INSTRUCTOR: Dr. Robert C. Dowler  
OFFICE: CAV 020  
TELEPHONE: 325/486-6639  
E-MAIL: robert.dowler@angelo.edu  
OFFICE HOURS: M 10 - 11, or by appointment. Any modifications will be posted on my office door.

Prentice Hall, Upper Saddle River, New Jersey. NOTE–This text has a website (http://pearsonhighered.com/herron) that includes study questions and other materials.


OTHER REQUIRED MATERIAL:

All students in Biology 4303 also will be using a software/application product called Top Hat. This service may cost a small fee, depending on whether or not you have purchased this for other courses. If you have purchased this application for another course this semester, there is no additional cost. If you have already purchased the long term contract year for another course at ASU in the recent past, there will also be no additional cost. If you have never used Top Hat before, there will be three purchase options: $26 for a one semester unlimited use, $38 for annual use for 1 year, or $75 for lifetime use. Top Hat requires everyone to have an electronic device (Smartphone, tablet, laptop, etc.) with them every day in class. Top Hat will be used to take attendance, present class material, and administer some in-class activities and quizzes.

PREREQUISITES: Biology 3301, *Genetics,* or another course in general genetics.

STUDENT LEARNING OUTCOMES: The primary goal of this course is to give an overview of evolutionary theory and to demonstrate the fundamental nature of evolution to the science of biology. This will be achieved, in part, through the presentation of current research topics in evolution. Students successfully completing this course should have a broad understanding of evolutionary theory, including the history of evolutionary thought, natural selection, sexual selection, the causes of evolution, the significance of Hardy-Weinberg equilibrium, the process of speciation, and human evolution. Overall, students should finish this course with an appreciation for the importance of an evolutionary view in the study of biology.

METHODS OF ASSESSING STUDENT LEARNING OUTCOMES: Knowledge of student learning Outcomes will be assessed as multiple choice, matching, or discussion questions on examinations.

**TENTATIVE LECTURE SCHEDULE**

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LECTURE TOPIC</th>
<th>TEXT CHAPTER</th>
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<tbody>
<tr>
<td>AUG 27</td>
<td>Introduction; Science, religion, &amp; evolution.</td>
<td>1, 2 (part)</td>
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| SEP 3 | History of evolutionary thought  
(Quiz 1– Perimeter of Ignorance – SEP 6) | 2 (part) |
| SEP 10 | Darwin, the Modern Synthesis and evidences of evolution  
(Quiz 2— A Case for Evolutionary Thinking-Ch. 1 - SEP 13) | 2 |
| SEP 17 | Darwin/evidences of evolution (cont.)  
(Quiz 3 – Ch. 2  SEP 20) | 2, 3 |
| SEP 24 | Natural selection and adaptation (Quiz 4 – Ch. 3-SEP 27)  
(Quiz 6 – YIF Ch. 1-4 - OCT 18) | 3, 10 (part) |
| OCT 1 | Mechanisms of evolutionary change-mutation (Quiz 5 - Ch. 14 – OCT 4)  
(Exam 1 – OCT 9) | 5 |
| OCT 8 | Mendelian genetics & Hardy Weinberg equilibrium  
(Quiz 7 - YIF Ch. 5 - 7 – OCT 25) | 6 |
| OCT 15 | Genetic drift, migration, nonrandom breeding  
(Quiz 8 - YIF Ch. 8-11 + EPILOGUE – NOV 1) | 7 (part) |
| OCT 22 | Species concepts and mechanisms of speciation  
(Quiz 9 – Text Ch. 11 Sexual selection -- NOV 8) | 17, 15 (part) |
| OCT 29 | Origin of life  
(Quiz 10 – Text Ch. 12 Endosymbiosis -- NOV 26) | 17 |
| NOV 5 | Precambrian evolution; Endosymbiosis | 17, 15 (part) |
ATTENDANCE: Attendance in class is expected and daily attendance records will be kept for administrative purposes. Because lectures emphasize the material covered on exams, those students that miss classes usually do worse on exams and in the course than those students who attend all classes.

GENETICS PREREQUISITE: This course has a prerequisite of Biology 3301, Genetics. I expect you to have a background in genetics sufficient to apply genetic principles to understand evolutionary processes. We will not review basic genetics in this course.

GRADING: The course grade will be based on three exams and grades on class assignments, in-class quizzes, and weekly chapter quizzes.

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>EXAM I</td>
<td>100</td>
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<tr>
<td>EXAM II</td>
<td>150</td>
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<tr>
<td>CHAPTER QUIZZES</td>
<td>150</td>
</tr>
<tr>
<td>IN-CLASS EXERCISES/PROBLEMS</td>
<td>50</td>
</tr>
<tr>
<td>COMPREHENSIVE FINAL EXAM</td>
<td>200</td>
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<tr>
<td>TOTAL POINTS POSSIBLE</td>
<td>650</td>
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A = 585 - 650  B = 520 - 584  C = 455 - 519  D = 390 - 454  F = BELOW 390

CHAPTER QUIZZES/IN-CLASS EXERCISES: Eleven 15-point quizzes over chapter readings in the text and Your Inner Fish will be given during the semester. The lowest quiz grade will be dropped. In-class group or individual exercises or take-home problems will be assigned irregularly through the semester for a total of 50 points.

CELL PHONE USE IN CLASS: Use of cell phones for texting or social media is not permitted during class periods. If you text in class, you will be asked to leave.

MAKE-UP EXAMS: Make-up exams will be given only in emergency situations which preclude class attendance. Arrangements for excused make-up exams should be made prior to the scheduled date of the exam, unless it is a health emergency, in which case you should contact me by the first class following the absence.

RELIGIOUS HOLY DAY: A student who intends to observe a religious holy day during the semester should make that intention known in writing to the instructor during the first week of the semester and one week prior to the absence. If this submission is completed, a student who is absent from classes for the observance of a religious holy day shall be allowed to take make up missed exams or assignments scheduled for that day in accordance with syllabus policy.

DISABILITIES: Persons with disabilities that may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, in order to request and to implement academic accommodations.

ACADEMIC HONESTY: Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is contained in the web version of the Student Handbook. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is submitted, plagiarism, and collusion. My policy for cheating on an exam is to give a grade of zero on the exam and to provide your name and details of the incident to the department head. You should understand that your loss of credibility on any future (or past) work is the worst penalty for cheating on an exam.