BIOLOGY 4850 - NEUROCHEMISTRY
2014 Serial

1. Instructor. Dr. Robert J. Omeljaniuk, CB-4013, 343-8236

2. Intent. To provide senior undergraduate students with an opportunity to study selected aspects of neurochemistry in a directed study approach.

3. Marking Scheme. 10 Assignments and/or seminars valued at 10 final marks each = 100 final marks.

4. Execution.

a. General. Students will be assigned specific readings from the course textbook and will be prepared to discuss the subject matter and any difficulties they may have with it in group discussions on a weekly basis. Students' comprehension and mastery of the material will be evaluated on the basis of assignments submitted no later than one week following discussion of the subject matter. Answers to assigned questions may take any neatly presented format including text, figures and tables submitted as a hard copy; paragraph and short-essay answers supported by diagrams of the student's own design will be most appropriate. All assignments must be credibly completed; in the event a student completes the course with a mark between 40 and 49 %, they will be eligible to apply for a Special Exam, which covers all course material and will take the place of the final mark. **Attendance at classes is mandatory. Assignments are due no later than 1200 hrs on the Friday of the week indicated in the Tentative Outline below.**

b. Tentative Outline.

Serial	Reading	Discussion Date (week of)	Assignment Deadline (week of)
1	Chapter 01: Cell biology of the nervous system.	08 Sep	15 Sep
2	Chapter 02: Cell Membrane Structures and Functions; and Chapter 06: The Cytoskeleton of Neurons and Glia	15 Sep	22 Sep
3	Chapter 07: Intracellular Trafficking	22 Sep	29 Sep
4	Chapter 03: Membrane Transport; and	29 Sep	06 Oct
5	Chapter 04: Electrical Excitability and Ion-Channels	06 Oct	13 Oct
6	Chapter 12: Synaptic Transmission and Cellular Signaling	13 Oct	20 Oct
7	Chapter 13: Acetylcholine	20 Oct	27 Oct
8	Chapter 14: Catecholamines; and Chapter 15: Serotonin.	27 Oct	03 Nov
9	Chapter 16: Histamine; and Chapter 17: Glutamate and glutamate receptors.	03 Nov	10 Nov
10	Chapter 18: GABA; and Chapter 19: Purinergic signaling.	10 Nov	17 Nov

5. Textbook.

Basic Neurochemistry - Principles of molecular, cellular, and medical neurobiology. 8th ed.. S. T. Brady, G.J. Siegel, R.W. Albers, and D.L. Price (eds). Academic Press. New York. 1096 pp. 2012.