

**BIOM* 6110: Research Methods in Biomedical Sciences (Advanced Microscopy)
“Theory and Practical Training in Laboratory Techniques for Biomedical Sciences”**

Credit: 0.5 (Offered over two semesters: Fall & Winter 2017/2018)

Lectures held from **10:00 to 11:30 AM** in **OVC Room 3648** (Mon/Wed)

Course Coordinator:

Roger Moorehead
Department of Biomedical Sciences, Room 3626
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Participating Faculty and Staff, Department of Biomedical Sciences:

Monica Antenos, ext. 58260: mantenos@uoguelph.ca
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Matthew Vickaryous, ext. 53871: mwickary@uoguelph.ca

Objective:

To provide a theoretical and practical introduction to basic and advanced laboratory techniques for graduate students in Biomedical Sciences.

Course Format:

There are 2 required modules and 2 elective modules. All Students must take Module 1 (Introduction to Research Methods) and students can choose between Module 2 (Real-Time PCR) and Module 4 (Protein Assays) as their second required module. Students may only sign up for two elective modules and these modules often have a minimum number of students required to run the module and a maximum number of students the module can accommodate. Module 2 or module 4 can be selected as an elective module provided you meet the requirement of 2 required modules (i.e. if you have selected modules 1 and 2 as your required modules you can select module 4 as one of your two elective modules). If you have signed up for a module that does not get the required number of students, you will be notified and asked to select an alternative elective module. Please email your choices to Roger Moorehead at rmoorehe@uoguelph.ca

Most modules consist of one or more lectures and one or more hands-on components. Lectures will occur during the designated lecture slots (Monday or Wednesday 10-11:30) however the lab components of the modules may take place outside the designated class times. **Students must attend all lectures and labs in order to obtain credit for that module.**

Required Reading:

Material will be recommended by individual instructors.

Student Evaluations:

The type of evaluation will be determined by individual instructors but may include written reports of laboratory work, papers on selected topics, on-line quizzes, written examinations or oral presentations. Each module will be self-contained, and assignments will generally be due within two to three weeks of the associated class time.

Each of the four modules will constitute $\frac{1}{4}$ of the final grade.

Academic Misconduct:

Plagiarism, sharing of work or other such forms of misconduct will not be tolerated.

The standard University of Guelph policies on academic misconduct are addressed in the UofG 2013-2014 Graduate calendar – for policy details and a description of possible penalties, please refer to the section entitled “Academic Misconduct” via this link:

<http://www.uoguelph.ca/registrar/calendars/graduate/current/pdf/files/index.shtml>

Course evaluations:

Students will be asked to complete a questionnaire on instructors' teaching competence during the last two weeks of classes (Fall and Winter semester, if possible). This is part of the information required by the University to evaluate faculty performance for purposes of tenure, promotion and selective increases. Administered by a third party rather than the instructors, and generally available on-line, these evaluations will be delivered to the respective instructors ONLY after the final grades have been submitted to the Registrar's Office. **Note:** Only the numerical ratings from the form will be made available to the Chair for administrative purposes-the Chair will NOT see any comments that are written on the evaluation form unless signed by the student.

BIOM*6110 Modules

1. Introduction to Research Methods

Instructors: Monica Antenos

Lectures: Wed Sept 13; 10-11:20am, OVC Room 3648

Labs: Good Pipetting Practice – Wed Sept 20, 10-11:20am, RHB lab Room 3638
pH Seminar – Mon Sept 25, 10-2:30pm, RHB lab Room 3638 (there will be 3 different sessions, 10-11am, 11am-12pm and 1:30-2:30pm and you only need to attend 1 session)

2. Real Time PCR

Instructors: Laura Favetta/Roger Moorehead

Lectures: Mon Oct 2; 10-11:20am, OVC Room 3648

Wed Oct 4; 10-11:20am, OVC Room 3648

Labs: multiple sessions offered between Wed Oct 11 – Fri Oct 20

3. Experimental Models*

Instructors: Jim Petrik/Roger Moorehead/Ed Reyes

Lectures: Mon Oct 23; 10-11:20am, OVC Room 3648

Wed Oct 25; 10-11:20am, OVC Room 3648

Labs: TBA (week of Oct 30)

* this module will only be offered if at least 4 students register and a maximum number of students this module can accommodate is 8.

4. Protein Assays

Instructors: Monica Antenos/Allison McKay

Lectures: Mon Nov 6; 10-11:20am, OVC Room 3648

Wed Nov 8; 10-11:20am, OVC Room 3648

Labs: TBA (week of Nov 13)

5. HPLC*

Instructors: Ron Johnson/Yu Gu

Lectures: Mon Jan 15; 10-11:20am, OVC Room 3648

Wed Jan 17; 10-11:20am, OVC Room 3648

Labs: TBA (week of Jan 22)

* this module will only be offered if at least 5 students register

6. Histology and Immunohistochemistry*

Instructors: Matthew Vicakaryous/Jodi Morrison

Lectures: Wed Feb 5; 10-11:20am, OVC Room 3648

Wed Feb 14; 10-11:20am, OVC Room 3648

Labs: Feb 6-13; exact dates and times TBA

* this module will only be offered if at least 2 students register and a maximum number of students this module can accommodate is 8.

7. Flow Cytometry*

Instructors: Rob Jones

Lectures: Mon Mar 5; 10-11:20am, OVC Room 3648

Wed Mar 7; 10-11:20am, OVC Room 3648

Labs: TBA (week of Mar 12)

* this module will only be offered if at least 2 students register and a maximum number of students this module can accommodate is 8.