UTRGV COURSE SYLLABUS TEMPLATE

BMED 1101/1104: Mission 1—Biomolecules Term: Fall 2015, 8/31-9/27 Meeting times and location: Sabal 2.110 Tues 8.00 am - 9.40 am (Section 1) Tues 1.40 pm - 3.20 pm (Section 2) Tues 5.55 pm – 7.35 pm (Section 3)	Instructor Name: Dr. Sue Anne Chew Instructor Office and Telephone #: BRHP 2.112, 956-882 6518 Instructor Email: SueAnne.Chew@utrgv.edu Instructor Office Hours: Mon and Thurs, 2-4 pm or by appointment Instructional Facilitator Name: Ramiro Tovar (Section 1), Cecilia Orta (Section 2 and 3) Instructional Facilitator Email: Ramiro.Tovar01@utrgv.edu, Cecilia.Orta01@utrgv.edu

***This syllabus represents the current course plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*

Textbook and/or Resource Material

All required content for this course is paid for via course fees and is delivered via iPad, which will be issued to you at your orientation meeting for the program. This learning material will include carefully curated readings, video, interactives, animations, apps and other sources.

The following materials, and many others are included:

- *Principles of Biology,* Sapling Learning, Modules 1-12, and 44-50.
- *Biology,* OpenStax College, https://openstaxcollege.org/textbooks/biology
- *Conceptos de Biología,* OpenStax College, click here for access
- Introductory Biology, Carnegie Mellon University, click here for access
- Khan Academy, Biology, https://www.khanacademy.org/science/biology
  Khan Academy Biología, https://es.khanacademy.org/science/biology
- The Cassiopeia Project, https://www.youtube.com/user/cassiopeiaproject

Course Description and Prerequisites

Welcome to the first step of your journey into the world of the biomedical sciences. As you reach each of your learning goals, you will develop the knowledge and skills necessary to contribute to the health and well being of many members of your community. You will also learn what the professionals in the field know about the inner workings of the human body and medicine. It will be a fascinating trip through one of the fastest growing areas of scientific study. In this first mission, you will study:

- Atoms and Molecules
- Macromolecules: Carbohydrates, lipids, proteins, and nucleic acids
- RNA and DNA
- Gene Expression and Regulation

Learning Objectives/Outcomes for the Course

As you do the activities in this course, you will work toward demonstrating competence in each of these programmatic objectives:

- Apply knowledge of biology in defining and discussing basic biomedically-related science concepts. (Level 1)
- Describe the structure and function of the body and explain the basis of major pathologies and diseases at the molecular, cellular, organ, and system levels. (Level 1)

- Critically examine the science behind disease prevention and health promotion, especially as related to common chronic conditions. (Level 1)
- Recall the most relevant equations used in the biomedical sciences, describe the phenomenon they explain, and cite how and when they are applied. (Level 1)
- Describe the social and environmental determinants of health and their influences on healthcare and biomedical research and discuss related impacts on individuals, communities, and populations - regionally, nationally and globally. (Level 1)
- Describe the basic principles of scientific method including common research approaches, methods and designs. (Level 1)
- Identify and develop biomedical science questions as they emerge in case-based, lab and clinical activities and identify and apply relevant evidence to answer those questions. (Level 1)
- Set up, operate, clean and store standard biological science equipment such as a centrifuge, spectrophotometer, pH meter, balance, bunsen burner, pipettes, pipettors, micropettor, the microplate reader and understand the principles of operations. (Level 1)
- Perform basic laboratory skills such as measuring mass and volume, making and diluting solutions, adjusting pH of solutions and quantifying concentration without introducing significant error in results. (Level 1)
- Handle and culture specimens according to established laboratory criteria to prevent health hazards or the introduction of clinically significant error in test results. (Level 1)
- Understand the principles of common laboratory techniques and be able to apply them in a simulated context. (Level 1)
- Demonstrate a desire to help others and sensitivity to others' needs and feelings. (Level 1)
- Demonstrate knowledge of socio-cultural factors that affect interaction and behaviors; multiple dimensions of diversity; strategies for interacting effectively with people from diverse backgrounds. (Level 1)
- Demonstrate ability to work collaboratively with others to achieve shared goals. (Level 1)
- Behave in an honest and ethical manner; cultivate personal and academic integrity and adhere to ethical principles and follow rules and procedures. (Level 2)
- Consistently fulfill obligations in a timely and satisfactory manner; take responsibility for personal actions and performance. (Level 2)
- Set goals for continuous improvement and for learning new concepts and skills; solicit and respond appropriately to feedback. (Level 2)
- Appropriately utilize campus, community, and other resources to help one succeed in the university setting, including progressive awareness of how and when to seek academic assistance or other professional support. (Level 2)

Grading Policies

You will demonstrate your achievement of program competencies by completing the following types of activities. You must receive at least a 70% to receive credit for demonstrating competence.

You will complete the following kinds of activities as you work your way through the program:

Checks for Understanding (CFUs) are quiz-like questions with dynamic feedback so you and your instructors can monitor your progress and understanding of key concepts. These key concepts are foundational and key to your success in the biomedical sciences. **Therefore, you must do the checks for understanding over until you are able to answer all of the questions correctly**. *You will receive 40 points for each check for understanding activity for a total of 280 points or 14% of your total grade. You may redo checks for understanding as often as necessary to get the answers correct***.**

Practice consists of quiz-like questions with dynamic feedback designed to determine your knowledge and skills such as problem solving. *You will receive 55 points for each practice activity for a total of 220 points or 11% of your*

total grade. You must receive at least a 70% in order to move forward. You may do practice activities as many times as you like and the highest score you receive will be recorded.

