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

Semester and Year: Spring 2019
Section: 83004
Class time and days: Tues 9:30AM – 10:50AM Room: WH277
Thurs 9:30AM – 10:50AM Room: WH277
Lab: Thurs. 11:00AM – 1:50PM Room: SH127

Instructor: Lorna Johnson Contact Info: 972-238-6041 email: Ljohnson4@DCCCD.edu Office Hours: T,TR By request at the ACCESS center

Last date to withdraw: Wednesday April 17th 2019

Final Exam Date and time: Thurs. May 16th 2019

Evaluation Procedures: 4 lecture exams worth 100 points each = 400 points
13 lab quiz grades worth 10 points each = 130 points
Activities or assignments (membrane model) = 20 points
Interactive classroom assignments (during review sessions) = 50 points
Lab Attendance Grade = 50 points
1 comprehensive final exam = 100 points
Learnsmart On-line Homework = 100 points
Total = 850 points

Note: Homework is due the night before each test by 11pm

(A = 765-850; B = 680-764; C = 595-679; D = 510-594; F = 509 and below)

Attendance Policy: Attendance for lecture and lab is mandatory and recommended

Academic Progress: Students are encouraged to discuss academic goals and degree completion with their instructors. Specific advising is available throughout the semester. Check http://richlandcollege.edu/advising/ for more details.

Hoefnagels 4th Edition Connect Access Card – 1 semester stand-alone homework code only (with e-book): ISBN: 9781260183894, this can be purchased directly from the bookstore or when the 2 week free access code runs out, on-line from the instructors e-campus site.

Note: Students should not purchase a random on-line access code as they will be charged $120 rather than the $50 one semester charge that Richland negotiated.

Lab Manual
The e-lab manual is available for download and printing on instructor’s e-campus site at no cost.
Make sure you print these and bring them to each lab or you’ll lose quiz points

Revised for Spring 2019
**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:**
Prerequisite: One of the following must be met: (1) DREA 0093 AND DWRI 0093; (2) English as a Second Language (ESOL) 0044 AND 0054; or (3) have met Texas Success Initiative (TSI) Reading and Writing standards AND the college Writing score prerequisite requirement.

**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.

**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

**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*

**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. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
8. Identify the importance of karyotypes, pedigrees, and biotechnology.
9. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
10. Analyze evidence for evolution and natural selection

Revised for Spring 2019
**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.

**Race to finish:** (https://www.richlandcollege.edu/apply-reg/finishrace/pages/default.aspx) is where students can find -- in one place -- all types of assistance and resources that can help them complete their degree(s) and/or certificate(s), seamlessly transfer to a university or enter the workforce with better opportunities.

**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: https://alt.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 https://alt.richlandcollege.edu/admissions/ and https://www.richlandcollege.edu/services/Advising/Pages/default.aspx for more details.

**College Policies and Procedures:** For Institution Policies, please refer to: http://www.richlandcollege.edu/syllabipolicies

**Instructor Policies and Suggestions for Student Success:**
**Instructor Policies:** It is imperative that students conduct themselves properly at all times. Persistent talking, disturbances, or rude behavior will not be tolerated, and you will be asked to leave. However, students are encouraged to raise questions pertinent to the material being presented. **NO EATING, DRINKING, OR USE OF A CELL PHONE (TEXTING, PICTURES OF NOTES, ETC.)** will be allowed in the classroom or laboratory. Please make sure all pagers, cell phones, and other electronic devices are switched off at all times and put away during the entire class-lecture or lab. No headphones are allowed in lecture or lab; anyone wearing headphones, etc. during a lecture or lab exam will be given a zero. During lectures, you should be constantly supplementing your lecture notes since some topics may need clarification and will not be in the notes and will be of use when studying for exams, so listen carefully! **You must also print out and bring the appropriate lab print to each lab; failure to do so will result in a loss of points.** Please note it is not OK to leave/miss lectures or labs because of an outside job. Remember this is your future; don’t make it a missed opportunity!

