FA

BIOLOGY 3250: Comparative Animal Physiology I.
2015 Serial
Instructor: Dr. Robert J. Omeljaniuk, CB-4013.

1. CALENDAR DESCRIPTION.

Comparative Animal Physiology I. 3-3; 0-0.
An introduction to organismal and cellular communication emphasizing endocrine, neural and intracellular signal transduction mechanisms. Laboratory exercises involve practical experience in the use of *in vivo* and *in vitro* techniques.

2. MARKING SCHEME.

a. *Lab assignments. 2 X 5% = 10% of final mark.

b. *Lab reports. 1 X 10% = 10% of final mark.

*All tables and figures are to be rendered by hand in accordance with direction and style of the Canadian Journal of Zoology. For purposes of training in data presentation, computer generated tables and figures are not authorized.

c. Mid-Term Tests.
(1) Term Test #01: 20% Final Mark. 05 Oct 2015;
(2) Term Test #02: 30% Final Mark. 02 Nov 2015; and
(3) Term Test #03: 30% Final Mark. 25 Nov 2015.

3. LABORATORIES.

a. Lab coordinator. Mr. Michael Moore, CB-3020A; 346-7739.

b. Schedule.*

(1) Week of 21 September. Both Sections A and B attend simultaneously. Tutorial on data management and lab reports.

No assignment but attendance is mandatory in order to continue in the course.

(2) Week of 28 September. Introductory lab-Basic lab skills and data management. Lab Sections A.
Lab assignment must be submitted in next lab period.

Week of 05 October. Introductory lab-Basic lab skills and data management. Lab Sections B.
Lab assignment must be submitted in next lab period.

(3) Week of 12 October. pH and physiological buffers. Lab Section A.
Lab assignment must be submitted in next lab period.

Week of 19 October. pH and physiological buffers. Lab Section B.
Lab assignment must be submitted in next lab period.

(4) Week of 26 October. Erythrocyte hemolysis and membrane permeability. Lab Section A.
Formal report must be submitted in next lab period.

Week of 01 Nov. Erythrocyte hemolysis and membrane permeability. Lab Section B.
Formal report must be submitted in next lab period.

* LAB SCHEDULE IS SUBJECT TO CHANGE IN ACCORDANCE WITH AVAILABILITY OF ANIMAL PREPARATIONS AND INSTRUMENTATION. BE PREPARED TO RECEIVE ADDITIONAL INSTRUCTIONS FOR LAB EXERCISES AS THE LAB MANUAL IS BEING REVISED.

c. Lab Assignments/Reports.

(1) To be submitted to Teaching Assistant or Lab Director in lab periods unless otherwise directed by the course instructor.

(2) Due as indicated. Late reports will not be accepted without documented medical or compassionate explanations.

(3) Format.

(a) Neatly word-processed according to the manuscript requirements for CANADIAN JOURNAL OF ZOOLOGY, without exception. See CJZ Instructions to Authors.

(b) Illegible reports will not be accepted. Plagiarism, to any extent, will not be accepted; any plagiarism will result in a report mark of 0 and potentially a course mark of 0. (Reference: LU Calendar for Academic Dishonesty).

(c) Reference material for reports may be provided as available and located in library as 2-hour reserve material. Students are required to search the literature for pertinent material in support of Lab Report Discussion Sections.

(4) Lab Report Marks*.

(a) Introduction.

Provides the scientific basis for the work performed. 1 mark.

(b) Results.

Drafted figures, tables and a narrative summary of experimental findings. 4 marks.

(c) Discussion.

Discussion of the scientific and biological relevance of the data, and comparison of the results with published findings. This section also includes appropriate presentation of cited references. 5 marks.

*NOTE: Formal reports require significant effort for data presentation, reading and interpreting reference material, and incorporating relevant reference material into meaningful discussions.

4. TENTATIVE LECTURE OUTLINE.

a. Endocrinology. Lectures 1 to 15.

b. Neurophysiology: Lectures 16 to 30.

c. Intracellular signal transduction. Lectures 31 to 36.
(If we get there. There is a new course in the works which would focus on this topic and primary messenger receptors intended to start being offered September 2012. Stay tuned to this Bat Channel).