COURSE TITLE: Biology for Science Majors I        COURSE NUMBER: BIOL 1406

COURSE PREREQUISITE
College level ready in Reading and Writing.

COURSE DESCRIPTION
An introductory survey of contemporary biology for students majoring in the sciences. Topics emphasized will include the chemical basis of life, structure and function of cells, energy transformations, and molecular biology and genetics. (3 Lec., 3 Lab)

CREDIT HOURS: 4

TEXAS CORE CURRICULUM
http://www.thecb.state.tx.us/index.cfm?objectid=6F049CAE-F54E-26E4-ED9F0DAC62FABF7D
• Critical Thinking Skills - to include creative thinking, innovation, inquiry, 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

STUDENT LEARNING OUTCOMES (SLOs)
1. Describe the characteristics of life.
2. Explain the reasoning used by scientists.
3. Identify the basic properties of substances needed for life.
4. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
5. Describe the structure of cell membranes and the movement of molecules across a membrane.
6. Identify the substrates, products, and important chemical pathways in metabolism.
7. Identify the principles of inheritance and solve classical genetic problems.
8. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
9. Describe the unity and diversity of life and the evidence for evolution through natural selection.
10. Be able to apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
11. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
12. Communicate effectively the results of investigations.

REQUIRED MATERIALS
- Biology by OpenStax College, available through
  o OpenStax website for a web, PDF, or ePUB versions:
    • http://openstaxcollege.org/textbooks/biology
  o Campus Bookstore or OpenStax website for the printed textbook (ISBN 978-1-938168-09-3)
- Laboratory Exercises available on eCampus
- Packet of Scantron 882 answer sheets

A student of El Centro College is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer. THECB TAC Rule 4.218 (c)
COURSE OUTLINE

- Lecture presents the fundamental theory of biological topics. Five units will be covered and assessed:
  - Week 1: Molecules of Life
  - Week 2: Cell Structure
  - Week 3: Cell Energetics
  - Week 4: DNA & Cell Reproduction
  - Week 5: Inheritance & Expression of Genes

- Laboratory elaborates upon the theories presented in lecture through the use of "hands on" learning experiences and may incorporate material not discussed in the lecture portion. Quizzes will be given at the beginning of each lab. Lab Projects will be given per the Course Schedule.

EVALUATION PROCESS

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Lecture Quizzes (15 @ 5 pts)</td>
<td>75 points</td>
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<tr>
<td>Lecture Exams (4 @ 100 pts)</td>
<td>400 points (5 taken, lowest dropped)</td>
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<tr>
<td>Final Exam (1 @ 100 pts)</td>
<td>100 points</td>
</tr>
<tr>
<td>Lab Quizzes (10 @ 10 pts)</td>
<td>100 points</td>
</tr>
<tr>
<td>Lab Projects (3 @ 50 pts)</td>
<td>150 points (4 taken, lowest dropped)</td>
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<tr>
<td>Lab Report Evaluation (1 @ 100 pts)</td>
<td>100 points</td>
</tr>
</tbody>
</table>

Total Points 1000

GRADE SCALE

The following letter grades will be assigned per the total points listed:
A (90-100%)=900-1000, B (80-89%)=800-899, C (70-79%)=700-799, D (60-69%)=600-699, F (0-59%)=0-599

DROP DATE

The last day to drop for this semester and receive at grade of "W" is AUGUST 3, 2017 by 7pm in the Registrar's Office (A130). Under Texas law, students who enroll in a Texas public institution of higher education (including DCCCD) for the first time in fall 2007 or later may not drop more than six courses during their entire undergraduate career. For more information: https://www1.dcccd.edu/catalog/ss/oep/dw.cfm

ATTENDANCE

Attendance in lecture and laboratory sections of this course is mandatory. Students are expected to arrive on time and stay until class is dismissed.

CLASS RULES

- Any student who engages in distracting practices – which includes, but is not limited to, cell phone use, excessive talking, or sleeping – will be asked to leave for the remainder of the class. Dismissal due to distracting others will result in a quiz grade of zero (0%) for that day.
- Students are required to print handouts, which are found on eCampus, for each before the start of each class day for use in the lecture and lab classes.
- For each class day, attendance is required to attend lab.
- Online assignments and quizzes should be completed using Mozilla Firefox, Goggle Chrome, or Internet Explorer on a computer. Using a device such as a phone or tablet is not recommended.
- Students more than 30 minutes late for a lecture exam will not be allowed to take the exam.
- Make-up exams will not be given for any reason. The first exam missed will count as the drop exam and subsequent exams missed will be given grades of zero (0%).
- Closed-toe shoes must be worn in every lab. Goggles/gloves will be provided and must be worn when using eye and skin irritants.
- Students leaving early from lab will receive a deduction from their quiz grade for that day.
- Failure to clean all workstations will result in a quiz grade of zero (0%) for the entire class.
- Missed lab activities, lab quizzes, and lab projects cannot be made up due to time constraints.
- When emailing your instructor, clearly state your name, the class and section you are in, and your issue.
- No “extra credit” can substitute for missed classes, exams, or poor performance.

ACCESSING eCAMPUS

You will be using eCampus, an online course site, in the class. Go to http://www.elcentrocollege.edu/ecampus/ to log in to your account. If you cannot access the site, please contact technical support at 1-866-374-7169. If this course is not available in your course list, please contact your instructor.
COMPUTER REQUIREMENTS
Students need access to hardware and software that meet the following requirements:
- Computer or other device able to access eCampus
- Google Chrome OR Mozilla Foxfire 5.0 or higher
- Shockwave Flash Plug-in

ACADEMIC DISHONESTY
Academic dishonesty will not be tolerated in this course. If cheating is observed, points for that activity will be disallowed. Grades of zero given for cheating may not be dropped. Academic dishonesty includes activities such as copying from another student’s lecture exam, lab quiz, lab practical, lab report, or collaboration with students who have completed lab practicals, lecture quizzes, and lecture exams. It can be assumed that tests showing the same or similarly missed questions as evidence of dishonesty. All tests involved can receive a score of zero. Also, students missing similar questions when taking the test at or near the same time will be more closely scrutinized. The instructor reserves the right to schedule separate testing times for students.

INSTITUTIONAL POLICIES
All El Centro students are responsible for knowing and adhering to the following institutional and course-related policies:
- Institutional Policies
- Course-related Institutional Policies
- Title IX and Sexual Misconduct

DISCLAIMER: The provisions contained in this syllabus do not constitute a contract between the student and El Centro College. These provisions may be changed at the discretion of the Coordinator/Instructor. When necessary, appropriate notice of such changes will be given to the student. The instructor-of-record may provide additional information to enhance the course to meet the needs of the enrolled students, provided that the enhancements do not conflict with the official course syllabus.