Instructor: Dr. Lucia Carreon
Email: lucia.carreonmartinez@utrgv.edu
Office Hours: TBA

Textbook and/or Resource Material:
Textbook required: Suggested: Campbell Biology 9th (10th or 11th) Edition Reece et al (w/wo Mastering Biology)
Loose leaf textbook with Mastering Biology ISBN: 9780133922851
e-text available too at: http://www.mypersonal.com

Other resources: OpenStax, Concepts of Biology, Rice University. Download for free at http://cnx.org/content/col11487/latest/

Course Description A study of the basic principles of Biology. Topics will include biological chemistry, cell structure and function, photosynthesis and respiration, DNA structure and function, mitosis, meiosis, Mendelian genetics, and evolution.

Dr. Carreon’s Teaching philosophy: As a teacher, I aim to help you understand how each of the individual parts and/or concepts come together as part a “whole”. To achieve this I use some examples and analogies, as well as asking questions during class so you exercise retrieving the information and try to explain it in your own words.

On occasion, I will apply quizzes on material that you should have read ahead of class or on topics specifically assigned by me the lecture before. These quizzes count as participation points and the information is used as material to focus on students misconceptions and discuss the material in class. Grades for these quizzes will not be posted on blackboard.

In addition as part of a team, you will be in charge of presenting certain topic (from the syllabus/textbook) to your classmates. This will enhance your communication and critical thinking skills and aid in the comprehension of the material.

Texas Higher Education Coordinating Board (THECB) ACGM Learning Objectives
Fundamental principles of living organisms are covered, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Course Learning Objectives/Outcomes for the Course
Upon successful completion of this course, students will:
1. Describe the characteristics of life.
2. Explain the methods of inquiry used by scientists.
3. Identify the basic requirements of life and the properties of the major molecules 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.
Texas Higher Education Coordinating Board (THECB) core learning outcomes
This course may be used to fulfill three hours of the natural science and technology component of the university core curriculum and addresses the following four core objectives established by the Texas Higher Education Coordinating Board: communication skills, critical thinking skills, teamwork and empirical and quantitative skills.

Learning Objective Activities/Assignments that Addresses Objective
Critical Thinking: Activities that include reading and analyzing information to answer questions
Communication Skills: Students will develop a 3D model of a topic covered in class and explain it to their classmates.
Teamwork: Activities will include working collaboratively to answer questions and to develop their 3D model.
Empirical and Quantitative Skills: In laboratory students will collect original data for several experiments and analyze these data using basic statistical tests and graphs
** Note: the assigned service learning activities will help you achieve the following learning objectives: leadership, teamwork, and communication skills.

BIOLOGY DEPARTMENT SLOs
1. Role of the Cell: The Biology graduate knows the role of the cell in life and living systems, and understands the interrelationships among subcellular structures that contribute to its functioning as a unit.
2. Role of Genetics: The Biology graduate understands the role of genetics in inheritance and can explain how environmental conditions influence natural selection processes and contribute to adaptation.
3. Diversity of Life: The Biology graduate is aware of the diversity of life and interrelationships between an organism and its environment.
4. Structure and Function: The Biology graduate understands how the organization of a specific structure within an organism related to its function, understands interrelationships among organs and organ systems within an organism.
5. Scientific Method: The Biology graduate can formulate a testable hypothesis, evaluate and design experiments, analyze and interpret data, and communicate research findings in both oral and written form.

Co-requisite: BIOL 1406 Lab - Biology Laboratory (25% of final grade)
Recommended prerequisite: MATH 1314 Successful completion of College Algebra or concurrent enrollment in higher-level mathematics is recommended.

Grading Policies
Your final grade will be determined by
150 pts 15 quizzes on Blackboard (5 questions, 2 pts each per quiz)
60 pts in class activities/ assignments/ homework (10 pts each).
170 group work activity and demonstration
500 4 exams (out of 5, each 125 pts)
120 pts lecture attendance, surprise quizzes and exit tickets with Socratic student app
1000 total possible points

1000-900= A; 899.9-800=B; 799.9-700= C; 699.9-600= D; 599.9>= F. UTRGV’s grading policy is to use straight lettergrades (A, B, C, D, or F).

Your final numeric grade in LECTURE is 75% of your final grade. The remaining 25% is from your laboratory grade.

If you missed one QUIZ you can make it up by taking a cumulative final exam, or if you want to improve your grade (the final exam would replace the lowest grade of a previous quiz).

