University of Guelph
College of Biological Science
Department of Molecular and Cellular Biology
COURSE OUTLINE
MCB*4600 Topics in Molecular & Cellular Biology
Fall 2015

Course description

Independent study of a current topic in Molecular and Cellular Biology, selected from the recent research literature and involving a review and critical appraisal of the area. The course comprises independent library research, participation in weekly meetings, and written and oral presentations. Students should make arrangements with both faculty supervisor and the course coordinator in a prior course selection period. Open to students in semesters 6, 7, and 8 of the B.Sc. Majors in the molecular biosciences, Department of Molecular and Cellular Biology.

Prerequisites

MBG*3350 or equivalent laboratory experience at the discretion of the student's project advisor. Normally, students must have completed 5 semesters in an appropriate program in the biological sciences.

Teaching team

The course co-coordinator is:
Prof. John Dawson. (Rm. 2248, Science Complex, email: jdawso01@uoguelph.ca)
Students are expected to complete all arrangements with a faculty supervisor and submit a signed Research Agreement to the Coordinator before the first week of classes.
Your Faculty Advisor is the most important member of your Teaching team. Students should be sure that they know how to contact them for guidance and advice.

Resolving conflict: Working in teams can involve differences of opinions or personalities. If you experience a conflict with your faculty advisor that you are not able to resolve on your own, contact the Chair of the Department of Molecular and Cellular Biology for advice and assistance.

Course schedule

Each student must meet with their advisor at least once per week to discuss their progress in reviewing the literature, writing the report and preparing for the oral presentation. Over the semester students are expected to demonstrate appropriate understanding of the relevant literature and develop new levels of understanding by identifying specific areas of knowledge that need research. The student is expected to formulate new research questions, and propose research plans (including experimental design, and data analysis) to address their questions.

Learning goals, rationale, and Course Content

An independent study of a selected topic in molecular biology, genetics, or microbiology, involving a review, critical appraisal of the current literature and **proposals for future research**. These courses are intended to develop the student's ability to independently read and critically assess the current scientific literature. Students will be expected to integrate knowledge gained from previous courses in examining a topic of interest. Students will present their analysis orally and in writing. The production of a well-written research review article and a public oral presentation are the focus of this course.

Course Resources

There is a Courselink site for this course. Information on the Courselink site include:

- Deadlines for all assignments in the Courselink Calendar
- A means of communicating your class schedules to the Coordinator so they can arrange the scheduling of student seminars (see methods of assessment below)
- Assignment outlines, grading sheets
- This course outline

Methods of Assessment

Students will find details of all Assessments on CourseLink.

Assessment Form of Assessment	**Weight of Assessment**	**2015 Due Date**	**Graders**
1. Outline of Research Topics and Plan	5%	Dropbox: September 23	Coordinator
2. Synopsis of Research Progress	5%	Dropbox: October 23	Coordinator
3. Final Oral Presentation	30%	Dropbox: Nov 27 Seminar: Nov 30 – Dec 4	Faculty advisor + one other faculty member
4. Project Report	30%	Dropbox: December 4	Faculty advisor + one other faculty member
5. Semester Performance	30%		Faculty advisor

Topic Selection-Outline: Students will discuss the choice of topic with their course advisor. Start with a clear idea of the questions you are trying to answer in your topic (Usually a more specific idea is easier to research and to write about than a general topic). The student must write an outline (about 1-2 pages) of the proposed independent study topic. When completed, the outline with title and the advisor must be submitted to the course coordinator.

Some suggestions for the research outline**:** The outline is meant to be viewed only as a proposed Topics Research plan. Students should clearly identify the planned focus of the research topic and its context. Include the following as appropriate:

1. State the research focus as questions or hypotheses you would like to try to answer in the research.
2. What are the subtopics within your main topic?
3. Identify important authors and relevant articles you expect to examine, who are the leaders in the area? Are there experts (other than your advisor) with whom you might consult?

Topic Progress Synopsis: A researcher should always review the progress of a project from time to time. The actual research readings may suggest new directions not anticipated at the outset. A mid-semester synopsis of this progress review is required. Students should use their original Topic Outline and report to the Coordinator on the questions/hypotheses, subtopics and authors/experts that have been reviewed.

The Review Article: The article should clearly identify the focus of study, critically review and evaluate the relevant literature. The article should be written in concise and sufficiently nontechnical language to be intelligible both to general biologists and to specialists in other fields. The article should have no more than 20 pages of manuscript text.

Extra pages are allowed for the title page, list of references, figures and tables. The article must contain an abstract, of less than 100 words, summarizing the contents of the paper. Text is to be double-spaced with 2.5 cm margins an all sides. The text font should be similar to the font used in this sentence. Review articles in the journal *Cell* may be used as a model for style with respect to (1) section headings in the text, (2) literature citations in the text, and (3) list of references. Consult the journal "Instructions to Authors" for details.

The written paper must be submitted to your Dropbox on Courselink as a PDF file on or before the deadline. Marks will be deducted for late papers: 10% each day up to a 50% deduction. No papers will be accepted over 5 days late.

Turnitin

In this course, we will be using Turnitin, integrated with the CourseLink Dropbox tool, to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to maintain academic integrity at the University of Guelph.

All submitted assignments will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site.

A major benefit of using Turnitin is that students can educate and empower themselves in preventing academic misconduct. In this course, you may screen your own assignments through Turnitin as many times as you wish before the due date. You will be able to see and print

reports that show you exactly where you have properly and improperly referenced the outside sources and materials in your assignment.

Oral Presentation: The oral presentation should highlight the main features of the topic chosen for independent study including any new research plans described in their review article. The oral presentation will be given in a colloquium arranged for this purpose before interested members of the Department of Molecular and Cellular Biology. The course coordinator will schedule the time and location of the seminars. Upload your presentations to your Dropbox on Courselink at the time to be announced by the Coordinator.

The oral presentation is to be 20 minutes in length, followed by a 10-minute question period. Marks are deducted if a seminar deviates significantly from the time allowed. Students **must** attend all of the oral presentations in their chosen session of the MCB Projects/Topics colloquium. Presentations should consist of computer-generated images projected onto a screen. Microsoft PowerPoint is the recommended software.

Important Dates
A list of important dates is available in the Undergraduate Calendar.

Course and University Policies

When You Cannot Meet a Course Requirement
When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the undergraduate calendar for information on regulations and procedures for Academic Consideration.

Accessibility
The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services (formerly the Centre for Students with Disabilities) as soon as possible.

For more information, contact Student Accessibility Services at 519-824-4120 ext. 56208 or email csd@uoguelph.ca.

Academic Misconduct
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 Undergraduate Calendar.

E-mail Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

Drop Date

The last date to drop one-semester courses, without academic penalty, is the 40th class day. To confirm the actual date please see the schedule of dates in the Undergraduate Calendar. For regulations and procedures for Dropping Courses, see the Undergraduate Calendar.

Copies of out-of-class assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Grading

Indicate all course policies regarding in-semester tests and assignment submissions, including time and place for submission of assignments and explicit penalties for late submissions.

Campus Resources

If you are concerned about any aspect of your academic program:

Make an appointment with a Program Counsellor in your degree program.

If you are struggling to succeed academically:

There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist.

If you are struggling with personal or health issues:

Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance.

Student Health Services is located on campus and is available to provide medical attention.

For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations.

If you have a documented disability or think you may have a disability:

Student Accessibility Services (SAS) formerly Centre for Students with Disabilities can provide services and support for students with a documented learning or physical disability. They can also provide information about how to be tested for a learning disability.