RICHLAND COLLEGE DEPARTMENT OF BIOLOGY
School of Mathematics, Science, and Health Professions
Course Syllabus For
Biol 1407: Biology for Science Majors II
4 credit hours (3 Lec/3 Lab)

INSTRUCTOR’S INFORMATION

Semester and Year: Summer 2019
Section: 86501
Class time and days: Lecture: MTWR 05:40PM 07:40PM  Lab: MTWR 07:50PM 09:50PM
Room: Lecture: WH275  Lab: SH129

Instructor: Daniel Salazar
Contact Info: dsalazar@dcccd.edu (972) 238-6140
Office: A110, Adjunct Office
Office hours: By Appointment

Last day to drop a class without a "W"- Friday, July 11, 2019
Last day to drop a class with a "W"- Tuesday, July 30, 2019
Final Exam Day and time: August 08, 2019 - R 05:40PM 07:40PM

Evaluation Procedures: Your course grade will be based on 4 lecture exams, a final examination, writing assignment, and laboratory quizzes. The lecture exams will be multiple choice, true/false, matching, and short answer/essay. The final exam is PARTIALLY comprehensive. You will need a green #882 scantron and a #2 pencil for each exam. All exams are comprehensive in the sense that you are expected to have mastered all previous material, although each lecture exam will focus on the most recently covered material. Exams will be based both on the lecture material and assigned reading. The final exam grade will replace your lowest lecture exam grade, if higher. There are no “borderline” situations with regard to the final course grade.

100-89.5% = A; 89-79.5 = B; 79-69.5 = C; 69-59.5 = D; 59.5 and below = F
[This may change at the discretion of the instructor.]

Course grade is determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Lecture Examinations @ 120 pts each</td>
<td>480 pts</td>
</tr>
<tr>
<td>Writing Assignment &amp; Presentation</td>
<td>100 pts</td>
</tr>
<tr>
<td>12 Post-lab Grades</td>
<td>250 pts</td>
</tr>
<tr>
<td>12 Pre-labs</td>
<td>50 pts</td>
</tr>
<tr>
<td>1 Final Exam @120 pts</td>
<td>120 pts</td>
</tr>
<tr>
<td>Total Points Earned</td>
<td>1000 pts</td>
</tr>
</tbody>
</table>

THE INSTRUCTOR RESERVES THE RIGHT TO AMEND THIS SYLLABUS AS NECESSARY.
NOTES ABOUT GRADED MATERIALS:

- **Lecture Examinations:** NO MAKE-UPS!! There are no make-ups for lecture exams. If one is missed, the missed score will be replaced by the final exam % score. If two are missed, the second missed score will be a zero, except in extreme extenuating circumstances. A 882-E Scantron sheet is required for this.

- **Lab Quizzes:** Two lab quizzes will be dropped for extenuating circumstances like tardiness, absence due to illness, deaths in the family, or because of poor performance. ABSOLUTELY NO MAKE-UPS FOR LAB QUIZZES! The lab quiz will be administered during the first 15 minutes of the lab period; if you are late for lab, you will have less time to finish the quiz.
  - IF you leave the lab after taking the quiz (without completing the lab exercise to the teacher’s satisfaction) your lab quiz for that day will not be graded (will receive a grade of zero).
  - IF you did not attend a lab, you can not turn in a Pre-lab for it.

- **Pre-labs:** Two pre-lab quizzes will be dropped. Must be done BEFORE THE BEGINNING OF EACH LAB. The biology PRE-LABS are found on your e-campus biology site, if you did not attend a lab, you cannot turn in and get credit for the Pre-lab.

- **Final Exam:** NO make-up in the final exam. No incomplete grade should be given to any student that misses the final. The final exam is PARTIALLY comprehensive (labs and lectures included). It consists of 100 multiple choice questions. A 882-E Scantron sheet is required for this.

- **Extra Credit:** Extra credit points may be offered during the semester, at the discretion of the instructor. If these points are earned, they will be added to the total points earned, not the final course grade.

- **Research paper/presentation:** A research paper or presentation on any topic of interest discussed in class during the course of the semester. Research paper should be type, double space, five or more pages exclusive of the title page and bibliography.

- **In-Class Group work:** In occasions I will provide a worksheet to be done in groups in the classroom. If you are absent for class, you will miss these points.

- **Homework:** Homework will be assigned over the Units covered. No assignments will be accepted via email. No late assignments will be accepted.

- **Lecture Quizzes:** Lecture quizzes are taken weekly over the material covered and highlighted in class. The goal of the quizzes is to encourage you to keep up with the reading and homework.

- **Letters of Recommendation:** I do not write letters of recommendation for every student. I will only write such letters if I believe my letter will help the student in being admitted to the school/program to which he is applying. This decision is made subjectively and depends on the student’s classroom and lab behavior, attitude, motivation, and grades. You must check with me first and make sure I have agreed to write the recommendation before listing my name as a reference or source of a recommendation. Please realize that a mediocre letter of recommendation may hurt your chances of getting admitted to the school/program of your choice.

