Biology for Non-Science Majors II  
BIOL 1409-63500  
Semester: Spring 2019  
January 22, 2019 – May 16, 2019

Professor - Dr. Héctor González-Pagán  
Email: hectorgonzalez@dccc.edu  
Meeting Days: Monday and Wednesdays  
Lecture Time: 5:30 pm to 6:50 pm (H30)  
Lab Time: 7:00 pm to 8:20 pm (H32)

Credit Hours: 4 Semester Hours  
Science, Technology, Engineering and Math (STEM) Office Phone: 214-860-8649, 214-860-8760  
Division Office Location: H129, Monday – Friday: 8:00 a.m. – 5:00 p.m.  
Mission Statement: Mountain View College empowers people and transforms communities.

Course Description: Presentation of biological concepts for the non-science major. This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Laboratory activities will reinforce these concepts.

Course Materials/Supplies Needed  
- LAB MANUAL: Print labs from eCampus prior to attending lab session.  
- Nitrile Gloves: Working with chemicals (available in the College Bookstore or drugstore)  
- Scantron: all tests and lab practical’s need scantron 882E  
- Two inch 3-Ring Binder with dividers for the labs and lab assignments printed from eCampus

Core Objectives  
- 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

Lecture 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 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.
Lab Student Learning Outcomes
Upon successful completion of this course, students will:

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

Course Outline: See course calendar in eCampus.

Objectives, which are determined by the district curriculum committee, are measurable or observable and will be evaluated. Different modes of instruction will be utilized for presentation and evaluation. Lecture topics will include evolution, protists, plant diversity, fungi, animal diversity, animal systems, animal behavior, ecology, population ecology, and ecosystems. An emphasis will be placed on wellness throughout the semester. The Mountain View College nature trail will be used to reinforce topics taught in the lecture and lab.

Evaluation Procedures:

LECTURE EXAMS: 55% of the total grade
- Lecture exams will be given in the testing center and must be taken by the deadline posted.
- Four Lecture exams - Scantron 882E and #2 pencils required
- One Comprehensive Final Exam given in the lecture classroom. Students are required to take the final exam. If missed, you will receive a 0. The lowest Lecture Exam for the semester will be dropped. Ten points WILL BE deducted if there are ANY marks on the exam.
- You will need #2 pencils and Scantron 882E (available in the bookstore) for each lecture exam.
- Make-up Exam Policy: In the event of a missed exam, the instructor must be notified within 24 hours of the scheduled exam and documentation will be required for the absence. Arrangements must be made with the instructor to make-up an exam.

RESEARCH PAPER: 10% of the total grade
- Requirements for this project will be announced in class and posted on eCampus.

PRESENTATION: 5% of total grade
- Oral presentation requirements posted on eCampus.

LABORATORY PRACTICALS: 20% of the total grade
- Laboratory Practical’s MUST be taken during the scheduled lab exam time (see course calendar). Scantron 882E required.
- There is a time limit of 1 hour - 15 minutes for all lab Practical exams.
- A laboratory practical tests your knowledge of laboratory information, ability to interpret data, and ability to successfully perform laboratory skills.

LABORATORY NOTEBOOK: - 10% of total grade
- Requirements for the lab notebook will be posted on eCampus.

Final grade: 55%+10%+5%+20%+10% = 100%
**GRADING SCALE** - FOR EACH EXAM, ASSIGNMENT AND FINAL GRADE:

A = 90 +
B = 80 to 89
C = 70 to 79
D = 60 to 69
F < 59.4

*Grades are finalized at the end of the semester after the final exam. ECampus final grade column can be used as an estimate of your grade but may not be 100% accurate. If you want an accurate calculation use the information in this syllabus.*

A limited number of extra credit assignments may be given throughout the semester. If you miss the opportunity you will not be able to go back. You will not have to option for extra credit if you are late to class, late turning in assignments or missing assignments, do not participate, or have too many absences. Excessive absences and late to class effect your ability to participate

**Instructor Attendance Policy:**
- Students are expected to attend all classes. Students have the responsibility to attend class and to consult with the instructor when an absence occurs. If for some reason you must leave class early, you should inform the instructor prior to the start of class of your reason for leaving early. **On-time attendance is vital to your success in this course. Plan to arrive early. On-time attendance is taken at the beginning of class. A deduction may occur for lack of participation if unexcused tardy or absence.**

**Student Expectations:**
- Students will develop personal responsibility in the areas of on-time attendance, completing all assignments on time, studying 12-15 hours per week outside of class, and bringing the textbook to class.
- Students will develop personal responsibility in the areas of proper care for scientific equipment, proper care and respect for biological specimens, safety in the laboratory, proper storage of laboratory equipment, and cleanliness of laboratory stations.
- Students must write their name, course and section and instructor name on all assignments
- **No earbuds in class. Please turn your cell to vibrate and step outside if you must text. No texting in class.**

**Late Work Policy:**
- Students must contact the instructor if they will miss class, lab, or the due date for an assignment within 24 hours.
- Documentation of an excused absence is required. Arrangements must be made with the instructor to make-up a lab, exam, or assignment.
- **Work is due at the beginning of class on the due date.**
- Twenty points may be deducted per day for an assignment that is late if accepted. In class work that has a late start due to tardiness will have a minimum of 10 points deducted if accepted.

