BIOLOGY 3251

Animal Physiology - Organ System Operation and Regulation (2017)

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

1. Calendar Description.

Animal Physiology - Organ System Operation and Regulation
0-0;3-3
A comparative study of animal organ system physiology. Areas to be discussed include the structure, operation and regulation of muscle, cardiovascular systems, osmotic and ionic regulation, respiratory- and gastrointestinal systems.
Notes: *Students who have previous credit in Biology 2035 may not take Biology 3250 or 3251 or 3253 for credit. An additional fee (see Miscellaneous Fees) is required for this course.*

2. Marking Scheme.

a. Lab reports: 4 X 10 % = 40% of Final Mark; and

b. Term Tests:

(1) Term test #01. Tuesday Lab Period, 07 Feb 2017. 20% Final Mark; and
(2) Term test #02. Tuesday Lab Period, 28 Mar 2016. 40% Final Mark.

3. Laboratories.

a. Lab coordinator: Mr. Michael Moore, CB-3011A; 343-8909.

b. Schedule:

Lab schedule and lab report submission dates are subject to change in accordance with availability of animal preparations and instrumentation.

(1) Week of 16 January: Kidney function. Formal report due 31 January, in class.
(2) Week of 23 January: Neurophysiology. Formal report due 07 February, in class.
(4) Week of 30 January: Muscle physiology. Formal report 14 February in class.
(5) Week of 06 February. Cardiac physiology-heart function. Formal report due 28 February, in class.

c. Lab Reports.

(1) Due as indicated in laboratory schedule;
(2) Late reports will not be accepted without medical or compassionate explanations.
(3) Reports will be marked and returned as soon as possible.
(4) Format. Neatly written, typed, or word-processed according to the manuscript requirements for Canadian Journal of Zoology.
(5) Illegible reports will not be accepted; plagiarism, to any extent, will not be accepted.
(6) The textbook is the primary reference for lab reports. Websites are not authorized as references although peer-reviewed journals accessible on the internet are authorized and are to be appropriately cited in accordance with CJZ instructions.
(7) Report Marks.

(a) Introduction: Provides the scientific basis for the work performed: Pass/Fail. Failure results in Report returned, not marked, for a score of 0.0 Final Marks.
(b) Results: Drafted figures, tables and a textual summary of experimental findings: 3.0 Final Marks.
(c) Discussion: Discussion of the scientific basis and biological relevance of the data, and comparison of the results with published findings; this section also includes appropriate presentation of cited references; 7 Final Marks. **PAGE LIMIT OF 6 PAGES; OVERLENGTH DISCUSSIONS WILL BE REJECTED *in toto*.**

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

4, Proposed curriculum: See attached pages.

5. Textbooks:

a. Boron, W.F. and E.L. Boulpaep. Medical Physiology, 2nd ed. (revised) 2012. Saunders, Philadelphia PA. (1337 pp).; and

b. Biology 3251 Lab Manual. Available as part of the Comparative Animal Physiology I & II Lab Manual in the LU Alumni Bookstore.