Evolution, Biology 370.01  
Fall 2017

Instructor: Dr. Brent Burt  
Class meeting time / place: MWF 11:00-11:50, Human Services 320
Department: Biology  
Office: Science 222  
Phone: 468-2482  
E-mail: dbburt@sfasu.edu
Office hours: MWF 9:00-10:00, TR 9:30-10:30, and by appointment
Text: Evolutionary Analysis. Fifth Edition, Freeman and Herron
Additional Reading: Papers from primary literature
Course online resources: see D2L

Course Description:
3 semester hours, 3 hours lecture per week. Basic principles, mechanism and patterns of evolution, including a historical survey of related ideas. Prerequisite: BIO 341.

Course Objectives:
• To discuss evolution within a historical and theoretical context. This objective encompasses the historical development of scientific thought leading to the publication of On the Origin of Species, the question of "what is science?", and differences between scientific methods and theology.
• To understand the Theory of Natural Selection as postulated by Charles Darwin
• To introduce students to the concept of microevolution and microevolutionary forces
• To present the concepts of macroevolution including speciation and phylogenetics

Student Learning Outcomes (Course Competencies):
Students are evaluated based on performance on required assignments and examinations.
1. Improve scientific literature analysis skills.
2. Understand the difference between the basis of scientific and theological explanations for biodiversity.
3. Learn the key figures in the discovery of natural selection.
4. Understand the theory of natural selection, including: the four postulates, the expected outcome if all four postulates hold, and the scientific basis of each postulate and the theory as a whole.
5. Define the concept of microevolution, and understand the forces contributing to microevolution and the expected patterns associated with those forces.
6. Understand the principles associated with evolution of QTLs.
7. Understand the concept of macroevolution.
8. Learn basic species definitions and speciation models.
9. Learn how to reconstruct and interpret phylogenetic trees.

Program Learning Outcomes:
PLO 1. The student will demonstrate a good knowledge base in biological concepts (Knowledge). This PLO is achieved with SLO 2-9.
PLO 4. The student will be able to design, carry out, and analyze experiments to answer biological questions using scientific methods. This PLO is achieved with SLO 1.

Grading:
Your final grade in this course is determined by grades from lecture exams, literature review class discussions, daily lecture quizzes and participation in the course evaluation.
4 regular exams  400 pts (100 each)
4 paper discussions  80 pts (20 each)
Class evaluation  5 pts

Grade are determined by earning 90%, 80%, 70% and 60% of available points for the associated traditional letter grade.

Course Requirements:
Exams:
Lecture exams will be a combination of fill-in-the-blank, figure interpretation/drawing, and short answer/essay questions. Make-up exams will be given prior to regularly scheduled exams or students will take the optional comprehensive final exam. The comprehensive final exam can replace only one exam grade.
Anyone showing up late to take an exam must take the comprehensive final exam if they arrive after any other student has 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.

All students will be given the option of taking an optional, comprehensive final exam. For
students choosing to take this optional exam, the score for this exam will replace the lowest
grade from the regular exams.

When studying for exams, concentrate on lecture notes. Questions from our paper
discussions will also be included on exams. 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. Copies of the text portions of my lecture notes are available on D2L. It is crucial that you download and bring a copy of these notes to class each day. Additional material will occasionally be given in class and should be written into this core of lecture notes.

Paper discussions:

We will be reading and discussing four papers from the primary (scientific) literature this
semester. Prepare two copies of supporting notes of the reading. One copy will be turned in
before the discussion and the other is to help with participating in the discussion. The notes
should clearly indicate at least two questions that you plan to bring up during the discussion.
Papers with underlined and/or highlighted sections do NOT demonstrate that you’ve read the
paper. Do not simply copy another student’s notes or text from the paper as these are
forms of plagiarism. You must be present at the paper discussions to be eligible to earn full
points.

Class evaluation:

It is now departmental policy to require students to fill out online class evaluations at the
semester’s end (instructions will be provided at a later date).

Attendance Policy:

Attendance is expected for each lecture. Perfect or near-perfect attendance will play a
crucial role in decisions concerning borderline final grades.

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/.
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Aug 28</td>
<td>Introduction</td>
</tr>
<tr>
<td>30</td>
<td>Evolution and Creationism/Intelligent Design</td>
</tr>
<tr>
<td>Sep 1</td>
<td>Evidence for Evolution</td>
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<tr>
<td>4</td>
<td>Population Genetics: Hardy-Weinberg Equilibrium</td>
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<td>6</td>
<td>Discuss Video: Judgment Day, Intelligent Design on Trial</td>
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<td>8</td>
<td>Population Genetics: Natural Selection</td>
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<td>Population Genetics: Natural Selection</td>
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<td>15</td>
<td>Population Genetics: Mutation</td>
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<td>20</td>
<td>Exam One</td>
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<td>22</td>
<td>Population Genetics: Genetic Drift</td>
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<td>25</td>
<td>Population Genetics: Genetic Drift</td>
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<tr>
<td>27</td>
<td>Population Genetics: Gene Flow</td>
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<tr>
<td>29</td>
<td>Population Genetics: Nonrandom Mating</td>
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<td>Oct 2</td>
<td>Evolution at Multiple Loci: Linkage Disequilibrium and Sex</td>
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<td>9</td>
<td>Evolution at Multiple Loci: Quantitative Genetics</td>
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<td>11</td>
<td>Discuss Paper</td>
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<td>13</td>
<td>Evolution at Multiple Loci: Quantitative Genetics</td>
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<td>16</td>
<td>Exam Two</td>
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<tr>
<td>18</td>
<td>Selection and Adaptation</td>
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<td>20</td>
<td>Selection and Adaptation</td>
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<td>23</td>
<td>Sexual Selection</td>
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<td>25</td>
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<tr>
<td>27</td>
<td>Kin Selection and Social Behavior</td>
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<td>30</td>
<td>Kin Selection and Social Behavior</td>
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<td>Nov 1</td>
<td>Discuss Paper</td>
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<td>3</td>
<td>Life History Evolution</td>
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<td>6</td>
<td>Life History Evolution</td>
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<td>8</td>
<td>Exam Three</td>
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<tr>
<td>10</td>
<td>Species Concepts</td>
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<tr>
<td>13</td>
<td>Speciation</td>
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<tr>
<td>15</td>
<td>Speciation</td>
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<td>17</td>
<td>Phylogenetic Reconstruction</td>
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<td>20-24</td>
<td>Thanksgiving, no class</td>
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<tr>
<td>27</td>
<td>Phylogenetic Reconstruction</td>
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<td>29</td>
<td>Human Health and Evolution</td>
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<td>Dec 1</td>
<td>Human Health and Evolution</td>
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<td>Discuss Paper</td>
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<td>Human Evolution</td>
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<td>8</td>
<td>Exam Four</td>
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<td>11</td>
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