INSTRUCTOR'S INFORMATION
(Instructor reserves the right to amend this information as necessary.)

Semester and Year: Summer 2019
Meeting Dates: 06/06/2019 - 07/03/2019
Section: 85003
Class time and days: M-F 9:40 - 11:40AM (Lecture) / M-F 11:50AM - 1:50PM (Lab)
Room: WH 275 (Lecture) / SH 151 (Lab)

Instructor: Libiya Shah Office: Sabine 268 Phone: 972-238-6084
Instructor’s DCCCD email: Lshah@dcccd.edu
Office Hours: Refer instructor’s e-campus site

Last date to withdraw: 06/25/2019 (with W)

Final Exam Day and time: Wednesday, July 3rd 2019 @ 9.40AM (Lecture Room)
Bring scantron sheet for all exams

DCCCD CATALOG 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.

PRE-REQUISITES
One of the following must be met: (1) DREA 0093 AND DWRI 0093; (2) ESOL 0044 AND ESOL 0054; or (3) have met TSI Reading and Writing standards AND DCCCD Writing score prerequisite requirement.

RECOMMENDED PRE-REQUISITE: MATH 1314. Successful completion of College Algebra or concurrent enrollment in higher-level mathematics is recommended.

Evaluation Procedures:
GRADE EVALUATION: Grades determined by performance, not needs or wants.
Students may earn a maximum of 1000 points for the lecture and lab components combined. The final grades for the course will be assigned as follows:
   [This may change at the discretion of the instructor.]

4 lecture exams @ 100 points each = 400 points
10 Pre-labs @ 10 points each = 100 points
10 Lab Quizzes@ 15 points each = 150 points
Lab report assignment (Enzyme Report) @ 50 points total = 50 points
   1 Final exam @ 200 points (comprehensive) = 200 points

Total Points Earned = 900 points possible

Revised for Summer 2019
THE INSTRUCTOR RESERVES THE RIGHT TO AMEND THIS SYLLABUS AS NECESSARY

Percentage grade       Convert to letter grade:

90 or above            = A
80-89.9                = B
70-79.9                = C
60-69.9                = D
Below 60               = F

For an A you must earn: 810 points
For a B you must earn:  720 points
For a C you must earn:  630 points
For a D you must earn:  540 points

Attendance Policy:
You are expected to be in class every session. Your performance in the course is dependent on your attendance, so please make every effort to attend all classes as scheduled. Students who are late or absent are still responsible for all due dates and test/exam dates.

Late Work, Lab and/or Make-up Exam Policy:

Late works: Any assignment turned in late will be assessed a 10% penalty for each DAY it is late.

Lab Quiz & Lecture Exams: ABSOLUTELY NO MAKE-UPS FOR LAB QUIZZES AND EXAMS!!!

Final Exam: The final exam is comprehensive. It consists of 100 multiple choices questions.

Scantron sheet required for all exams.

Required Materials:

- BIOLOGY 2e, by OpenStax (FREE!)
- https://openstax.org/details/books/biology-2e
- Print: Optional
  ISBN-10: 1-947172-51-4
- Digital:

URL for Textbook: Check e campus Textbook module

The Laboratory Manual is available (free) online on your e-campus site.
All labs are available for download and printing on instructor’s e-campus site at no cost. You must print out and bring the appropriate lab print out to that specific lab, failure to do so will result in loss of pre-lab points!!!

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Instructor Policies and Suggestions for Student Success:

- Never miss a class. Exams will be based on Lecture classes.
- Text reading assignments are provided with the lecture schedule. Keep up with your reading, and expect to read the chapters more than once!
- Lecture attendance and note taking will provide an additional learning resource. Some information may be presented in class, which is not found in the text! You will be held responsible for such information on the exams.
- Ask questions in class and seek outside help if necessary. Use science corner for free tutoring as well. We want you to succeed, but you must learn the material in order to do so!
- Read the chapters, study the figures, and answer the post-test and review questions at the end of the chapters, and also make sure to complete online homework in a timely manner. I often use these questions on the exams to reward students for working them out on their own.
- No Food or drinks will be permitted in the laboratory. You may bring in drinks in the classroom only if the classroom is kept clean.
- 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.
- You will be expected to utilize your time in the lecture/lab session efficiently. Conversations other than those related the topic of the lab session would not be allowed. Student(s) may be asked to leave the classroom/lab at the discretion of the instructor if persistent talking during class.
- 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. It is suggested that you will need to spend at least 2 hours of reading and self-study for each hour of lecture. Be realistic about your work and class schedule when registering.
- Be prepared to be an active independent learner and to work cooperatively with other students as well. If you cannot or will not do this, you might want to re-think this class.
- **NO WHINING IS ALLOWED!!!**

**BE ON TIME for lecture and lab.** Arriving late will not only prevent you from getting a good start on course material, but also it poses a great distraction for other students and the instructor. ABSOLUTELY NO MAKE-UPS FOR LAB QUIZZES! The lab quiz will be administered during the first 10-15 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 professor’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 cannot turn in a Pre-lab for it.**

- **Class Participation:** You are expected to actively participate in taking notes, in all forms of class discussion including answering instructor questions. It will help to maximize the effect of learning when you become actively involved in thinking, understanding and sharing your knowledge. However, there will be no official course grading policy on attendance. If there is a conflict in your schedule, contact me ASAP.

- **Classroom Behavior:**
  You are expected to behave in an adult manner while in class. Inappropriate class behaviors include sleeping, working on other class assignments, and talking incessantly. **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. Please be considerate enough to turn off cell phone or set it to silent mode. No use of headphones in the classroom.
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.

