PHYSL 466: UNDERGRADUATE TUTORIAL

Objectives

The primary objective is to train students to critically read and evaluate original research literature focused on a topic of current relevance in physiology. It should involve a literature search for the writing of a major scholarly review on a subject proposed by the supervisor.

Expectations

Essay Guidelines

Students must submit 3 written essays for evaluation. Each essay should be 10 double-spaced pages (excluding figures and references), and should be written in a format similar to a review article in a scientific journal. The essays should deal with related sub-topics that all have a single unifying theme centered on a major topic in physiology. For example, the 3 essays may deal with, respectively, the roles of Na⁺, K⁺, and Cl⁻ channels in control of cell membrane permeability. The unifying theme in this example would be the cell membrane electrophysiology. Each essay will be marked by the supervisor and an external reader (20%; see below). The 3 essays should be handed in to the supervisor, the external reader and the course coordinator at the rate of one per month during the term (i.e. Fall term: essays will be handed in by September 30, October 31 and November 30; Winter term: essays will be handed in by January 31, February 28 and March 31). Reports handed in late will result in marks reduction of 25 % for every day past the due date. All three essays must be marked before the final oral exam.

Each essay must describe the following aspects of a specific topic:

1. In an introduction section please provide a brief overview of the topic and its significance.
2. In a discussion section, describe the studies that were outstanding in shaping the field. Are there any controversies in the field, and if so, what are they and how did they arise? Who are the leading researchers in the field, and what did they contribute?
3. What key principles or concepts can be derived from the papers covered in the essay?
4. A concluding section must summarize the essay’s main points and state clearly student’s opinions on the current state of the topic, and future directions. Are there any significant gaps in our knowledge of this research area? If so, what kind of research strategies might be pursued to fill these gaps?
5. The references should be cited in full, i.e. they should include the authors, manuscript title, journal title, year, volume and pages.

Evaluation of Essays

Essays will be evaluated by the supervisor and an external examiner who is an expert in the field of research. The external examiner should be identified by the supervisor and the student at the beginning of term. Each essay will weigh 20% of the final grade and the final oral presentation will weigh 40% of the final grade.

There is much leeway for objectively determining what constitutes “fair” or “excellent” performance in a course. However, some fundamental criteria can be suggested:

1) The essays should be clearly written with a logical organization and “flow” of ideas and hypotheses. Figures and diagrams are to be used where appropriate.
2) The essays should explicitly state, early on, the major issues or controversies to be discussed, and the perceived importance of these issues to the field of research.
3) The essays should show a clear appreciation of the conceptual development and current state of knowledge in a field. The references should be up-to-date.
4) The essays must show some attempt by the student to critically evaluate the value and impact of selected papers to the field of research. In other words, why is the paper #1 more significant than the paper #2? It is important that the views expressed here be the student’s own opinions, and not those of published articles that are merely paraphrased by the student. If the student chooses to paraphrase
published opinions, then it is vital that the student cites the literature source and provides logical reasons for his/her agreement/disagreement with the paraphrased viewpoints.

Oral Presentation Guidelines

The student must give an oral presentation to an examining committee at the end of the course. The committee will include the student’s supervisor, the external reader who has evaluated the essays, and the course coordinators. The presentation must last no more than 20 minutes, and it will be followed by questioning from the committee members.

The presentation will be scheduled during the last month of the term.

After the presentation the supervisory committee will provide detailed feedback concerning the student’s performance at the oral exam.

The final grade will be weighed as follows:

3 essays: Marked by the supervisor and the external examiner ........................................ 60%

Oral presentation............................................................................................................. 40%

Final grades in this course are on a 4-point scale, defined as follows:

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<td>Outstanding</td>
<td>A+</td>
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<td>B+</td>
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<td>Excellent</td>
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<td>81-84 %</td>
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<td>Satisfactory</td>
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Academic Integrity

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at http://www.governance.ualberta.ca/en/CodesofConductandResidenceCommunityStandards/CodeofStudentBehaviour.aspx) and avoid any behaviour that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and will result in failing of the course and suspension or expulsion from the University.

For more information on the course please contact the Course Coordinators:

Dr. Emmanuelle Cordat
7-34 Medical Sciences Building
Tel. 492-8892
cordat@ualberta.ca

Dr. Silvia Pagliardini
3020F Katz Group Building
Tel 492-9054
silviap@ualberta.ca
PHYSL 466 Registration

Student Name: __________________________________________________________

ID#: _________________________________________________________________

Student Email address: _________________________________________________

Supervisor: ___________________________________________________________

External examiner: _____________________________________________________

Has the student discussed with the supervisor and agreed to the requirements of the course and proposed reading material?

Have regular meetings been scheduled with the supervisor to direct and discuss reading on the specialized topic?

Supervisor’s signature __________________________ Date

External Examiner’s signature __________________________ Date

Student’s signature __________________________ Date