**Makeup Exam Policy:**
- Students must contact the instructor prior for a planned absence or within 24 hours of the exam if unplanned.
- Documentation of an excused absence is required.
- Arrangements must be made with the instructor to make-up an exam.
LABORATORY EXPECTATIONS:

**ATTENDANCE IS MANDATORY** and each exercise will require laboratory participation. Attendance will be taken at the beginning of each class period.

- Students are required to print a copy of the lab for each day from eCampus prior to class. The labs are formatted for the Arial font. If you do not have access to a computer and printer, you can print the pages for a small fee in the campus computer labs, W139 (W141 and W142).
- Instructions are given at the beginning of each lab and **WILL NOT** be repeated. Students who miss instruction will not be allowed to participate in lab.
- Labs forms for each lab practical must be kept in a lab notebook and brought to each lab session.
- Nitrile Gloves are **required** when working with chemicals. **Purchase them before class! NO GLOVES, NO LAB!**
- Closed toe shoes are required for all labs. Hazardous Materials are used in the laboratory areas.
- Material Safety Data Sheets (MSDS), required by OSHA, are available for all students to observe upon request.
- **Cell Phones** are not permitted to ring in the lab. **No texting in class or lab— please step out into hall**
- Students who bring computers to class are not permitted to check email or the Internet.
- **Eating, Drinking, Gum Chewing, and/or Applying Cosmetic are NOT ALLOWED** in the laboratory at any time. Do not bring any beverage containers or water bottles into the lab.

**eCampus:**
- Students are encouraged to use the resources available on eCampus regularly.
- Go to the website: [http://ecampus.dcccd.edu](http://ecampus.dcccd.edu) Your login is an “e” and your seven-digit student identification number (example: e7654321). If you have never used eCampus before, your password is the same as your user name until you change it under personal information.

**eConnect:** Your final grade will be posted to eConnect and the course will be made unavailable.

**Disclaimer:** Instructor reserves the right to change/adjust course calendar and syllabus as needed.

**Withdraw date:** April 17, 2019
- Please speak with the instructor if you are having difficulty in the course.
- Students often drop courses when help is available that would enable them to continue. I hope you will discuss your plans with your instructor if you feel the need to withdraw.

**Academic Dishonesty:**
Students caught plagiarizing an assignment will receive a “0” on the test or assignment and will be subject to an “F” in the course and possible expulsion from the college. Any testing or exam no phone or notes may be used in Testing Center, Classroom or Lab Practical and may result in a “0” on the assignment and possible “F” and or expulsion.

**Mountain View College Institutional Policies:**

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<td>Processes</td>
<td>Lab 1 Orientation/Safety</td>
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<td>1/28/19 Chapter 11 Evolution and Its Processes</td>
<td>1/30/19 Chapter 12 Diversity of Life</td>
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<td>Lab 2 Evolution Part 1</td>
<td>Lab 3 Evolution Part 2</td>
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<td>2/4/19 Chapter 13.1-13.2 Diversity of Microbes</td>
<td>2/6/19 Chapter 13.3 Diversity of Protists</td>
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<td>Lab 4.1 Microscope Review, Bacteria, Archaea, and Protists</td>
<td>Lab 4.2-4.8 Microscope Review, Bacteria, Archaea, and Protists</td>
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<td>2/11/19 Chapter 13.4 Diversity of Fungi</td>
<td>2/13/19 Chapter 14 Diversity of Plants</td>
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<td>Lab 5 Fungi and Plant Reproduction</td>
<td>Lab 6 Plants</td>
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<td>Test 1 (Ch 11-13) in testing center - Deadline 2/12</td>
<td>Research Paper: Annotated Bibliography Due</td>
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<tr>
<td>2/18/19 Chapter 15 Diversity of Animals</td>
<td>2/20/19 Chapter 15 Diversity of Animals</td>
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<td>2/25/19 Chapter 15 Diversity of Animals</td>
<td>2/27/19 Chapter 16.1 Homeostasis and Osmoregulation</td>
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<td>Lab Practical 1 - in lab (Labs 1-8) Lab Notebook #1 Due Test 2 (Ch 14 &amp; 15) in Testing Center - Deadline 2/26</td>
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<td>3/4/19 Chapter 16.1 Homeostasis and Osmoregulation</td>
<td>Research Paper Outline Due - submit on eCampus</td>
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<td>3/6/19 Chapter 16.2 Digestive System</td>
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<td>3/25/19 Chapter 16.3 Circulatory and Respiratory System</td>
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<td>Lab 16 Musculoskeletal System</td>
<td>Lab Practical 2 - in lab (Labs 9-16) Lab Notebook #2 Due</td>
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<td>4/8/19 Chapter 16.6 Nervous System</td>
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<td>4/15/19 Chapter 17 Immune System and Disease</td>
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<td>Lab 19 Viruses and Immunity</td>
<td>Lab: Video Inside the Living Body</td>
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<td>4/17/18 LAST DAY TO DROP THE CLASS WITH A “W”</td>
<td>Test 3 (Ch 16 &amp; 17) in testing center - Deadline 4/19</td>
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<td>Lab 20 Population Ecology</td>
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<td>5/1/19 Chapter 20 Ecosystems and the Biosphere</td>
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<td>Lab Practical Review</td>
<td>Lab Practical 3 - in lab (Labs 17-23) Lab Notebooks #3 Due</td>
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<td>5/13/19 Final Exam Week - Comprehensive Final Given in Class (Date/time given by Instructor)</td>
<td>Test 4 (Ch 19-21) in testing center - Deadline 5/10</td>
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**Spring Break – March 11 – 15, 2019 – No Classes**