2016 CHEM BIO 2Q03 - Inquiry for Chemical Biology

Course Outline

Instructors:

Dr. Paul Berti (berti@mcmaster.ca / ext. 23479 / ABB 458)  
Dr. Giuseppe Melacini (melacin@mcmaster.ca / ext. 26959 / ABB 266a)

These e-mails should be used primarily to set appointments. When contacting us, please suggest at least three dates/times during which you are available to meet in person.

Classes:

Tue 13:30 – 14:20, and Thu 12:30 – 14:20 pm; BSB – 119

Peer Tutors (PTs)

MATTHEW CAMPEA (CAMPEAMA on A2L)  
JATHAVAN ASOHAN (ASOHANJ on A2L)  
DANIEL LEVIN (LEVINDL on A2L)  
FUNING LIN (LINF5 on A2L)  
VICTORIA MARANDO (MARANDVM on A2L)  
JACOB PIERSCIANOWSKI (PIERSCJJ on A2L)

Teaching Assistants (TA)

ROGER BIALY (BIALYRM on A2L)

Course Objectives

The goal of this course is to introduce students to the inquiry model of education as applied to Chemical Biology.

What Is Inquiry?

Inquiry is a form of self-directed learning where students:  
• Determine what they need to learn  
• Identify resources and how best to learn from them  
• Use resources and report their learning
Inquiry aims to build research skills. Specifically, in this course students will be introduced to self-directed learning, i.e., how to search and read the primary scientific literature and develop their skills in analyzing papers, in oral and written presentations, and in working as part of a group.

**What Skills Will We Develop?**

Through directed exercises and research projects, we will help you develop the following skills/abilities:

1. The ability to ask a good question, and to judge what a good question is.

2. The ability to answer that question by developing skills:
   (a) to read the scientific literature
   (b) to use the library and electronic resources effectively
   (c) to critically assess information for relevance and reliability
   (d) to refine a question as a project progresses.

3. The ability to present your findings, both orally and in written form.

4. The ability to work in groups.

5. The ability to properly cite sources of information and an understanding of academic integrity.

6. Introduction to relevant software:
   Chemical Drawing Program - ChemDraw (requires free registration)
   Protein Structure Visualization - PyMOL
   http://www.pymol.org/educational/

**How Will the Course Be Run?**

The beginning of the course will largely be occupied with developing skills. This will be done mainly in the context of short exercises, including in-class exercises. Two projects will be introduced as the term progresses. The tentative schedule of the course is posted in the last page of this document, but this may be subject to change as the course progresses.

**A2L**

We will use AVENUE2LEARN for posting course information, submitting reports, group discussions, etc. You can log in through a web browser at avenue.mcmaster.ca.
Students should be aware that when they access the electronic components of this course private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

**Electronic Submission**

All written reports and PowerPoint presentations will be submitted and graded electronically through A2L. **Be sure to check your A2L e-mail for receipt of submission to the dropbox.** It is your responsibility to ensure that your work has been successfully submitted.

**Evaluation**

The course evaluation will be based on:

<table>
<thead>
<tr>
<th>Weight</th>
<th>Assignment</th>
<th>Relevant Dates</th>
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<tbody>
<tr>
<td>10%</td>
<td>Exercises</td>
<td>Mostly in class</td>
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<tr>
<td>50%</td>
<td>Project B</td>
<td>Presentations on 29 Nov, 01, 06 Dec, written report on 06 Dec.</td>
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<tr>
<td>100%</td>
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Project evaluations will include input from instructor, peer tutors, TA, and peer evaluations. Both projects will be group projects.

**Missed/late work**

**Late work will be subject to a grade reduction of 10% per day and will not be accepted after five days.** Late work is to be e-mailed directly to a course instructor, as the A2L dropbox will be closed. Missed presentations will not be rescheduled.

It is the student’s responsibility to ensure that they have properly submitted their work to the dropbox by checking their A2L e-mail for a submission receipt.

If you are absent from the university for a minor medical reason, lasting fewer than 5 days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form (MSAF). Absences for a longer duration or for other reasons must be reported to your Faculty/Program office, with documentation, and relief from term work may not necessarily be granted. When using the MSAF, report your absence to an instructor. MSAF may not be used for term work worth 30% or more.
Academic Integrity

You are expected to exhibit honesty and use ethical behaviour 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 behaviour 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, located at http://www.mcmaster.ca/academicintegrity

The following illustrates only three forms of academic dishonesty:

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

2. Improper collaboration in group work.*

3. Copying or using unauthorized aids in tests and examinations.

* Projects 1 and 2 are group projects. Unless noted in class, everything else, including exercises, is to be done individually.

We will be using a web-based service (turnitin.com) to protect against plagiarism. University policy dictates that the use of turnitin.com cannot be made mandatory. If you object to your work being checked with turnitin.com, please speak to an instructor before projects begin. All work will be screened for plagiarism even if turnitin.com is not used.

Copyright Policy

In this course you will have access to material that is subject to copyright laws. This includes (but is not limited to) the textbook, solutions manual and all resources developed by the instructor such as quizzes, assignments, tests, class notes and class slides. You are not allowed under any circumstances to share or redistribute this material in any printed or electronic form without explicit written consent of the copyright holder. This includes posting any course material on Internet bulletin boards, course repositories, social networks, etc.

Discrimination Policy

McMaster University is concerned with ensuring an environment that is free of all adverse discrimination. If there is a problem that cannot be resolved by discussion among the persons concerned, individuals are reminded that they should contact their Department Chair, or Human
Rights & Equity Services, as soon as possible. Issues involving teaching assistants should also be brought to the attention of the instructor.

Changes

If, due to circumstances beyond our control, changes to the course are required:

"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 weekly during the term and to note any changes."

Tentative CB 2Q03 Schedule for F2016

<table>
<thead>
<tr>
<th>Week</th>
<th>Class</th>
<th>Date</th>
<th>1st Hour</th>
<th>2nd Hour</th>
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<tr>
<td>1</td>
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<td>06-Sep-16</td>
<td>Course introduction</td>
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<td>08-Sep-16</td>
<td>Anatomy of a paper</td>
<td>Mock Inquiry, 25 word summary</td>
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<td>13-Sep-16</td>
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<td>Library tour</td>
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<td>15-Sep-16</td>
<td>Project A setup - Natural products</td>
<td>Database searching</td>
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<tr>
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<td>20-Sep-16</td>
<td>Deciphering figures / Peer review</td>
<td>Using Pymol</td>
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<td>22-Sep-16</td>
<td></td>
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<td>27-Sep-16</td>
<td>Library tour</td>
<td>How to write</td>
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<td>29-Sep-16</td>
<td>Writing together</td>
<td>Editing together / Progress reports</td>
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<td>04-Oct-16</td>
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<td>Using Chemdraw</td>
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<td>06-Oct-16</td>
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<td>11-Oct-16</td>
<td>Project A presentations (5)</td>
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<td>20-Oct-16</td>
<td>Project B paper selection / project plan</td>
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<td>22-Nov-16</td>
<td>Project B presentations (5)</td>
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<td>24-Nov-16</td>
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<td>Meet with groups (as needed)</td>
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<td>29-Nov-16</td>
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<td>01-Dec-16</td>
<td>Project B presentations (5)</td>
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<td>06-Dec-16</td>
<td>Project B presentations (5)</td>
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