Cell Biology Lecture fall 2017
BIOL 3412-01
Associated Labs: A-F
Lecture: (Section-01): Tuesdays and Thursdays 8:00 a.m. – 9:15 a.m. SCIENCE BUILDING 2.106.

Instructor: Megan Keniry, Ph.D.
e-mail: megan.keniry@utrgv.edu
Office: ESCNE 2.304
Phone: 956-665-7463
Office hours: Wednesday and Thursday 1:00-3:00 p.m. in ESCNE 2.304 and by appointment.

How to Get In Touch:

I can be reached by email: megan.keniry@utrgv.edu. Do not use non-UTRGV email accounts such as Gmail or Yahoo- as per federal law.

Office hours: Wednesdays and Thursdays 1:00-3:00 p.m. in SCNE 2.304 or by appointment. Everyone in the class should come to office hours at least twice this term! There is a special policy for end of term office hours (based on very high student demand). If you would like to go over Exams 1-3, you must do so by November 30th. Office hours after this date are dedicated to Exam 4, the final review and any other questions you may have. This policy is to accommodate the large class size. I will remind you of this end of term office hour policy with announcements in class and on blackboard.

“I don’t get this.” If you are thinking this, get to office hours or make an appointment! Don’t wait to get help! If you score below 75 percent on any exam, come to office hours.


Course Description: A study of cell structure and function with emphasis on bio-energetics, membranes, genes, and genetic control, cell division and its regulation, and cellular differentiation.

Prerequisites:
(Undergraduate level BIOL 1406 Minimum Grade of D or Undergraduate level BIOL 1306 Minimum Grade of D or Undergraduate level BIOL 1401 Minimum Grade of D or Undergraduate level BIOL 1487 Minimum Grade of D or Undergraduate level BIOL 114 Minimum Grade of D or Undergraduate level BIOL 1305 Minimum Grade of D or Undergraduate level BIOL 1311 Minimum Grade of D or Undergraduate level BIOL 1405 Minimum Grade of D)
(Undergraduate level BIOL 1407 Minimum Grade of D or Undergraduate level BIOL 1307 Minimum Grade of D or Undergraduate level BIOL 1402 Minimum Grade of D or Undergraduate level BIOL 1488 Minimum Grade of D or Undergraduate level BIOL 1306 Minimum Grade of D or Undergraduate level BIOL 1312 Minimum Grade of D or Undergraduate level BIOL 1406 Minimum Grade of D) and (Undergraduate level CHEM 2123 Minimum Grade of D or Undergraduate level CHEM 2102 Minimum Grade of D) and (Undergraduate level CHEM 2323 Minimum Grade of D or Undergraduate level CHEM 2302 Minimum Grade of D)

Course Objectives:
- Learn about cellular architecture and how it facilitates cellular processes
- Develop critical thinking skills for interpreting experimental results and designing new experiments
- Work on a group project (in lab class)
- To learn basic differences between prokaryotic and eukaryotic cells
- To learn about the most basic eukaryotic organelles (their composition and functions)
- To learn about DNA replication, transcription and translation within a cellular context
- To learn about chromosomal structure and how it facilitates eukaryotic gene regulation
- To learn about membrane composition and function
- To learn about membrane transport
- To learn about the cytoskeleton and how it interacts with the rest of the cell
- To learn about cellular signal transduction
- To learn about how cells comes together to form a tissue

Course Expectations:
- Students need to come to class on time and take notes
- Students should read the book and do assigned homework questions
- Students should utilize practice exams
- Please, contact me if you need help with anything.
- Students should take an active role in learning by doing assignments and asking questions

Learning Objectives for Core Curriculum Requirements
BIOL 3412 satisfies Texas Higher Education Coordinating Board (THECB) for the core areas of Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, and Personal Responsibility.
Grading policy (lecture and lab contribute 75% and 25% of overall grade respectively)

Lecture Grade (75 % of overall grade):
Exams 1-4 =80% of lecture grade
MANDATORY Final Exam =20% of lecture grade
= 100% of lecture grade

