THE UNIVERSITY OF TEXAS RIO GRANDE VALLEY

BMED 4310-01: MEDICAL BIOCHEMISTRY

SYLLABUS – FALL 2016

INSTRUCTOR & OFFICE HOURS:

Dr. Erich Wittmer
Office: LHSB 1.410
Office Phone: 956-882-7156
Email: erich.wittmer@utrgv.edu

OFFICE HOURS:
M 10:00 AM – 12:00 PM
T 10:00 AM – 12:00 PM
W 10:00 AM– 12:00 PM
Or by Appointment

MEETING TIMES AND LOCATION:

Tuesday and Thursday 8:00-9:15 AM, SABH 2.110A /Brownsville Campus

TEXTBOOK AND/OR RESOURCE MATERIAL:

Lieberman, M. & Marks, A. (2012). Marks' Basic Medical Biochemistry: A Clinical Approach. 4th edition. Lippincott, Williams & Wilkins. ISBN 978-1608315727

COURSE DESCRIPTION:

Develops student understanding of biochemical principles particularly as related to human metabolic processes in health and disease. The discipline of biochemistry developed as chemists studied the molecules of cells, tissues and body fluids, and physicians, scientists and geneticists probed the inheritance patterns and molecular basis of diseases. Tools of molecular biology now permit detailed and sophisticated diagnostic tools, molecular explanations, and treatments, of many disease processes. Homeostasis and proper functioning of the body requires a delicate balance amongst essential nutrients taken in or synthesized, appropriate metabolism in response to internal and external environment, and disposal of waste products. Two basic metabolic requirements are: synthesize everything cells need that is not supplied by the diet, and protect internal environment from toxins and changing external conditions. Dietary components are metabolized by: fuel oxidative pathways, fuel storage pathways, biosynthetic pathways, and detoxification or waste-disposal pathways

PRE-REQUISITES/ CO-REQUISITES:

BMED 1101, BMED 1103 Requisite of BMED 1102

COURSE LEARNING OUTCOMES:

This course aims to provide students with a basic understanding of:

1. Have improved acknowledge applied to biomedicine, master the name and basic structure of important biochemical molecules and pathway
2. Understand the relationships between biochemical molecules, pathway and human diseases.
3. Read and understand scientific literature in biochemical research.
4. Link concepts learned to other disciplines within the biomedical sciences
5. Communicate, understand, and apply the information learned throughout the course

GRADING POLICIES: (PASSING GRADE FOR THIS COURSE IS C)

Homework, Quizzes, and Attendance	15%
Exam 1	25%
Exam 2	25%
Exam 3 – Final	35%

Score Range	Grade
90-100	A
80-89	B
70-79	C
60-69	D

COURSE IMPORTANT DATES:

The UTRGV academic calendar can be found at http://my.utrgv.edu (Important dates for Fall 2016): Fall 2016 Term (August 29 – December 15)

Aug 26 Waitlist ends Last day to withdraw (drop all classes) for a 100% refund

Aug 29 Fall classes begin Sept 1 Last day to add or register for Fall classes

Aug 29 – Sept 2 Last day to withdraw (drop all classes) for an 80% refund

Sept 5 Labor Day Holiday, no classes

Sept 6 - Sept 12 Last day to withdraw (drop all classes) for a 70% refund

Sept 14 Census day (last day to drop without it appearing on the transcript)

Sept 13 - Sept 19 Last day to withdraw (drop all classes) for a 50% refund

Sept 20 - Sept 26 Last day to withdraw (drop all classes) for a 25% refund

Nov 17 Last day to drop (DR grade) a class or withdraw (grade of W)

Nov 24 - Nov 25 Thanksgiving Holiday, no classes

Dec 8 Study Day, no classes

Dec 9 – Dec 15 Final Exams

CALENDAR OF ACTIVITIES

WEEK	CLASS	DATE	LECTURE
1	1	08/30	Introduction to biochemistry
	2	09/01	Energy and Enzymes
2	3	09/06	Carbohydrate structure
	4	09/08	Glycolysis
3	5	09/13	TCA
	6	09/15	HMP Shunt
4	7	09/20	Glycogen
	8	09/22	Gluconeogenesis
5	9	09/27	Other carbohydrate metabolism
	10	09/29	Clinical Case Review
6	11	10/04	Exam 1 Review
	12	10/06	**Exam 1**
7	13	10/11	Lipid digestion and absorption
	14	10/13	Fatty acid metabolism
8	15	10/18	Fatty acid synthesis
	16	10/20	Cholesterol synthesis and metabolism
9	17	10/25	Vitamins
	18	10/27	Vitamin Deficiencies + Exam Review
10	19	11/01	**Exam 2**
	20	11/03	Amino acid digestion and absorption
11	21	11/08	Amino acid metabolism
	22	11/10	Urea cycle

12	23	11/15	DNA and RNA Structure
	24	11/17	DNA metabolism
13	25	11/22	DNA to RNA
	26	11/24	Protein Structure and Protein synthesis
14	27	11/29	Thanksgiving
	28	12/01	Tissue metabolism
15	29	12/06	FINAL EXAM REVIEW
	30	12/13	Final

ATTENDANCE POLICY:

Attendance is mandatory. Any disrespect will imply a reduction of 10% of the final grade. There will be no makeup assignments given regardless of circumstance for this course.

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, 2016 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.