Contextualized Performance-Based Assessment (PBA) activities require you to *apply* content and concepts you have learned to aspects of human biology and health. Some of these assessments will be done in class. Your instructor will grade them. *In this Mission, you can earn up to 350 points or 17.5% of your total grade on the three Performance-Based Assessments.*

Team-Based Learning activities (TBL) are completed in groups in class, but may require out of class preparation. These activities emphasize *integration* of content and concepts learned in other activities and emphasize diseases, conditions, and other aspects of human biology and health. *You can earn up to 350 points or 17.5% of your total grade on Team-Based Learning activities*. Team-based Learning activities are graded using a rubric, and all team-members receive the same grade.

End of Mission Exam: After you have successfully completed all of the activities in the Mission, you will review what you have learned and take an exam that covers all of the content in Mission One. You will take this exam in class and not on TEx. *You can earn up to 800 points on the exam for a total of 40% of your final grade. You can retake the final exam one time to improve your grade.*

NOTE: Unless they have special permission from the instructor, students must complete any retakes of Checks for Understanding, Practice Activities, and Final Exam by October 12th.

Staying On Track
The TEx app on your iPad will help you to keep track of your schedule of activity due dates and will let you know if you get off track. Your instructional facilitator and instructors will also be monitoring your work and are there to help you; contact them immediately if you start to struggle. If you get behind, don't give up—work with them to make a plan to get back on track.

Absence and Makeup Policy
Coached Study Hours and Class Activities are mandatory. If an excused absence is unavoidable, at the professor's sole discretion, students may complete an alternate assignment which may include completing an individual version of the Team-based Learning activity or reading and summarizing a scientific article chosen by the professor.

Calendar of Activities
The UTRGV academic calendar can be found at http://my.utrgv.edu at the bottom of the screen, prior to login. Important dates for Fall 2015 include:

August 31	Classes Begin
September 7	Labor Day Holiday; university closed
September 16	Last day to drop a class before it appears on the transcript and counts toward the "6-drop" limit. Last day to receive a 100% refund for dropped classes (other policies apply when a student is withdrawing from all classes).
November 18	Drop/Withdrawal Deadline; last day for students to drop the course and receive a DR grade. After this date, students will be assigned a letter grade for the course that will count on the GPA.
November 26-27	Thanksgiving Holiday; university closed
December 10	Study Day; no classes
December 11-17	Final Exams

Date	Day	Activity	Points	Contact
Week 1 – 8/31 to 9/6				
8/31	Monday	The Term Begins!		IF

		Module 1 Survey		
9/1	Tuesday	Check for Understanding (CFU) 1.1 Study of Life	40	IF
9/2	Wednesday	CFU 1.2 : Atoms and Molecules	40	IF
9/3	Thursday	Module 1 Practice	55	IF
9/4	Friday	Module 2 Survey		IF
In Class	During scheduled class time	Class Intro and Virtual Rounds		Faculty
Week 2 – 9/7 to 9/13				
9/7	Monday	Labor Day		
9/8	Tuesday	CFU 2.1: Biological Macromolecules	40	IF
9/9	Wednesday	CFU 2.2 Proteins	40	IF
9/10	Thursday	Module 2 Practice	55	IF
9/11	Friday	Performance-based Assessment, Part 1	100	Faculty
In Class	During scheduled class time	Team-based Learning, Part 1	100	Faculty
Week 3 – 9/14 to 9/20				
9/14	Monday	Module 3 Survey CFU 3.1: DNA Structure & Function	40	IF
9/15	Tuesday	CFU 3.2: Genes & Proteins	40	IF
9/16	Wednesday	Module 3 Practice	55	IF
9/18	Friday	Performance-based Assessment, Part 2	100	Faculty
9/18	Friday	Team-based Learning, Part 2	100	Faculty
In Class	During scheduled class time	Go over Module 1		Faculty
Study Hours	During Study Hours Time	Go over Module 2		Faculty
Week 4 – 9/21 to 9/27				
9/21	Monday	Module 4 Survey		
9/22	Tuesday	CFU 4.1: Gene Regulation	40	IF
9/23	Wednesday	Module 4 Practice	55	IF
9/25	Friday	Performance-based Assessment, Part 3	150	Faculty
9/25	Friday	Team-based Learning, Part 3	150	Faculty
In Class	During scheduled class time	Go over Module 3		Faculty
Study Hours	During Study Hours Time	Go over Module 4		Faculty
Study Hours	**Week 5 Study Hours**	End of Mission Exam	300	Faculty
	Total		1500	

UTRGV Policy Statements

STUDENTS WITH DISABILITIES:
If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. **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 accessibility@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 accessibility@utrgv.edu.

MANDATORY COURSE EVALUATION PERIOD:
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. Online evaluations will be available Nov. 18 – Dec. 9, 2015. Students who complete their evaluations will have priority access to their grades.

ATTENDANCE:
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:
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, 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:
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, 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 in an environment free from sexual misconduct and discrimination.

COURSE DROPS:
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.