

## Introductory Biomedical Neuroscience (BMED1108-01) Fall 2016

Instructor: Dr. Masako Isokawa, Professor of Health and Biomedical Sciences

Course offered: **F (12:00 – 12:50)**  
**LHSB 1.410**

Office Hours: *Please make appointments*

F (11:00 – 12:00) in BRHP 2.115.

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Textbook: *The Mind's Machine* by Watson & Breedlove (2012) Sinauer (ISBN 978-0-87893-933-6)

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Lecture dates	Topics
September 2 <sup>nd</sup>	Structures of neurons, brain, and the nervous system (explain how the lecture will be conducted)
9 <sup>th</sup>	<i>Discussion on structure of neurons, brain, and NS</i> (explain how the discussion will be conducted)
16 <sup>th</sup>	Ionic basis of neuron excitability
23 <sup>rd</sup>	<i>Discussion on ionic basis of neuron excitability</i>
30 <sup>th</sup>	Synapses
October 7 <sup>th</sup>	<i>Discussion on synapses</i>
14 <sup>th</sup>	Neurotransmitters and receptors
21 <sup>st</sup>	<i>Discussion on neurotransmitters and receptors</i>
28 <sup>th</sup>	Cellular signaling molecules (GPCR and 2 <sup>nd</sup> messengers)
November 4 <sup>th</sup>	Neuron plasticity (learning and memory)
11 <sup>th</sup>	<i>Discussion on GPCR and plasticity</i>
18 <sup>th</sup>	Reviews for final exam
25 <sup>th</sup>	<i>No lecture (Thanksgiving holidays)</i>
December 2 <sup>nd</sup>	Final Exam (scantron)
	<i>(No exams during finals week)</i>

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Grading: Your final class grade (a letter grade) will be determined based on:

- 1. Assignments and Quiz**
- 2. Participation in Discussion**
- 3. Exam**

***Students are expected to attend every lecture, discussion session, and Internet lecture series. Late submission of assignments will not be considered towards grading.***

***Attendance will be taken for each lecture, discussion session, and internet lecture series.*** Attendance will not receive any extra point in the Exams.

However, it will reflect the enthusiasm of your mastery of the course content, and may be used towards final letter grade when appropriate.

Course objectives & content: An introduction to the field of neuroscience. The course offers core concepts in medical neuroscience in a hierarchical order from molecules to networks of neurons.

Student learning outcomes (Course objectives met by students):

- A. Acquisition of critical thinking skills applied to neuroscience.
- B. To understand and apply neuroscience methods and recognize its application.
- C. To link different areas and concepts of neuroscience to form a cross-disciplinary, integrated understanding of the field.
- D. To understand neuronal systems from cellular to system level, and communicate successfully how the systems' components work and what roles they play.
- E. Ability to understand and apply neuroscience principles in health and diseases.

How the learning outcomes will be assessed.

Scoring rubrics will be used for writing assignments, which are given at the beginning of the course and at the end of the course to assess absolute (not relative to other students) progress.

Writing Assignment, Group discussions, and Group Presentations

Scoring rubric is used to assess or communicate about product, performance, or process tasks by delineating consistent criteria for grading. Because the criteria are public, a scoring rubric allows teachers and students alike to evaluate criteria. A scoring rubric can also provide a basis for self-evaluation, reflection, and peer review. It is aimed at accurate and fair assessment, fostering understanding, and indicating a way to proceed with subsequent learning/teaching. Scoring rubrics may help students become thoughtful evaluators of their own and others' work. Here is a seven-step method to creating and using a scoring rubric for writing assignments.

1. Look at models of good versus "not-so-good" work.
2. List the criteria to be used in the scoring rubric and discussion of what counts as quality work.

3. Articulate gradations of quality. These hierarchical categories should concisely describe the levels of quality (ranging from bad to good). They can be based on the discussion of the good versus not-so-good work samples. Use a conservative number of gradations, which keeps the scoring rubric user-friendly while allowing for fluctuations that exist within the average range.
4. Practice on models. This practice can build students' confidence in understanding how the instructor would use the scoring rubric on their papers, presentations, and group exams.
5. Ask for self and peer-assessment.
6. Revise the work on the basis of that feedback. As students are working on their assignment, they can stop occasionally to do a self-assessment and then give and receive evaluations from their peers. Revisions should be based on the feedback they receive.

On line resources: Lecture slides are available for registered students on Blackboard.

Absence/Make-up policy: Students are expected to attend all classes. Make-up exams will not be given. A grade of zero will be given for missing any exam.

No food and/or drink consumption in class.

Use of Electronic Equipment in Class.

