Life Sciences 2AA3
Introduction to Topics in Life Sciences

Note: This is a tentative outline as of June 2016. Modifications to module order/content may vary slightly.

LEAD INSTRUCTOR:
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MODULE INSTRUCTORS:
various

INSTRUCTIONAL ASSISTANT:
Sunita Nadella, Ph.D.

COURSE DESIGN AND DEVELOPMENT:
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COURSE DESCRIPTION:
This course is an opportunity to explore contemporary fields of research in the Life Sciences and the application of this research to questions about human health and well-being. Some of these topics are the focus of sub plans available to students in the Life Sciences programme the end of their second year. These topics include:

- Cells, Molecules and Disease
- Modelling Life
- Sensory Processes
- Scientific Communication

Your exploration of these fields will occur through a series of lectures from McMaster researchers in these fields and an analysis of how basic research has been translated to real-world questions. The tutorials will be an opportunity to work with upper-year mentors to develop diverse skills in scientific communication including presentations, essays, data reports, and debates.

This course was developed in collaboration with students in the Life Sciences program. There hope is that this course offers students exposure to a unique experience that will broaden student learning in the Life Sciences. Students will have the opportunity to view contemporary topics from multiple diverse perspectives, which will enhance critical thinking skills, expand knowledge, and develop an open-minded and collaborative approach to learning. The eclectic approach of this course will allow students to draw upon ideas from multiple areas of study, helping them gain complementary insights into a field of study.

COURSE AIMS:
- Students will be introduced to interdisciplinary perspectives on current topics in Life Sciences
- Students will be introduced to sub plans or fields of interest in the Life Sciences program.
- Students will explore program options through MAP.
- Students will practice and develop foundational or ‘soft’ skills including communication, collaboration, and presentation.
- Students will engage in diverse forms of communication including written and oral communication to diverse audiences.
- Students will receive formative feedback to allow for foundational skill development.
- Students will practice and develop technical or ‘hard’ skills including data analysis and interpretation, knowledge translation, research design, and critical thinking.
• Students will prepare a proposal for a community engagement project (research or outreach) that applies to a specific from the course content the Life Sciences content.
• Students will be introduced to different careers through alumni guest speakers.
• Students will practice communication skills (written reflections, oral presentations)

**Learning Outcomes:**
• Students will have a program plan that is founded on the academic mandate of the Life Sciences Program.
• Students will outline short and long-term goals that are part of their program plan.
• Students will make an informed choice about Life Science sub plans or Faculty or University minors.
• Students will have developed their foundational (soft) and technical (hard) skills.
• Students will have an awareness of the relevance of basic research to human health issues in their local and global communities.

**Online Content:**
This course uses Avenue to Learn to post the course outline, assignments, and other notices. Go to [http://avenue.mcmaster.ca](http://avenue.mcmaster.ca) to find out how to log-on to the course’s platform.

**Textbook:**
There is no required textbook for this course. Required readings will be provided for each lecture.

**Evaluation:**
Critical literature review (five during weeks 1 to 5; short 1 to 2 pages): 5% each  
Participation in lectures through classroom response questions  
Group project that applies a topic from one module to a research or community project (weeks 6 through 11)  
10% literature review  
10% mid-project update  
10% final report  
20% final presentation at end of term exhibition  
Program plan: (weeks 6 to 11): interim updates and final plan  
Reflections (on foundational skills during project)  
Total = 25%
Total = 5%
Total = 50%
Total = 15%
Total = 5%

**Schedule:**
Each week will consist of two lectures (50 minutes each) and a tutorial (1 hour and 50 minutes).

**Weeks 1 through 5:**
Guest speakers from various McMaster departments  
Each week students will have a short assignment that ties the content of the guest lecture to the development of a technical or applied skill including data analysis, experimental design, data interpretation, or communication of data to various audiences.

**Week 6 through 10:**
Development of community-based or research-based project proposal

**Week 11:**
Final symposium on group projects and end of term celebration

**Week 12:**
Submission of personal programme plan
REQUESTS FOR RELIEF FOR MISSED ACADEMIC TERM WORK:

If you are absent from the university for a minor medical reason, lasting fewer than 3 days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form. 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, enter the Instructional Assistant name and email (TBA) should be entered as the contact for the course and you must contact the Instructional Assistant to learn what relief may be granted for the work you have missed, and relevant details such as revised deadlines, or time and location of a make-up exam. Please note that the online MSAF can only be used for term work worth less than 25% and it cannot be used for the final examination.

With an approved MSAF the following accommodations may be granted (accommodation is not guaranteed).

• If you miss a tutorial, you are accountable to your group. You may be able to catch up on work done with your group. You will not be given accommodation for tutorial work worth less than 2%.
• If you miss a test, you will be expected to complete an equivalent test within 24 hours of your return to campus, which is the time that you submit your MSAF (i.e. when you are well).
• If you miss a deadline for essay submission or a presentation, you will be expected to submit or present the assignment within 24 hours of your return to campus, which is the time that you submit your MSAF (i.e. when you are well). Any late submission without an MSAF will be deducted 10% per day.
• There is no accommodation for missed participation with the class response system.

ACADEMIC DISHONESTY:

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:
• Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
• Improper collaboration in group work. While we encourage you to work with your peers in solving problems on your assignments, copying of answers is not acceptable. Your final work must be your own.
• Copying or using unauthorized aids in tests and examinations.

GRADES:

Grades obtained in Life Science 2L03 will be converted according to the scheme generally used at McMaster University which can be viewed here: http://registrar.mcmaster.ca/exams/grades/ When the final marks are obtained, ALL borderline cases will be reviewed and, where warranted, adjustments will be made in the final mark.