 + 92 + 92 + 75 = 351, \( \frac{351}{400} = 87.8 \% \), B

Course Requirements:
This course is going to run as a “flipped” class. This means all lectures will be posted online for you to view and study at your convenience. **We will not meet as a class on most Tuesdays (Exceptions: 9 February; 1 & 22 March; 5 April; and 3 May).** I will be available for individual consultations during the class period on all other Tuesdays. **We will meet each Thursday,** at which time we will review and address questions and concerns about the most recent lecture materials, watch videos on key animal groups, or take exams.

Exams will be a combination of multiple choice, matching and true/false questions. The final exam is an optional comprehensive exam that will replace the lowest grade from the 4 regular exams. The final exam is also the makeup exam for anyone missing one of the 4 regular exams.

When studying for exams, concentrate on lecture notes. Both lecture videos and copies of the text portions of my lecture notes are available on D2L. It is crucial that you download a copy of the lecture outlines and make additional notes on these outlines while watching the videos. The textbook should be considered supporting material for information presented in class lectures. Figures from the textbook will be key in many sections of the lecture notes. Additional information will occasionally be given in lecture videos and should be written into the core lecture outlines. Anyone showing up late to take an exam must take the final exam if they arrive after any other student has already turned in their exam and left the room. Latecomers to the final exam will not be allowed to take the exam if they show up after any other student has already turned in their exam.

It is now departmental policy to require students to fill out online class evaluations at the semester’s end. This assignment is worth 5 points

Lecture attendance:
Regular attendance is expected each day we meet as a class. Students with poor attendance typically do very poorly in this class.

Acceptable Student Behavior
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program. Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment will be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Class etiquette:
- Do not be late for class.
- Do not leave before the class period is over.
- Do not anticipate the end of class and start putting your things away.
- Do not talk during class.
- Turn off your phone.
- Stay awake.

Student Academic Dishonesty (4.1)
Abiding by university policy on academic integrity is a responsibility of all university faculty and students. Faculty members must promote the components of academic integrity in their instruction, and course syllabi are required to provide information about penalties for cheating and plagiarism as well as the appeal process.

**Definition of Academic Dishonesty**
Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not
limited to:

- using or attempting to use unauthorized materials on any class assignment or exam;
- falsifying or inventing of any information, including citations, on an assignment; and/or;
- helping or attempting to help another in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were one’s own. Examples of plagiarism include, but are not limited to:

- submitting an assignment as one’s own work when it is at least partly the work of another person;
- submitting a work that has been purchased or otherwise obtained from the Internet or another source; and/or,
- incorporating the words or ideas of an author into one's paper or presentation without giving the author credit.

**Penalties for Academic Dishonesty**

Penalties may include, but are not limited to reprimand, no credit for the assignment or exam, re-submission of the work, make-up exam, failure of the course, or expulsion from the university.

**Procedure for Addressing Student Academic Dishonesty**

A faculty member who has evidence and/or suspects that academic dishonesty has occurred will gather all pertinent information and initiate the following procedure:

- The faculty member will discuss all evidence of cheating or plagiarism directly with the student(s) involved.
- After consideration of the explanation provided by the student(s), the faculty member will determine whether academic dishonesty has occurred. The faculty member may consult with the academic unit head and/or dean in making a decision.
- After a determination of academic dishonesty, the faculty member will inform the academic unit head and submit a Report of Academic Dishonesty with supporting documentation to the office of the dean of the student’s major. This report will become part of the student’s record and will remain on file with the dean’s office for at least four years even if the student withdraws prior to receiving a grade.
- For a serious first offense or subsequent offenses, the dean of the student’s major will determine a course of action, which may include dismissal from the university. The dean may refer the case to the college council for review and recommendations before making this determination.

A student's record of academic dishonesty will not be available to faculty members. The purpose of the record is for the dean to track a pattern of academic dishonesty during a student's academic career at Stephen F. Austin State University.

**Student Appeals**

A student who wishes to appeal decisions related to academic dishonesty should follow procedures outlined in Academic Appeals by Students (6.3).

**Students with Disabilities**

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

**General Education Core Curriculum**

This course has been selected to be part of Stephen F. Austin State University’s core curriculum. The Texas Higher Education Coordinating Board has identified six objectives for all core courses: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the
improvement of its general education core curriculum by regular assessment of student performance on these six objectives.

