



Anatomy & Cell
Biology

9520Y / 9620Y

Research Seminars in Cell and Neurobiology

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

Zoom sessions

2020

COURSE DESCRIPTION

This course consists of two components:

A **skills** section that provide an opportunity for individuals to 1) practice new or refine existing communication skills (writing, presenting, debating, and discussing) while expanding and integrating their command of the literature; and 2) build a tangible dossier of professional skills, experiences, and milestones in preparation for the next step in education, employment, and life.

A **presentation** section that allows students an opportunity to speak about their research projects. Each presentation class consists of one or two presenters describing their research interest in an effort to develop scientific presentation skills. Students will present to an audience of their peers (class mates and other graduate students), and to at least two faculty members. In the first term, each student will present the background literature supporting their proposed research program (research background presentation). This will be followed, in the second term, by a short presentation outlining the findings collected to date (research talk presentation). These presentations will act as a foundation for developing strong communications skills that will be further developed during the course of the student's progress within their program.

COURSE ADMINISTRATION

The course begins on Friday, September 18th, 2020 and is scheduled to end in March 2020. Lectures are held on Fridays from 11:30am – 12:30pm in Zoom format, and Tuesdays from 9:00am – 11:30am in Zoom format.

COURSE INSTRUCTORS

The course coordinators are Drs. Paul Walton and Patrick Lajoie. All questions related to the course should be directed to them. Contact information can be found below. Many faculty members in the Anatomy & Cell Biology graduate program will participate in the course as invited guests and will provide feedback and evaluation to the presenting student(s). Although there are normally two faculty members signed up for each session, it is possible that other faculty attend the presentation if it is in an area of interest to them.

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COURSE EVALUATION

Passing the course requires that the student presents each of the two scheduled talks. 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. Peer evaluations are provided in the form of written comments and provided to each student at the end of the session. Attending faculty members also provide evaluations.

The weighting of each component of the course is:

Research background	45%
Research talk	45%
Participation	10%

RESEARCH BACKGROUND TALK

The student presents a 40-minute presentation (30 minute minimum) on the field of research proposed in the M.Sc or Ph.D. thesis project. It is not the role of this particular presentation to discuss specific data but more so as a general introduction to the area of research. The presentation will be followed by a 10-minute question period. Some preliminary data can be shown to demonstrate rationale for the project. The work of others can be presented to support the developing hypothesis. The presentation should consist of:

- an overall rationale and introduction to the research area
- background on the players involved (molecules, transmitters, receptors, cell types, diseases)
- hypothesis and research objectives
- methodological considerations for the project
- anticipated results

RESEARCH TALK

A short conference-style (also known as platform session) presentation will be given describing your thesis research, results to date, and their implications. There will be two presenters during the one-hour class. Each presenter will give a short talk (15 minutes maximum duration) followed by 5 minutes of questions. This presentation will have a short introduction and possible methods section followed by a discussion of the data and their implications. An outline slide is NOT necessary for such short talks.

It is important during the learning part of this course that students are provided with feedback. However telling the student that everything was excellent or poor is not enough. One learns from knowing why something went well or not so well. It is expected that all students and faculty in attendance will provide some comment as to how the presentation was perceived. From all the comments the student (in conjunction with a faculty member if the student desires) will distill the main positive and constructive comments and how to best utilize that information.

COURSE ASSISTANCE

VISUAL AIDS

Students can choose to present their material using any means they feel would best suit their style. Your choices vary greatly, although PowerPoint presentations are most common.

With the Zoom presentation format, students will share their screen during the presentation.

PRESENTATION SKILLS

Ask anyone and they will give you their “hints” or “tips” on presenting to an audience. In this field, all of the faculty members and many graduate students have had some experience on presenting data or lectures so they can provide you with helpful information. Ultimately you need to find what works for you keeping in mind certain “dos” and “don’ts”. It is our hope that this course provides you with a framework from which you can build a comfortable and confident approach to public speaking for the scientific audience. To that extent, I will give you my views on oral presentations. I am no expert, very few of us are, but together we will learn what works for each of you.

ANSWERING QUESTIONS

It is impossible to anticipate all questions and hence to prepare for them. The best advice is to carefully consider the question that is asked and answer to the best of your knowledge without extending yourself into the realm of the unknown. Saying “I do not know the answer to that question” is not taboo and in some cases is the best answer you can give. I will mention one question answering skill that is relatively useful. Although this approach has been designed for the interview process I think it has some validity in answering questions in general. The S.T.A.R. approach to answering questions is described below with some modifications to take into account scientific presentations. The **S.T.A.R.** answer states a **S**ituation or **T**ask you were given, describes the **A**ction you took and explains the **R**esults of that action. Here is a sample S.T.A.R. answer to the question, “Why did you look at the expression of Epidermal Growth Factor Receptor (EGFR) in these cells and how was it done?”

Situation or Task:

In reviewing the literature, I found that EGFR is induced by growth factor stimulation in other cells types.

Action:

Therefore I collected protein from cells treated with the growth factor over a series of time points and performed SDS-PAGE, transferring the protein to nitrocellulose for immunoblotting with an antibody specific to EGFR.

Results:

Following incubation with an HRP-conjugated secondary antibody, the blot was exposed to chemiluminescence detection revealing that EGFR was highly expressed by time point X whereas it was not detectable prior to growth factor addition.

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. Plagiarism is a major academic offence (see Scholastic Offence Policy in the current Academic Calendar).

PLAGIARISM CHECKING

The Western University uses software for plagiarism checking. Students may be required to submit their written work in electronic form for plagiarism checking.