Biochemistry 4C03
Course Outline
January 2012

Coordinator/Instructor:
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Teaching Assistants:
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Time:
Monday and Thursday 12:30 pm – 1:20 pm, and Tuesday 1:30 pm – 2:20 pm in the Burke Science Building Room 119. Any class tutorials and presentations by the course coordinator/teaching assistants will take place at the time and location noted above unless agreed to otherwise by the course coordinator/teaching assistants and students. Please note that the location of individual group meetings with the teaching assistants as well as student presentations will be announced about a week in advance of their occurrence. Students should check LearnLink frequently to ensure that they do not miss any events scheduled at dates/times and locations other than those noted above.

Course Objective:
One objective of the course is to enhance the ability of students to understand scientific findings and methods reported in primary journal articles, and to communicate their content in oral presentations and in written abstracts and reports. Another key objective is to teach students how to write a research proposal by building on current knowledge in the scientific literature.

Course Organization:
The primary means of general communication between the course co-ordinator/teaching assistants and students will occur through LearnLink.

Students will be assigned a research topic, which will serve as the foundation for two oral presentations based on a primary journal article (reviews do not constitute primary research articles but should be consulted to familiarize the student with the area of the topic). Students should identify a high-profile full-length publication for example, one featured in the News and Views section of a recent, high-impact journal such as Science, Nature, or Cell. Students may seek the help of their assigned teaching assistant to find the most appropriate article and must obtain approval from the teaching assistant for their choice of article well in advance of their first presentation (please see schedule below).
The initial presentation will be of an introductory nature, structured along the lines of a Scientific Abstract. The first presentation should outline the rationale for the study, the state of current knowledge, primary findings described in the article, and conclusions of the study. The first presentation should not exceed 10 minutes with 5 minutes for questions and comments from the audience. Generally, a single “slide” will take at least 1 minute to present. Due to time constraints on room bookings, each student presentation will be strictly limited to the periods cited above. Students are expected to participate after the presentations by asking questions; to this end, each student should read at least 2 articles other than that forming the basis of their presentation.

The first presentation is intended to set the stage for the second presentation, which will require the student to expand on the first presentation and in particular to recount the original findings (results and relevant methods) of the article(s). The original figures and tables from the chosen article can be used directly in the content for the second presentation. The student presenter should also describe the key methods employed in the study. The second presentation should not exceed 20 minutes with 10 minutes for questions and comments from the audience. All students are expected to participate in the 10-minute discussion period.

The written grant proposal should be centered on the assigned research topic and must build on the findings (results) of the selected article. The proposal should comprise a scientific abstract, an introduction to the field, a short description of the rationale for the proposed study, a hypothesis, 3 specific aims, and references. A brief description of the methods to be used should be included in the specific aims section. A lecture will be scheduled to introduce students to the key components of a scientific proposal. Moreover, an example of a grant proposal will be posted on LearnLink as a guide to the students.

**Schedule Outline:**

January 3rd: First class meeting; outline of course objectives, organization and breakdown of student evaluation.

January 4th: Students will be assigned a teaching assistant; this information will be posted on LearnLink.

January 9th: Research topics assigned to students by teaching assistants.

January 13th: Students identify appropriate primary research article(s) and seek approval of their choice(s) by their teaching assistant. Students should begin to prepare an outline/draft of their first presentation and seek feedback from their teaching assistant.

January 17th: Students provided with feedback from teaching assistants on their initial outline and draft presentation. Each teaching assistant will post the approved journal articles on LearnLink to afford all students in their group time to read the articles in advance of their presentation. Students are expected to participate by asking questions or commenting after each presentation.
February 1st: Final presentation outline uploaded to LearnLink.

February 2nd - 9th: Individual student presentations (first presentation) will take place between these dates. Rooms for the presentations will be identified and posted on LearnLink.

February 20th - 26th: Reading Week - No classes or tutorials can take place during this period.

February 28th - March 4th: Opportunity for feedback from teaching assistants on preliminary abstract and draft for the second presentation.

March 7th: Final abstract/presentations uploaded to Learnlink.

March 1st - 11th: Individual student presentations (second presentation) take place. Rooms will be assigned for the presentations and uploaded to LearnLink.

April 6th: Final written research proposal due.

**Evaluation:**

First presentation – 15% of final mark
  Outline – 3%
  Presentation – 10%
  Participation – 2%

Second presentation – 35% of final mark
  Abstract – 10%
  Presentation – 20%
  Participation – 5%

Grant proposal – 50% of final mark

Failure to make a presentation will result in a mark of zero. Late submission of any of the materials described (upload of presentations or the proposal) will result in a 10% reduction in the mark per day.

**Presentations**

Students must bring their identification cards to both presentations.

**Academic Integrity**

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behavior can result in serious
consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy.

<http://www.mcmaster.ca/academicintegrity>

This section is dedicated to students:
http://www.mcmaster.ca/academicintegrity/students/index.html

The following illustrates only three forms of academic dishonesty:

Plagiarism is the submission of work that is not one’s own or for which other credit has been obtained.

Improper collaboration in group work.

Copying or using unauthorized aids in tests and examinations.

Requests for Relief for Missed Academic Term Work
For absences from classes lasting up to 5 days:
Using the McMaster student absence form (MSAF) on-line, self-reporting tool, undergraduate students may report absences lasting up to 5 days and may also request relief for missed academic work. The submission of medical or other types of supporting documentation is normally not required. Students may use this tool to submit a maximum of two requests for relief of missed academic work per term. Students must immediately follow up with their course instructors regarding the nature of the relief. Failure to do so may negate the opportunity for relief. It is the prerogative of the instructor of the course to determine the appropriate relief for missed term work in his/her course.

The MSAF on-line, self-reporting tool cannot be used to apply for any final examination or its equivalent. See Petitions for Special Consideration in the Undergraduate Calendar.

Please consult the website for further info:
http://registrar.mcmaster.ca/calendar/2011-12/pg2246.html

Modifications to the course
The instructor and University reserve the right to modify elements of the course during the term. The University may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites (LearnLink) weekly during the term and to note any changes.