Attendance: If you didn’t attend one class, you will not be able make up the activity done on that day.

Cell phone use is not allowed during lecture time or exams- in case of an emergency you need to
notify the instructor BEFORE class. Cell phone use (except emergencies) will be penalized with minus 5pts on final grade per incident.

NOTE: If you decide to take Final Exam, it will be taken into account by replacing the lowest of the previous grades.

Extra credit: you could obtain up to a Maximum of 60 points by attending 6 different workshops at the Learning Center.

Important dates
The UTRGV academic calendar can be found at http://my.utrgv.edu at the bottom of the screen, prior to login.
Important dates for Fall 2018 include:

August 27  First day of classes
August 30  Last day to add a course or register for fall 2018
September 3  Labor Day – NO classes
November 14  Last day to drop a course; will count toward the 6-drop rule
November 22 - 24  Thanksgiving Holiday – NO classes
December 6  Study Day – NO classes
December 7 - 13  Final Exams
December 14 – 15  Commencement Exercises

Other Course Information
ATTENDANCE:
- Students are required to attend all classes, and must be on time for pre-lecture quizzes and/or exams. Excessive absences will result in a loss of points from participation grade. I am required to report excessive absences (more than three) to the ALERT program.

Exams & Make-up Exam
- **No make-up quizzes or activities will be given.** In class activities CANNOT be made up
- **You will be assigned a zero (0) for all missed quizzes or activities.** If you know you are to miss a quiz or activity, inform the professor as soon as possible and before the scheduled event.
- **Students will not be allowed to start an exam/quiz once the first exam has been turned in.**
- During examinations your tabletop must be devoid of books, notes, calculators, cell phones, etc.
- Cell phones/earphones/I-pods/Laptops/etc., and text messaging are not allowed during class time. Phones must be off and stored in a bag and off the table and off your pockets. Five points will be deducted from your final grade if you use any of these electronic devices. Let you know your instructor, at the beginning of class, if you need the cell phone (on vibrate) during lab exercise, and if you take a call during class, go outside to talk. Do not ever talk on the phone in class.
- **For quizzes/exams and final exam YOU MUST BRING A SCANTRON (Form No. 882-E ONLY).**
- **You are responsible of providing pencils, pen and eraser. Exams must be returned with the SCANTRON at the end of the exam.**
- **Students are not allowed to leave the class (no restroom visits) during exams and quizzes.** If you leave the class during an exam, you will lose the opportunity to complete the exam. If emergency make sure you bring a doctor’s note.
- **Cell phones and other electronic devices are not allowed during exams (or lecture).** All devices must be turned off and put away prior to the exam. If there is an emergency situation that requires flexibility in this policy, you must get approval from the instructor prior to the start of the exam.
- **Absences:** If I am given a notification within 24 hours of your absence, and a valid medical excuse is provided, I will justify your absence, but your discussion points will not be taken into account.
- **Issues concerning examinations and grading will be addressed for one week after each exam is given, but not latter.**

NOTE: “This syllabus is subject to change”. Any changes incorporated will be given to you in class as soon
as possible or through Black. Therefore, it is very important you attend all classes.

