Anatomy & Cell Biology

9555/9655

Advanced Topics in Cell and Neurobiology

Course Coordinator: Paul Walton, Ph.D.
Department of Anatomy & Cell Biology

2017

Fall/Winter
1.0 Credit
COURSE DESCRIPTION

The course offers an opportunity for critical evaluation of current research in numerous areas of cell and neurobiology including cell interactions, development and differentiation, intracellular dynamics, and cell pathology including cancer biology. During each session, current articles and reviews are discussed in detail with emphasis on hypothesis development, experimental models and data acquisition and analyses in cell and neurobiology research. Students will learn important research skills on how to review, criticize, write, discuss and present experimental results.

COURSE ADMINISTRATION

The course begins on Thursday, September 14th, 2016 and is scheduled to end on April 26th, 2018. Class sessions are held on Thursday mornings from 9:30 AM – 12:30 PM in Dental Sciences Bldg. 4007 (DSB 4007).

Prerequisites: Students are expected to have undergraduate exposure to cell and neurobiology. In the event that a student has not taken an introductory cell biology course, the student’s supervisory committee along with their supervisor will determine the best course of action, be it independent reading or an undergraduate course available at Western that can be taken concurrently.

This course is a mandatory requirement of the ACB graduate program for students involved in cell biology research. It is complementary to ACB 9550/9650 (Advanced Topics in Integrative Neuroscience) required for students in the field of neuroscience research.

COURSE INSTRUCTORS

The course coordinator is Dr. Paul Walton. All questions related to the course should be directed to him. Contact information can be found below. Many of the faculty members in the Anatomy & Cell Biology graduate program that conduct cell biology research will participate in the course as invited guests and will provide feedback and evaluation to the presenting student(s).

Dr. Paul Walton (course coordinator)   Office: MSB 474
                                        pwalton@uwo.ca    phone: x86825
COURSE EVALUATION

Evaluation of the course is broken down into several components. In addition, participation at ALL SESSIONS is required. *Advanced notice must be given*, supported by a valid reason, if you cannot attend. Illness is understandable but be aware that medical documentation may be requested in certain cases. Only under exceptional circumstances can a student miss more than two sessions in any given term.

**Paper Review**
25% of the final grade will be based on oral presentations of recently published papers in one of the areas covered by the course. (Students will select the papers and submit it to the course manager for approval). There are **one presentation**, each term.

**Written Critique**
25% of the final grade will be based on a written critique of one recently published paper in a selected topic of cell biology. The paper(s) will be provided by the course manager. More information is provided during the course.

**Grant Proposal**
25% of the final grade will be based on a written grant proposal (NSERC discovery grant-style). More information is provided during the course.

**Participation**
25% of the final grade will be based on participation and critical discussion of the selected material in class (10%).
At the beginning of each lecture, students will submit a written comment on the provided research paper (15%). The purpose of the comments will vary from week to week and may include summaries of the **main objective** of the paper, experimental **plan and conclusions**, describing **hypothesis** or determining **strengths and weaknesses** of the manuscript. Each written comment should be approximately ½ page, double-spaced.

The participation grade also consists of active discussion in class of the selected articles and review papers. It is expected that students will have read the papers and come prepared with critical reflections of the findings and methodology within the papers that they can share with their peers and faculty members.
PLAGIARISM

Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf

PLAGIARISM CHECKING
All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).