**Lab Report:** You will have to write and submit a one page lab report with graphs based on ENZYME exercise. Details can be found on ecampus (Lab Report Module). If you did not attend this lab, you CANNOT write a lab report for it. **Due date can be found on ecampus.**

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

**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](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 [http://www.rlc.dcccd.edu/advising/](http://www.rlc.dcccd.edu/advising/) for more details. Also, consult the [Advising Syllabus](https://alt.richlandcollege.edu/assets/uploads/2015/02/AdvisingSyllabus.pdf) regularly to check if you are on track.

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

**Student Learning Outcomes**
Upon successful completion of this course, students will:
1. Describe the characteristics of life.
2. Explain the methods of inquiry used by scientists.
3. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
4. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
5. Communicate effectively the results of scientific investigations.
6. Identify the basic requirements of life and the properties of the major molecules needed for life.
7. Compare and contrast the structures, reproduction, and characteristics of prokaryotic cells and eukaryotic cells.
8. Describe the structure of cell membranes and the movement of molecules across a membrane.
9. Identify the substrates, products, and important chemical pathways in metabolism.
10. Identify the principles of inheritance and solve classical genetic problems.
11. Identify the chemical structures, synthesis of nucleic acids and proteins.
12. Describe the unity and diversity of life and the evidence for evolution through natural selection.

**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.

Revised for Summer 2019
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.
<table>
<thead>
<tr>
<th>Day</th>
<th>Lecture and Reading Topic (WH 275)</th>
<th>Chapter</th>
<th>Lab Topic (Sabine 151)</th>
<th>Pre Lab (e-campus) Should complete and submit before lab begins</th>
<th>Lab QUIZ Topic (in the Lab)</th>
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</thead>
<tbody>
<tr>
<td>June 6</td>
<td>The Study of Life</td>
<td>1</td>
<td>Lab 1 Safety</td>
<td>-----------------</td>
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<tr>
<td>June 7</td>
<td>The study of Life/The Chemical Foundation of Life</td>
<td>1/2</td>
<td>Lab 2 Microscopy</td>
<td>Pre-Lab (PL) 1 Microscopy</td>
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<td>June 10</td>
<td>The Chemical Foundation of Life/Biological Macromolecules</td>
<td>2/3</td>
<td>NO LAB</td>
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<td>LQ 1 Microscopy</td>
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<td>June 11</td>
<td>Biological Macromolecules</td>
<td>3</td>
<td>Lab 3 Scientific Method</td>
<td>PL 2 Scientific Method</td>
<td>---------------</td>
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<td>June 12</td>
<td>Exam I (Chapters 1,2,3)</td>
<td></td>
<td>Lab 4 Chemistry &amp; Life</td>
<td>PL 3 Chemistry &amp; Life</td>
<td>LQ 2 Scientific Method</td>
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<tr>
<td>June 13</td>
<td>Metabolism</td>
<td>6</td>
<td>Lab 5 Spectrophotometry</td>
<td>PL 4 Spectrophotometry</td>
<td>LQ 3 Chemistry &amp; Life</td>
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<td>June 14</td>
<td>Metabolism/ Cell Structure</td>
<td>6/4</td>
<td>Lab 6 Enzymes</td>
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<td>LQ 4 Spectrophotometry</td>
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<td>June 17</td>
<td>Cell Structure (Enzyme Report Due)</td>
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<td>June 18</td>
<td>Exam II (Chapters 4, 6)</td>
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<td>Lab 7 Cells</td>
<td>PL 5 Cells</td>
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<td>June 19</td>
<td>Plasma Membranes</td>
<td>5</td>
<td>NO LAB</td>
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<td>June 20</td>
<td>Cell Respiration</td>
<td>7</td>
<td>Lab 8 Membranes</td>
<td>PL 6 Membranes</td>
<td>LQ 5 Cells</td>
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<tr>
<td>June 21</td>
<td>Photosynthesis</td>
<td>8</td>
<td>Lab 9 Cell Respiration</td>
<td>PL 7 Cellular Respiration</td>
<td>LQ 6 Membranes</td>
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<table>
<thead>
<tr>
<th>Day</th>
<th>Lecture topic</th>
<th>Chapter</th>
<th>Lab topic</th>
<th>Pre Lab (e-campus)</th>
<th>Lab QUIZ Topic (Lab)</th>
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<tbody>
<tr>
<td>June 24</td>
<td>Exam III (Chapters 5,7,8)</td>
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<td>June 25</td>
<td>Mitosis</td>
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<td>Lab 10 Cell Cycle (Mitosis)</td>
<td>PL 8 Cell Cycle (Mitosis)</td>
<td>LQ 7  Cell Respiration</td>
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<td>June 26</td>
<td>Meiosis</td>
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<td>Lab 11 Meiosis</td>
<td>PL 9 Meiosis</td>
<td>LQ 8 Mitosis</td>
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<td>June 27</td>
<td>Mendel’s Heredity</td>
<td>12</td>
<td>Lab 12 Mendelian Genetics</td>
<td>PL 10 Genetics</td>
<td>LQ 9 Meiosis</td>
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<td>June 28</td>
<td>DNA Structure &amp; Function</td>
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<td>NO LAB</td>
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<td>LQ 10 Genetics</td>
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<td>July 01</td>
<td>Genes &amp; Proteins</td>
<td>15</td>
<td>Lab 13 Protein Synthesis</td>
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<td>July 02</td>
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<td>Final Exam (Comprehensive)</td>
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