Cell Biology Lecture spring 2018
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 April 19th. 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) and
(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 the cell cycle in detail
- 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 = 15% of lab grade
Lab Final = 15% of lab grade
Poster = 10% 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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<tr>
<th>Lecture</th>
<th>Date</th>
<th>Topic</th>
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<tr>
<td>1</td>
<td>January 16</td>
<td>Chapters 1&amp;3 Intro and Protein Structure</td>
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<tr>
<td>2</td>
<td>January 18</td>
<td>Chapter 4 DNA/chromosomes</td>
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<td>3</td>
<td>January 23</td>
<td>Chapter 5 DNA replication</td>
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<td>4</td>
<td>January 25</td>
<td>Chapter 5 DNA repair &amp; recombination</td>
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<td>5</td>
<td>January 30</td>
<td>Chapter 6 Transcription</td>
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<td>6</td>
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<td>Chapter 6 Translation</td>
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<td>Exam I Chapters 1, 3-6</td>
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<td>Chapter 7 Transcriptional Regulation</td>
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<td>9</td>
<td>February 13</td>
<td>Chapter 8 DNA/RNA Technology</td>
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<td>10</td>
<td>February 15</td>
<td>Chapter 8 and membranes</td>
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<td>11</td>
<td>February 20</td>
<td>Chapter 10 Membrane Structure</td>
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<td>12</td>
<td>February 22</td>
<td>Chapters 10-11 Membrane Structure and Transport</td>
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<td>February 27</td>
<td>Chapter 11 Membrane Transport</td>
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<td>EXAM II Chapters 7-8, 10-11</td>
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<td>15</td>
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<td>Chapters 12 Membrane enclosed organelles</td>
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<td>March 8</td>
<td>Chapters 13 Cellular sorting pathways</td>
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<td>17</td>
<td>March 20</td>
<td>Chapter 14 Mitochondria and chloroplasts</td>
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<td>March 22</td>
<td>Chapter 14 Special Assignment in lecture hall</td>
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<td>19</td>
<td>March 27</td>
<td>Chapter 15 Cellular communication pathways (general)</td>
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<td>March 29</td>
<td>Chapter 15 Receptor Signaling</td>
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<td>April 3</td>
<td>EXAM III Chapters 12-15</td>
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<td>22</td>
<td>April 5</td>
<td>Chapter 16 Cytoskeleton</td>
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<td>23</td>
<td>April 10</td>
<td>Chapter 16 Cytoskeleton</td>
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<tr>
<td>24</td>
<td>April 12</td>
<td>Chapter 17 Cell cycle</td>
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<td>25</td>
<td>April 17</td>
<td>Chapter 17 and 18 Cell cycle &amp; apoptosis</td>
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<td>26</td>
<td>April 19</td>
<td>Chapter 19 Extracellular Matrix, cell junctions stem cells</td>
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<td>27</td>
<td>April 24</td>
<td>Chapters 19 Extracellular Matrix, cell junctions stem cells</td>
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<td>April 26</td>
<td>Chapter 20 Cancer</td>
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<td>28</td>
<td>May 1</td>
<td>EXAM IV Chapters 16-20</td>
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**Important Dates:**

- **First Day of classes:** January 16th
- **Final Exam:** Tuesday May 8th 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!

Spring 2018 Term (January 16 – May 10)

Oct. 30 (Mon.) Registration Begins
Jan. 10 (Wed.) Payment Due
Jan. 12 (Fri.) Waitlist Ends
Jan. 15 (Mon.) Last day to withdraw (drop all classes) and receive a 100% refund
Jan. 16 (Tues.) Martin Luther King Jr. Holiday. No classes.
Jan. 19 (Fri.) Last day to add a class or register for Spring classes
Jan. 22 (Mon.) Last day to withdraw (drop all classes) and receive an 80% refund
Jan. 29 (Mon.) Last day to withdraw (drop all classes) and receive a 70% refund
Feb. 5 (Mon.) Last day to withdraw (drop all classes) and receive a 50% refund
Jan. 31 (Wed.) Census Day (last day to drop without it appearing on the transcript)
Feb. 12 (Mon.) Last day to withdraw (drop all classes) and receive a 25% refund
Mar. 12 – Mar. 17 (Mon. – Sat.) Spring Break. No classes
Mar. 30 – Mar. 31 (Fri. – Sat.) Easter Holiday. No classes.
April 12 (Thurs.) Last day to drop a class (grade of DR) or withdraw (grade of W)
May 3 (Thurs.) Study Day. No classes.
May 4 – 10 (Fri. – Thurs.) Final Exams
May 11 – 12 (Fri. – Sat.) Commencement Exercises
May 14 (Mon.) Grades Due at 3 p.m.

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); 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:
Spring 2018 (full semester) April 11 – May 2

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.

**STUDENT SERVICES:** Recommended on all syllabi.

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)