Lab Grade (25% of overall grade):
Weekly quizzes =60% of lab grade
Lab Midterm =20% of lab grade
Lab Final =20% of lab grade
=100% of lab grade

Grading Scale:
90 - 100 points A
80 – 89 points B
70 – 79 points C
60 – 69 points D
Below 60 points F
### Calendar of Activities

#### Tentative Lecture Schedule:

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<th>Lecture</th>
<th>Date</th>
<th>Topic</th>
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<td>1</td>
<td>August 29</td>
<td>Chapters 1&amp;3 Intro and Protein Structure</td>
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<tr>
<td>2</td>
<td>August 31</td>
<td>Chapter 4 DNA/chromosomes</td>
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<td>3</td>
<td>Sept. 5</td>
<td>Chapter 5 DNA replication</td>
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<td>4</td>
<td>Sept. 7</td>
<td>Chapter 5 DNA repair &amp; recombination</td>
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<td>5</td>
<td>Sept. 12</td>
<td>Chapter 6 Transcription</td>
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<td>6</td>
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<td>7</td>
<td>Sept. 19</td>
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<td>9</td>
<td>Sept. 26</td>
<td>Chapter 8 DNA/RNA Technology</td>
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<td>10</td>
<td>Sept. 28</td>
<td>Chapter 8 and membranes</td>
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<td>11</td>
<td>Oct. 3</td>
<td>Chapter 10 Membrane Structure</td>
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<td>12</td>
<td>Oct. 5</td>
<td>Chapters 10-11 Membrane Structure and Transport</td>
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<td>Oct. 10</td>
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<td>15</td>
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<td>Chapters 12 Membrane enclosed organelles</td>
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<td>Chapters 13 Cellular sorting pathways</td>
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<td>Oct. 24</td>
<td>Chapter 14 Mitochondria and chloroplasts</td>
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<td>Chapter 14 Special Assignment in lecture hall</td>
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<td>19</td>
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<td>Chapter 15 Cellular communication pathways (general)</td>
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<td>Chapter 15 Receptor Signaling</td>
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<td>EXAM III Chapters 12-15</td>
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<td>Nov. 9</td>
<td>Chapter 16 Cytoskeleton</td>
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<td>23</td>
<td>Nov. 14</td>
<td>Chapter 16 Cytoskeleton</td>
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<td>24</td>
<td>Nov. 16</td>
<td>Chapter 17 Cell cycle</td>
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<td>25</td>
<td>Nov. 21</td>
<td>Chapter 17 and 18 Cell cycle &amp; apoptosis</td>
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<td>26</td>
<td>Nov. 28</td>
<td>Chapter 19 Extracellular Matrix, cell junctions stem cells</td>
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<td>27</td>
<td>Nov. 30</td>
<td>Chapters 19 &amp; 20 Cancer</td>
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<td>28</td>
<td>Dec. 5</td>
<td>EXAM IV Chapters 16-20</td>
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**Important Dates:**

First Day of classes: August 29th  
Final Exam: Tuesday 12.12.17 at 8am
Make-up Exams

Make-up exams are **ONLY** for official university events such as a member of the band for a concert, an athlete for a contest, an approved holy day or major illness **with** signed Dr.’s excuse. **You need to make up any missed exam within one week. If you miss an exam, schedule the make up with Dr. K. as soon as possible. Thank you!**

UTRGV Policy Statements

*The UTRGV disability accommodation, mandatory course evaluation statement and sexual harassment statement are required on all syllabi. Additional policy statements are optional, such as those covering attendance, academic integrity, and course drop policies.*

**STUDENTS WITH DISABILITIES:** Required on all syllabi. Do not modify.

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. **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:** Required on all syllabi. Do not modify.

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account ([http://my.utrgv.edu](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:

**Fall 2017 (full semester) Nov. 15 – Dec. 6**

**ATTENDANCE:** Recommended on all syllabi; may be modified by the instructor as long as it is not inconsistent with UTRGV policy.

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:** Recommended on all syllabi.

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:** Required on all syllabi. Do not modify.
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](http://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:** Recommended on all syllabi; may be modified by the instructor as long as it is not inconsistent with UTRGV policy.
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.