

THE UNIVERSITY OF TEXAS RIO GRANDE VALLEY

College of Health Affairs

Department of Health & Biomedical Sciences

BMED 3102-01 *Neurochemistry* – Spring 2017

Instructor: Ms. Ifelayo Adefuye
Office: BHRP 1.115
Phone: (956) 882- 7667
Email: Ifelayo.adebye@utrgv.edu
Class Schedule: W 10:50am – 11.40am, BSABH. 2.110

Office Hours: M- F 12:00 pm – 3:00 pm or by appointment

Textbook and/or Resource Material

Textbook: ***Basic Neurochemistry*** by Brady et al. (2012)
Academic Press (ISBN 978-0-12-374947-5)

Chapters of this text that are used for this class will be explained in class

Format:

Active learning, lecture and discussions.

Course Description

An interdisciplinary course investigating the chemical processes involved in central nervous system functioning and communication. Emphasis will be placed on the chemical aspects of synthesis, metabolism, and release of neurotransmitters. The role of neurochemistry in behavioral and neurological disease states will be evaluated. Current research topics in this area will also be presented.

Student Learning Outcomes

At the end of this course, students that successfully complete all course objectives are expected to:

1. Acquisition of critical thinking skills applied to neuroscience
2. To understand and apply neuroscience methods and recognize its application.
3. To link different areas and concepts of neuroscience to form a cross-disciplinary, integrated understanding of the field.

4. To understand neuronal systems from cellular to system level, and communicate successfully how the systems' components work and what roles they play.
5. Ability to understand and apply neuroscience principles in health and diseases.

Departmental learning outcomes that are met by this course are:

1. Students will be able to a) demonstrate a substantial factual knowledge base and b) grasp of the basic concepts of neuroscience and c) be able to relate them to human health and disease.
2. Students will learn to answer questions from standardized graduate examinations such as MCAT.
3. Students will be able to research a topic using standard electronic and non-electronic methods.
4. Students will appreciate the role of research in the biological, biomedical and clinical sciences.

Class Schedule* Subjected to changes*

Day	Date	Activities
Wed	01/18/2017	Ch. 4. Electrical Excitability and Syllabus Overview
Wed	01/25/2017	Ch. 4. Membrane-voltage dependent permeability, voltage-gated ion Channels
Wed	02/01/2017	Ch. 12. Synaptic transmission I: presynaptic mechanisms
Wed	02/08/2017	Ch. 12. Synaptic transmission II: postsynaptic mechanisms
Wed	02/15/2017	Ch. 17. Glutamate and glutamate receptors I
Wed	02/22/2017	Ch. 17. Glutamate and glutamate receptors I
Wed	03/01/2017	GABA and GABA receptors I
Wed	03/08/2017	Midterm Exam
Wed	03/15/2017	Spring Break
Wed	03/22/2017	GABA and GABA receptors I Assignment Due
Wed	03/29/2017	Ch. 13. Acetylcholine
Wed	04/05/2017	Ch. 14, 15. Monoamines
Wed	04/12/2017	Ch. 21. G protein coupled receptors
Wed	04/19/2017	Ch. 23, 24 Second messenger pathways (AC/cAMP & PIP) and Calcium ions and cellular functions
Wed	04/26/2017	Class Presentation
Wed	05/03/2017	Study day
Wed	05/10/2017	Final Exam

Assessment

Midterm term -30%

Final Exam -30%

Participation and Attendance- 10%

Quiz -10%

Assignments – 10%

Class Presentation – 10%

Students are expected to prepare for class and follow instructions for posted assignments or readings. Students have to come on time for the exams. As soon as the first student turns in an exam no new exams will be handed out. Students cannot leave the class room during the exams and are not allowed to use ANY electronic devices or written materials such as cell phones, iPad, computers, tablets, iPod, books, notes etc. Not following those rules will result in 0 points or be dropped from the course. Students are required to frequently check the course page on blackboard for any updates regarding exams and course content. No additional extra credit projects, papers etc. will be accepted as a substitute at the end of the semester. Cell phones should be turned off and completely packed away during class times and exams.

Grading Policies

Grade	Range %
A	90-100
B	80-89
C	70-79
D	60-69
F	59 and Under

Attendance Policy:

It is required that you attend all classes, midterm and final exam and class exercises. There will be no make-ups for quizzes, midterm exam or assignments. The final can only be made up if a substantial excuse (documented from doctor etc) is provided. It is expected that you show up for class on time since no exams or assignments will be handed out after the first person has finished.

Calendar of Activities

The UTRGV academic calendar and final exam schedule can be found at <https://my.utrgv.edu/home> at the bottom of the screen, prior to login. Some important dates for Spring 2017 include:

Jan 16	MLK Holiday and Day of Service
Jan17	First day of class for full semester
Jan 30	Last day to add a class for spring 2017 semester
Mar 13 – 18	Spring Break, no classes

Apr 13	Last day to drop (DR grade) a class or withdraw (grade of W)
Apr 14 – 15	Easter holiday, no classes
May 3	Last day of classes for full semester
May 4	Study Day, no classes
May 5 - 11	Final Exams (Schedule)
May 12-13	Commencement Exercises

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) 8827374 (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. 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 “6drop” 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.