Semester and Year: Summer 2019
Meeting Dates: June 06, 2019 – July 03, 2019
Section: 85001   Class time and days: Lec M T W R F 9:40AM - 11:40AM   Room: WH 160
Lab: M T W R 11:50AM- 1:50PM   Room: SH127

Instructor: Libiya Shah   Office: SH 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 Tuesday (with W)

Final Exam: Wednesday, July 3rd 2019 (WH 160)
Bring scantron sheet for all exams

Evaluation Procedures:

Students may earn a maximum of 800 points for the lecture and lab components combined. The final grades for the course will be assigned as follows:

4 lecture exams worth 100 points each = 400 points
13 lab activities worth 10 points each = 130 points
12 Homework assignments = 120 points
1 comprehensive final exam = 100 points
Attendance (Lab & Lecture) = 50 points
Total = 800 points

(A = 720-800; B = 640-719; C = 560-639; D = 480-559; F = 479 and below)

Attendance Policy: Attendance for lecture and lab is recommended. 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 the homework due dates and test dates.

Grace Time for Tardiness:
There is no grace time allotted for lecture or lab. If you leave the lab early (without completing the lab exercise to the instructor’s satisfaction) your pre-lab for that day will not be graded (will receive a grade of zero).

Late Work, Lab and/or Make-up Exam Policy:
Late works: Any assignment that are turned in late will be assessed a 10% penalty for each DAY it is late.

Make-Up:
ABSOLUTELY NO MAKE-UPS FOR LABS (Pre-labs) AND EXAMS!!

Final Exam: The final exam is comprehensive

Textbook

Author: Marielle Hoefnagels
Biology: Concepts and Investigations (bundled with Connect Plus access code) 4th Edition
ISBN: 9781260183894. No access code required

Lab Manual

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!!

Units of Instruction/Class Calendar: See a separate page

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. Feel free to email me with any questions that you may have and I will be happy to go over the topic again with you. Use tutors or other biology faculty 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. I often use these questions on the exams to reward students for working them out on their own. I will be happy to help you with these questions prior to the exam.
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. There are no make-up labs, if you miss a lab you will miss the points associated with the lab. ABSOLUTELY NO MAKE-UPS FOR PRE-LAB: The pre-lab should be submitted beginning of the lab period. If you are late for the lab, or did not attend a lab, you cannot turn in 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.

• **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. **Absolutely no electronic devices including laptops are allowed during lecture.**

• **Headphones are not allowed in class during lab or lecture, anyone wearing headphones during lecture exam will be given zero grade.**

• Please note it is not OK to leave/miss lectures or labs because of any outside job, remember this is your future don’t make it a missed opportunity!

**COURSE DESCRIPTION:**
Presentation of biological concepts for the non-science major. Emphasis will be on scientists and their contributions to the science field, scientific problem solving, unity of life including cells and genetic information, energy pathways important to life, and current issues in biology. (3 Lec., 3 Lab.)

**PREREQUISITES**
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.

This course consists of three hours of lecture and three hours of lab per week. Considerable preparation outside of lab and lecture times is required and expected.

**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 http://www.rlc.dcccd.edu/advising/ for more details.

College Policies and Procedures:
For Institution Policies, please refer students to the Richland website www.richlandcollege.edu (Current Students) or to www.richlandcollege.edu/syllabusinfo/syllabiiInformation.pdf

COURSE OBJECTIVES
Critical Thinking - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
Communication - 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.

CORE CURRICULUM STATEMENT:
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 DEVELOPMENT STATEMENT
Critical Thinking and empirical & quantitative skills will be demonstrated by students researching, analyzing & interpreting data derived from an experimental setting and drawing a well-informed conclusion of the data through the application of sound biological concepts.
Examples: research paper, case studies, lab report.

STUDENT LEARNING OUTCOMES:

LECTURE:

1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
3. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
4. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
5. Describe karyotyping, pedigrees, and biotechnology and provide an example of the uses of each.
6. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
7. Analyze evidence for evolution and natural selection.
8. Connect information about basic molecular structures, features and properties as they relate to biology*

*The 8th lecture outcome is specific for BIOL-1408 courses at Richland College. All other outcomes are part of the Texas common core requirement for all BIOL-1408 courses

LAB:
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. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
5. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
6. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
7. Photosynthesis, and cellular respiration.
8. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
9. Identify the importance of karyotypes, pedigrees, and biotechnology.
10. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
11. Analyze evidence for evolution and natural selection.