Students are NOT allowed to use cell phone in the lecture room while attending a lecture or taking an exam. ***Please turn off your cell phone in the lecture room.***

### **ACADEMIC STANDING**

To remain in good academic standing undergraduate students are expected to maintain a cumulative grade point average (GPA) of at least 2.00 ("C" average) for all work attempted at UTRGV. Academic standing is computed each regular semester (i.e., Fall or Spring) for every UTRGV student, including transfer and dual coursework and BECHS and MSA students; transient students are held to the standards of their home institution, not to those of UTRGV. Students who fail to maintain the minimum required grade point average of 2.00 in all work attempted at UTRGV will be placed on academic probation. At the end of the probationary semester, students who have earned a *cumulative* GPA of 2.00 or higher will be changed to GOOD STANDING status. At the end of the probationary semester, students who have NOT earned a *cumulative* GPA of 2.00 and who have NOT earned a *semester* GPA of 2.00 or higher will be changed to SUSPENSION status. At the end of the probationary semester, students who have NOT earned a *cumulative* GPA of 2.00, but who have earned a *semester* GPA of 2.00 or higher will continue on PROBATION until their *cumulative* GPA is 2.00, as long as each *semester* GPA is 2.00 or higher. The purpose of measuring academic standing is to keep students on track for successful completion of a degree and to prevent unnecessary financial burden on those students who do not finish a program. Academic Standing is calculated separately from Financial Aid Satisfactory Academic Progress. If you are on financial assistance, please visit UTRGV online for specific academic progress requirements.

### **STUDENTS' ACADEMIC RESPONSIBILITIES**

Students are required to be diligent in their studies and regular in class attendance. The

number of absences permitted in any one course varies with instructor and course. Some programs have very strict attendance policies. Attendance requirements are printed in the course syllabus and announced by the instructor at the initial class meeting. On recommendation of the instructor concerned, students will be dropped from courses for failure to meet the attendance requirements or other good cause. This will result in a W or an F on students' academic records with negative consequences for financial aid eligibility, and international student visas.

### **ADMINISTRATIVE WITHDRAWAL**

Students who miss more than half of the required activities within the first 25% of the course without contacting the course professor may be administratively withdrawn from the course. Administrative withdrawal has serious consequences. Students may have to repay funds to Title IV financial aid programs. Administrative withdrawal will count toward the six-drop rule limiting the number of courses students are allowed to drop to no more than six courses over the entire undergraduate career. International students will not be eligible to continue enrollment if an administrative withdrawal results in a course load less than full-time.

### **SCHOLASTIC DISHONESTY**

Students 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, 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). All scholastic dishonesty incidents will be reported to the Dean of Students. Do not allow your peers to pressure you to cheat. Your grade, academic standing and personal reputation are at stake.

### **GRADING POLICY**

Grades are awarded in courses in which students are officially enrolled after the official record date. The deadline to withdraw is specified in the [Academic Calendar](#) for each semester or term. After the deadline to drop with a grade of W has passed, students may not be awarded a W as a final grade. Final grades are available to students within 24 hours after all final examination grades have been submitted online after the end of each semester or term. Grade reports are not mailed to students. Students interested in obtaining their grades may log on to UTRGV Online.

Grade	Range	Grade Points
A	90-100	4.00
B	80-89.9	3.00
C	70-79.9	2.00
D	60-69.9	1.00
F	59 and Under	0.00

**Calendar of Activities:** The UTRGV academic calendar can be found at <http://my.utrgv.edu> at the bottom of the screen, prior to login. Some important dates for Fall 2016 include:

Aug 29	Fall classes begin
Sept 1	Last day to add or register for Fall classes
Sept 2	Last day to withdraw (drop all classes) for a 80% refund
Sept 5	Labor Day Holiday, <b>no classes</b>
Sept 14	Census day (last day to drop without it appearing on the transcript)
Nov 17	Last day to drop (DR grade) a class or withdraw (grade of W)
Nov 18 - Dec 8	Online course evaluations available
Nov 24 - Nov 25	Thanksgiving Holiday, <b>no classes</b>
Dec 8	Study Day, <b>no classes</b>
Dec 9 – Dec 15	Final Exams

**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 [ability@utrgv.edu](mailto: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](mailto:ability@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. Online evaluations will be available:

Oct 5 – Oct 12 for Module 1 courses  
Dec 1 – Dec 7 for Module 2 courses  
Nov 18 – Dec 8 for full fall semester courses

**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](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 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.

### **EMERGENCY POLICY STATEMENT**

In compliance with the Emergency UTRGV Academic Continuity Program, academic courses, partially or entirely, will be made available on the Blackboard course management system. This allows faculty members and students to continue their teaching and learning via Blackboard, in case the university shuts down as a result of a hurricane or any other natural disaster.

The university will use Blackboard to post announcements notifying faculty members and students of their responsibilities as a hurricane approaches our region. If the university is forced to shut down, faculty will notify their course(s). To receive credit for a course, it is the student’s responsibility to complete all the requirements for that course. Failure to access course materials once reasonably possible can result in a reduction of your overall grade in the class. To facilitate the completion of class, most or all of the communication between students and the institution, the instructor, and fellow classmates will take place using the features in your Blackboard and UTRGV email system.

Therefore, all students must use UTRGV Online to provide a current email address. In the event of a disaster that disrupts normal operations, all students and faculty must make every effort to access an internet enabled computer as often as possible to continue the learning process.

### **EMERGENCY NOTIFICATION SYSTEM**

UTRGV has implemented an emergency communication system to provide students, faculty, staff and visitors with important information in the event of an impending threat. This system allows UTRGV to send time sensitive notifications via telephones, computers, indoor speakers in classrooms and laboratories, outside speakers, e-mail messages, and announcements on UTRGV Online. The notification methods used will vary depending on the level of the emergency. Messages will communicate the current situation and provide guidance for what action needs to be taken immediately.