

**BIOM\*6100 Research Proposal in Biomedical Sciences**  
**Course Outline**  
**0.5 Credits (Fall 2018 and Winter 2019)**

**Course Coordinator**

Roger Moorehead  
Room 3626, OVC  
e: [rmoorehe@uoguelph.ca](mailto:rmoorehe@uoguelph.ca)  
t: 519-824-4210 x54950

**Instructors**

Tarek Saleh – [tsaleh@uoguelph.ca](mailto:tsaleh@uoguelph.ca)  
Sarah LePage – [lepages@uoguelph.ca](mailto:lepages@uoguelph.ca)

**Classes/Seminars**

There will be three lectures in September (dates and times to be determined). The first lecture will outline the roles and responsibilities of graduate students as well as important dates. The second and third lectures will provide students on effective strategies for preparing their research proposal and research seminar, respectively. Research seminars will be presented during the Department of Biomedical Sciences Graduate Student Seminar Series, current scheduled on Wednesdays 12:30-1:30. Seminar attendance is mandatory and attendance will be taken at each seminar. As there may be circumstances preventing students from attending all the seminar sessions students will be allowed to miss a maximum of 3 seminars. Students will be penalized 1% of their final grade for each seminar missed beyond the maximum allowable limit (written explanations for missing more than the maximum allowable limit will be considered by the Course Coordinator).

**Prerequisite Courses**

None

**Restrictions**

This course is restricted to MSc (thesis-based) graduate students in the first year of their program registered in the Department of Biomedical Sciences. This course can only be taken once.

**Course Objectives**

**General Objectives:** This graduate level course is designed for thesis-based MSc students and is meant to prepare students for their MSc defense and provide feedback on their oral and written communication skills.

**Specific Objectives:**

- Understand the expectations and roles of graduate students
- Perform a literature review and create a research proposal
- Learn how to translate scientific results in lay terms suitable for the general public

**Learning Objectives**

It is expected that students will gain a number of valuable skills from this course that will enhance their ability to successfully complete their MSc program including; (1) improve their oral and written communication skills, (2) understand how to create an effective research proposal, (3) critically evaluate scientific literature, and (4) learn how their research and the research of others impact our understanding of global health issues. These skills will be developed through instructional classes and feedback from their supervisory committee.

## **Evaluation**

Research Proposal.....	50%
Research Seminar.....	40%
Lay Summaries.....	10%

### **Research Proposal:**

The research proposal will be a **maximum** of 15 pages double-spaced using 1 inch margins and 12 point font. The page limit does not include the reference list or a maximum of 2 pages for figures/tables (figures/tables are not required). The research proposal will consist of a literature review and a detailed experimental plan. The literature review provides background information about the research project and should include a statement regarding how the research project will contribute to the scientific literature. The experimental plan should include a hypothesis, one or more specific objectives and a description of how the experiments will be performed. The experimental plan should also contain a statement regarding the significance of the research proposed. The research proposal should also comment on the anticipated outcomes of the experiments and potential problems that may be encountered. The research proposal must be submitted to the course coordinator by Dec 15 at the latest (you can submit your proposal prior to Dec 15). It is anticipated that students will received feedback from their supervisory committee and the course coordinator prior to their research seminar so changes/suggestions can be incorporated into the research seminar.

**Research Seminar:** Research seminars will be presented as part of the Department of Biomedical Sciences Seminar Series. Research seminars must be completed before the end of the third semester. These seminars will be approximately 20 minutes in duration and should cover relevant background information, research plan and if appropriate, preliminary findings (preliminary findings are not a required component of the seminar). The research seminars will be marked by the student's supervisory committee and the course coordinator. It is the student's responsibility to select a date when all supervisory committee members can be in attendance. If a supervisory committee member is unable to attend, the absent member can designate another faculty member to mark the seminar. In the event that the course coordinator cannot attend the seminar, the course coordinator will designate another faculty member to evaluate the seminar.

**Lay Summaries:** Students will select 5 presentations and write lay summaries about these presentations. Lay summaries will be a maximum of 250 words and should be suitable for a general audience. **LAY SUMMARIES CANNOT BE WRITTEN ON PROJECTS PRESENTED BY OTHER STUDENTS IN YOUR LAB.** Information on how to write a lay summary can be found at <http://www.dcc.ac.uk/resources/how-guides/write-lay-summary> and [https://mssociety.ca/en/pdf/Guide%20to%20Writing%20Lay%20Summary\\_ENG\\_Final20130726.pdf](https://mssociety.ca/en/pdf/Guide%20to%20Writing%20Lay%20Summary_ENG_Final20130726.pdf) as well as other websites.

### **Schedule**

When	What
Sept 12, OVC1642, 8:30-10:00am	Introduction course on expectations of a graduate student - Moorehead
Sept 26, OVC1642, 10:30am-12:00pm	Strategies for writing an effective research proposal - Saleh
Oct 1, OVC1642, 8:30-10:00am	Strategies for creating an effective research seminar - LePage
Dec 7	Submit your research proposal to your supervisory committee
Prior to March 31	Complete your research seminar
March 31	Submit your lay abstracts to the course coordinator

**Academic Misconduct**<sup>SEP</sup>The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Graduate Calendar:

[http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec\\_d0e1609.shtml](http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e1609.shtml)

### **Student Resources**

Students are encouraged to take advantage of appropriate research and writing workshops and drop-in help available through the University of Guelph Learning Commons:

[www.learningcommons.uoguelph.ca](http://www.learningcommons.uoguelph.ca) However, for this course, it is **not** appropriate to use commercial essay writing/editing services. Software to detect plagiarism may be employed. Students are encouraged to have a peer proof-read their final written assignments for editorial input prior to submission; however, **student assignments are to be individual, not group, efforts**. For the purposes of this course, a peer is another graduate student or senior undergraduate student.