- **Transferring Credits:** It is the responsibility of the student to check with the institution to which they intend to transfer credit for this and any other courses. Do not assume that the credits will be transferable without receiving written confirmation from that institution indicating the credits will be accepted in the manner which is intended by the student.

**NO WHINING IS ALLOWED!!!** You are an adult, so let’s behave that way.

**Attendance Policy:** In order to be successful, students must attend and participate in enrolled courses. Attendance is necessary for class participation and course work. There will be no make-up opportunities for missed assignments. Thus, it is strongly recommended that students attend each class. However, there will be no official course grading policy on attendance. If there is a conflict in your schedule, contact me ASAP.
Required Materials (choices):

- **BIOLOGY, by OpenStax** (FREE!)
  
  [https://openstaxcollege.org/textbooks/biology](https://openstaxcollege.org/textbooks/biology)  
  ISBN: 978-1-938168-09-3

- **The Laboratory Manual** is available (FREE!) online. 
  
  Print the entire manual and keep it in a three-ring binder. You must bring the entire manual to every lab session.

**Instructor Policies and Suggestions for Student Success:**

- **Class Room** – Lecture starts at 05:40PM. If late by more than 5 minutes, please try to be as quiet as possible.
  
  - Turn off your mobile phone/pager.
  - No use of headphones during lecture time.
  - Persistent talking among classmates during lecture will not be tolerated. A student may be asked to leave the classroom at the discretion of the instructor.
  - You are expected to take good care of all the equipment/materials provided to you in the lab. It is your responsibility to keep your working area and materials clean.
  - Consider this class as or more important than your job. It is not O.K. to leave lab early, or miss lab completely, because of work.

- **Science Corner** – Second floor Sabine building. Free tutoring for all science courses. Check posted schedules to find out times for each course.

- **Computer Labs** –
  
  - Richland College Main Computer Lab, Del Rio, Room D257, 972-238-6317
  - Overflow Lab for Main Computer, Wichita Hall, Room WH159
  - Students must provide their own storage devices; printers are available for printing in some labs. Copying of software is not allowed; personally-owned software may not be used; food and drinks are not allowed in labs. Students must adhere to the DCCCD’s Rules of Responsible Computing. Remember to save often and back-up your work - things happen, computers crash.

- **Center for Tutoring and Learning Connections (CTLC)** – room M216 – for tutoring in all classes and to make-up science lab safety training - (972)-238-6226

- **Students pursuing careers in the Health Professions** can find specific information on occupations, resources, financial aid, and programs at Texas institutions at this RLC Health Professions website:  [www.rlc.dcccd.edu/medcareers](http://www.rlc.dcccd.edu/medcareers)

**Institutional Policies:** Institutional Policies relating to this course can be accessed from the following link ([http://www.richlandcollege.edu/syllabipolicies/](http://www.richlandcollege.edu/syllabipolicies/))

- **Student Success**
  - Academic Advising and Degree Planning
  - Tutoring
  - Students with Disabilities
  - Cheating, Plagiarism and Collusion
  - Computer Use Policy
  - Student Survey of Instruction
  - Grade Reports
  - Religious and Ethnic Holiday Observance
  - Harassment, Discrimination and Sexual Misconduct
  - FERPA

- **Students Receiving Financial Aid**
  - Attendance and Participation
  - Withdrawing from Classes
  - Class Drop and Repeat Options
  - Withdrawal Policy
  - Six Drop Rule
  - Repeating a Course and Third Drop Rule
  - In Case of a Campus Emergency
  - Concealed Carry
  - Weapons
  - Syllabus Change Disclaimer
  - Other College-Specific Information
CATALOG COURSE DESCRIPTION
Biology for Science Majors II

Prerequisite: BIOL 1406. One of the following must be met: (1) DREA 0093 AND DWRI 0093; (2) English as a Second Language (ESOL) 0044 AND 0054; or (3) have met Texas Success Initiative (TSI) Reading AND Writing standards and the college Writing score prerequisite requirement.

Course Description: An introductory survey of current biological concepts for students majoring in the sciences. Emphasis will be placed on topics which include evolution, biological diversity, ecology, and comparative structure and function of organisms. (3 Lec., 3 Lab.)

Coordinating Board Academic Approval Number 2601015103

STUDENT LEARNING OUTCOMES
Upon successful completion of this course, students will:
1. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.
5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.
7. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
8. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
9. Communicate effectively the results of scientific investigation
10. Demonstrate knowledge of modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.