Assessment of these objectives at SFA will be based on student work from all core curriculum courses. This student work will be collected in D2L through LiveText, the assessment management system selected by SFA to collect student work for core assessment. LiveText accounts will be provided to all students enrolled in core courses through the university technology fee. You will be required to register your LiveText account, and you will be notified how to register your account through your SFA e-mail account. If you forward your SFA e-mail to another account and do not receive an e-mail concerning LiveText registration, please be sure to check your junk mail folder and your spam filter for these e-mails. If you have questions about LiveText call Ext. 1267 or e-mail SFALiveText@sfasu.edu.

The chart below indicates the core objectives addressed by this course, the assignment(s) that will be used to assess the objectives in this course and uploaded to LiveText this semester, and the date the assignment(s) should be uploaded to LiveText. Not every assignment will be collected for assessment every semester. Your instructor will notify you which assignment(s) must be submitted for assessment in LiveText this semester.

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Course Assignment Title</th>
<th>Date Due in LiveText</th>
</tr>
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<tbody>
<tr>
<td>Critical Thinking Skills</td>
<td>To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.</td>
<td>Shoaling behavior in zebrafish</td>
<td>Deadline provided in lab section</td>
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<td>Communication Skills</td>
<td>To include effective development, interpretation and expression of ideas though written, oral, and visual communication.</td>
<td>Zoology oral presentation</td>
<td>Deadline provided in lab section</td>
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<tr>
<td>Empirical and Quantitative Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>Shoaling behavior in zebrafish</td>
<td>Deadline provided in lab section</td>
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<td>Teamwork</td>
<td>To include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.</td>
<td>Flatworm phototropism</td>
<td>Deadline provided in lab section</td>
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<tr>
<td>Week</td>
<td>Dates</td>
<td>Thursday Class</td>
<td>Topics for the Week’s Review and Quiz</td>
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<tr>
<td>1</td>
<td>19-21 Jan</td>
<td>Discussion/review 21 January</td>
<td>Zoology as a Science, Hypothesis Testing</td>
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<td>26-28 Jan</td>
<td>Discussion/review 28 January</td>
<td>Reproduction, Development, Digestion</td>
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<td>3</td>
<td>2-4 Feb</td>
<td>Discussion/review 4 February</td>
<td>Homeostasis, Circulation, Respiration</td>
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<td>4</td>
<td>9-11 Feb</td>
<td>Discussion/review, week 1-4 material (9 Feb)</td>
<td><strong>Exam 1</strong> (11 Feb.)</td>
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<td>5</td>
<td>16-18 Feb</td>
<td>Discussion/review 18 February</td>
<td>Evolution, Animal Behavior</td>
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<td>7</td>
<td>1-3 Mar</td>
<td>Discussion/review, week 5-7 material (1 March)</td>
<td><strong>Exam 2</strong> (3 March)</td>
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<td>8</td>
<td>8-10 Mar</td>
<td>Discussion/review 10 March</td>
<td>Acoelomorpha, Lophotrochozoa I–Platyhelminthes, gastrotrichs -Rotifers</td>
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<td>9</td>
<td>14-18 Mar</td>
<td></td>
<td><strong>Spring Break</strong></td>
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<td>10</td>
<td>22-24 Mar</td>
<td>Discuss/review, 22 Mar., Easter Break, 24 Mar.</td>
<td>Lophotrochozoa II–Molluscs, Annelids, other lophotrochs</td>
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<td>11</td>
<td>29-31 Mar</td>
<td>Discussion/review 31 March</td>
<td>Ecdysozoa I- Nematodes - Arthropoda I–Chelicerates</td>
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<tr>
<td>12</td>
<td>5-7 Apr</td>
<td>Discussion/review, week 8-12 material (5 Apr)</td>
<td><strong>Exam 3</strong> (7 Apr.), Arthropoda II–Myriapods, Crustaceans, Hexapods</td>
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<tr>
<td>13</td>
<td>12-14 Apr</td>
<td>Discussion/review 14 April</td>
<td>Chaetognaths, Invert. Chordates</td>
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<td>14</td>
<td>19-21 Apr</td>
<td>Discussion/review 21 April</td>
<td>Vertebrata I Fish, Amphibians</td>
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<td>15</td>
<td>26-28 Apr</td>
<td>Discussion/review 28 April</td>
<td>Vertebrata II Mammals, Reptiles (including birds)</td>
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<td>16</td>
<td>3-5 May</td>
<td>Discussion/review, week 13-15 material (3 May)</td>
<td><strong>Exam 4</strong> (5 May)</td>
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<td>17</td>
<td>10 May</td>
<td>Optional Final Exam 10:30-12:30</td>
<td>Review all Course material for optional final exam</td>
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