**Late Work, Lab and Make-up Exam Policy:** There are no make-up labs; if you miss a lab you must miss the points associated with the lab. A make-up lecture exam will only be given if the student has contacted the instructor before the exam. The instructor will determine if the make-up time will be before the next class or during the final exam. A student may make-up only one lecture exam; any other exams missed will be a 0.

**Suggestions for Student Success:**
1. Attend all classes; be on time; please focus on material at hand
2. Read all assignments (chapters in the book or notes on ecampus; and study the lab manual before doing the labs); keep up with vocabulary
3. Study along as we go over topics—do not cram—study groups are helpful.
4. Be an active learner—in class, take notes and ask questions—otherwise no talking
5. Seek assistance if you have problems—use the science corner, peer tutoring and my help.
6. I wish you success this semester!
<table>
<thead>
<tr>
<th>WEEK</th>
<th>WEEK OF:</th>
<th>LAB TOPIC (Thursday 8.00am - 10.50am) SH127</th>
<th>TUESDAY LECTURE 9:30-10:50</th>
<th>THURSDAY LECTURE 9:30-10:50</th>
<th>Hoefnagels 4th Ed CHAPTERS</th>
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<tbody>
<tr>
<td>1</td>
<td>1/21/2019</td>
<td>Ex 1 &amp; 2: Orientation, Safety &amp; Scientific Method</td>
<td>Scientific Study of Life</td>
<td>The Chemistry of Life</td>
<td>Chapters 1 &amp; 2</td>
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<td>2</td>
<td>1/28/2019</td>
<td>Ex 3: Metric System &amp; Microscopy</td>
<td>Chemistry of Life cont.d</td>
<td>Chemistry of Life cont.d</td>
<td>Chapters 2</td>
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<td>3</td>
<td>2/4/2019</td>
<td>Ex 4: Life is Chemistry (chemical tests)</td>
<td>Cell Structure &amp; Function</td>
<td>Cell Structure &amp; Function</td>
<td>Chapter 3</td>
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<td>4</td>
<td>2/11/2019</td>
<td>Ex 5: Diffusion &amp; Cell Model</td>
<td>Review</td>
<td>EXAM 1 - Chapters 1-3</td>
<td>Chapters 1-3</td>
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<td>5</td>
<td>2/18/2019</td>
<td>Ex 6: Metabolism &amp; Enzymes</td>
<td>The Energy of Life</td>
<td>The Energy of Life</td>
<td>Chapters 4</td>
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<td>2/25/2019</td>
<td>TCCTA Meeting No Lab</td>
<td>Photosynthesis</td>
<td>TCCTA Meeting No Lecture</td>
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<td>8</td>
<td>3/11/2019</td>
<td>SPRING BREAK</td>
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<td>9</td>
<td>3/18/2019</td>
<td>Ex 8: Respiration</td>
<td>How Cells Release Energy - Respiration</td>
<td>Review</td>
<td>Chapter 6</td>
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<td>10</td>
<td>4/1/2019</td>
<td>Ex 9: DNA, the Master Molecule</td>
<td>EXAM 2 - Chapters 4-6</td>
<td>DNA Structure &amp; Gene Function</td>
<td>Chapter 7</td>
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<td>11</td>
<td>4/8/2019</td>
<td>Ex 10: Cellular reproduction (Mitosis &amp; Meiosis)</td>
<td>DNA Structure &amp; Gene Function</td>
<td>DNA Replication &amp; Mitosis</td>
<td>Chapter 7 &amp; 8</td>
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<td>Ex 11: Mendelian Genetics</td>
<td>Mitosis &amp; Meiosis</td>
<td>Review</td>
<td>Chapter 8 &amp; 9</td>
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<td>13</td>
<td>4/22/2019</td>
<td>No Lab - Meet for Lecture in Lab</td>
<td>EXAM 3-Chapters 7-9</td>
<td>Patterns of Inheritance</td>
<td>Chapters 7-9</td>
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<td>14</td>
<td>4/29/2019</td>
<td>Ex 12: Human Genetics</td>
<td>Patterns of Inheritance</td>
<td>Biotechnology</td>
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<td>NO LABS</td>
<td>FCOMPREHENSIVE FINAL</td>
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