CORE CURRICULUM Statement of Purpose
Through the Texas Core Curriculum, students gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

Core Objectives for the Sciences
* Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
* Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication
* Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
* Teamwork - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.
RICHLAND COLLEGE’S QUALITY ENHANCEMENT PLAN ~ LEARNING TO LEARN: DEVELOPING LEARNING POWER:

Richland College is piloting its Quality Enhancement Plan (QEP) in select classes. The QEP provides techniques, practices, and tools to help students develop the habits, traits or behaviors needed to be effective and successful lifelong learners in college and in life. For more information, please check QEP 2013 (http://www.richlandcollege.edu/qep)

ACADEMIC PROGRESS: Students are encouraged to discuss academic goals and degree completion with their instructors. Specific advising is available throughout the semester. Check Richland College Steps to Success (http://www.richlandcollege.edu/admissions/process.php)
## YOUR CLASS/LAB SCHEDULE

<table>
<thead>
<tr>
<th>Day</th>
<th>Lecture topic</th>
<th>Reading</th>
<th>Lab topic</th>
<th>Lab QUIZ Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 08</td>
<td>The Evolution of Populations</td>
<td>Chapter 19</td>
<td>Lab 1 Lab Safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 19</td>
<td>Lab 1 Population Genetics</td>
<td></td>
</tr>
<tr>
<td>July 09</td>
<td>The Evolution of Populations</td>
<td>Chapter 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evolution and the Origin of Species</td>
<td>Chapter 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 10</td>
<td>Evolution and the Origin of Species</td>
<td>Chapter 18</td>
<td>Lab 2 Evolution, Part 1</td>
<td>Population Genetics</td>
</tr>
<tr>
<td></td>
<td>Phylogenies and the History of Life</td>
<td>Chapter 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 11</td>
<td>Phylogenies and the History of Life</td>
<td>Chapter 20</td>
<td></td>
<td>NO LAB- CLASS MEETS FOR EXTENDED LECTURE</td>
</tr>
<tr>
<td>July 15</td>
<td><strong>Lecture Exam 1 (Chapters 18-20)</strong></td>
<td></td>
<td>Lab 3 Geologic Timeline and Cladistics</td>
<td>Evolution</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 16</td>
<td>Seedless Plants</td>
<td>Chapter 25</td>
<td>Lab 4 Seedless plants</td>
<td>Geologic Timeline and Cladistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 17</td>
<td>Seed Plants</td>
<td>Chapter 26</td>
<td>Lab 5 Seed Containing plants</td>
<td>Seedless plants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 18</td>
<td>Introduction to Animal Diversity</td>
<td>Chapter 27</td>
<td></td>
<td>NO LAB- CLASS MEETS FOR EXTENDED LECTURE</td>
</tr>
<tr>
<td></td>
<td>Invertebrates: Protostomes</td>
<td>Chapter 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 22</td>
<td><strong>Lecture Exam 2 (Chapters 25, 26)</strong></td>
<td></td>
<td>Lab 6 Animal Kingdom I</td>
<td>Seed Containing plants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 23</td>
<td>Vertebrates: Deuterostomes</td>
<td>Chapter 29</td>
<td></td>
<td>Lab 7 Animal Kingdom II (Gloves)</td>
</tr>
<tr>
<td></td>
<td>Invertebrates: Protostomes</td>
<td>Chapter 28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Revised for Summer 2019
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Chapter(s)</th>
<th>labs</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 24</td>
<td>Vertebrates: Deuterostomes</td>
<td>Chapter 29</td>
<td>Lab 8 Animal Kingdom III (Gloves)</td>
<td>Animal Kingdom II</td>
</tr>
<tr>
<td>July 29</td>
<td>Lecture Exam 3 (Chapters 27-29)</td>
<td>Chapter 44</td>
<td>Lab 9 Diversity and Ecology Campus Walk</td>
<td>Animal Kingdom III</td>
</tr>
<tr>
<td>July 30</td>
<td>Ecology and the Biosphere Population and Community Ecology</td>
<td>Chapter 44/45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 31</td>
<td>The Animal Body: Basic Form and Function</td>
<td>Chapter 33</td>
<td>Lab11 Anatomy I: Digestive System (Gloves)</td>
<td>Ecological Footprints</td>
</tr>
<tr>
<td></td>
<td>The Digestive System</td>
<td>Chapter 34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug 05</td>
<td>Osmotic Regulation and Excretion</td>
<td>Chapter 41</td>
<td>Lab13 Anatomy III: Urogenital System (Gloves)</td>
<td>Circulatory System</td>
</tr>
<tr>
<td>Aug 06</td>
<td>Chapters 33, 34, 40, 41</td>
<td>Chapter 41</td>
<td></td>
<td>NO LAB- CLASS MEETS FOR EXTENDED LECTURE</td>
</tr>
<tr>
<td>Aug 07</td>
<td>Final Review</td>
<td></td>
<td></td>
<td>NO LAB- CLASS MEETS FOR EXTENDED LECTURE</td>
</tr>
<tr>
<td>Aug 08</td>
<td>FINAL EXAM WEEK (Chapters 33, 34, 40, 41)</td>
<td></td>
<td></td>
<td>NO LAB</td>
</tr>
</tbody>
</table>

Note: Classes/labs meet Monday to Thursday.  
Read carefully the syllabus as it contains all the policies and procedures of this course, including grade policies.  
Lab Manual is available in pdf files on eCampus.

Final Exam Day and time: Wednesday, August 08, 2019, 05:40PM 07:40PM