<table>
<thead>
<tr>
<th>Due Date*</th>
<th>Date</th>
<th>Topic</th>
<th>chapters</th>
<th>readings</th>
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</thead>
<tbody>
<tr>
<td>Aug 30</td>
<td></td>
<td>Themes in the study of life</td>
<td>1</td>
<td>1.1-1.4</td>
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<tr>
<td>Sep 4</td>
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<td>The Chemical context of life</td>
<td>2</td>
<td>2.1-2.4</td>
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<td>Sep 6</td>
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<td>Water and life</td>
<td>3</td>
<td>3.1-3.2</td>
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<td>Sep 18</td>
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<td>EXAM 1</td>
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<td>4.1-4.3</td>
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<td>Sep 20</td>
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<td>Carbon and Molecular Diversity of life</td>
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<td>Sep 20</td>
<td></td>
<td>The structure and function of large biological molecules</td>
<td>5</td>
<td>5.1-5.5</td>
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<td>Sep 25</td>
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<td>A tour of the cell</td>
<td>6</td>
<td>6.2-6.6</td>
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<td>Sep 25</td>
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<td>Membrane Structure and Function</td>
<td>7</td>
<td>7.1-7.5</td>
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<td>Sep 27</td>
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<td>An introduction to Metabolism</td>
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<td>8.3-8.5</td>
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<td>Oct 2</td>
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<td>Exam 2</td>
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<td>Oct 4</td>
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<td>Cellular respiration and fermentation</td>
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<td>9.1-9.6</td>
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<td>Oct 4</td>
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<td>GROUP PRESENTATIONS</td>
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<td>CH 9 ACT</td>
<td>Oct 9</td>
<td>Photosynthesis GROUP PRESENTATIONS</td>
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<td>10.1-10.4</td>
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<td>CH 10 ACT</td>
<td>Oct 11</td>
<td>Continuation...</td>
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<td>Oct 16</td>
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<td>EXAM 3</td>
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<td>12.1-12.3</td>
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<td>Oct 18</td>
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<td>The Cell cycle (Mitosis)</td>
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<td>13.1-13.3</td>
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<td>Oct 23</td>
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<td>Meiosis and sexual life cycles</td>
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<td>CH 12 ACT</td>
<td>Oct 25</td>
<td>Mendel and the gene idea</td>
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<td>14.1-14.2</td>
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<td>CH 13 ACT</td>
<td>Oct 30</td>
<td>The chromosomal basis of inheritance</td>
<td>15</td>
<td>15.1-15.3</td>
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<td>**Nov 6</td>
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<td>EXAM 4</td>
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<td>Nov 1</td>
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<td>The molecular basis of inheritance</td>
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<td>16.1-16.2</td>
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<td>Nov 8</td>
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<td>From gene to protein</td>
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<td>17.1-17.5</td>
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<td>CH 16 ACT</td>
<td>Nov 13</td>
<td>Regulation of gene expression</td>
<td>18</td>
<td>18.1-18.2</td>
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<td>CH 17 ACT</td>
<td>Nov 15</td>
<td>Viruses and Biotechnology</td>
<td>19</td>
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<td>Nov 20</td>
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<td>EXAM 5</td>
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<td>Nov 22</td>
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<td>HAPPY THANKSGIVING!</td>
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<td>Nov 27</td>
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<td>Descent with Modification: A Darwinian view of life</td>
<td>22</td>
<td>22.1-22.3</td>
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<td>Nov 29</td>
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<td>The evolution of populations</td>
<td>23 &amp; 24</td>
<td>23.1-23.4</td>
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<td>24.1-24.2</td>
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<td>Dec 4</td>
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<td>Catch up day/ review/ Exam 5 (?)</td>
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<td>Dec 6</td>
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<td>Study day</td>
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<td>Dec 13</td>
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<td>FINAL EXAM- 1:15- 3:00 PM</td>
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* Exact Dates of subjects covered and all quizzes (except the final exam) are tentative and may change as needed to coincide with progress in course.

**IMPORTANT:**
Each student must complete and submit their own work at all times.
Failure to follow instructions on any assignment, participation, quiz or exam will result in a grade of zero (0).

The contents of this syllabus is subject to change.
Any changes incorporated will be announced to you in class or Blackboard. Therefore, it is very Important you attend all classes and check Blackboard Announcements regularly.
UTRGV Policy Statements

STUDENTS WITH DISABILITIES:

Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact Student Accessibility Services (SAS) as soon as possible to schedule an appointment to initiate services. Accommodations can be arranged through SAS at any time, but are not retroactive. Students who suffer a broken bone, severe injury or undergo surgery during the semester are eligible for temporary services.

Pregnancy, Pregnancy-related, and Parenting Accommodations

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

Student Accessibility Services:

Brownsville Campus: Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at ability@utrgv.edu.

Edinburg Campus: Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at ability@utrgv.edu.

MANDATORY COURSE EVALUATION PERIOD:

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available on or about:

- Module 1: October 4 – 10
- Module 2: November 29 – December 5
- Full Fall Semester: November 15 – December 5

ATTENDANCE:

Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

SCHOLASTIC INTEGRITY: As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

SEXUAL HARASSMENT, DISCRIMINATION, and VIOLENCE: In accordance with UT System regulations, your instructor is a “Responsible Employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct and discrimination.
COURSE DROPS
According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

STUDENT SERVICES:
Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor’s office hours. University Resources include the Learning Center, Writing Center, Advising Center and Career Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

- Learning center: BSTUN 2.10 (Brownsville) or ELCTR 100 (Edinburg)
- Writing center: BLIBR 3.206 (Brownsville) or ESTAC 3.119 (Edinburg)
- Advising center: BMAIN 1.400 (Brownsville) or ESWKH 101 (Edinburg)
- Career center: BCRTZ 129 (Brownsville) or ESSBL 2.101 (Edinburg)