

INSTRUCTOR: Dr. Rosa da Silva

Office: LSB 540

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Course Description:

This course is broken down into four modules that look at different topics of human health and pathophysiology. Each topic is examined from several different perspectives. This includes the normal physiology of a healthy individual through to pathophysiological consequences and the molecular biology that underlies various diseases. While we focus upon the cell biology, genetics, and biochemistry of each disease we also consider the social and economic factors that affect disease persistence and examine current treatments. The concept of disease eradication will also be considered, by looking at different perspectives in drug development and design.

Learning Objectives:

By the end of this course students will be able to:

- Read and understand journal articles relating to basic and clinical research in human disease
- Identify journal articles that pertain to written assignment questions
- Write short concept papers that summarizes journal articles
- Be familiar with concepts relevant to the treatment of disease
- Use the breadth of topic specific knowledge from lectures and readings to answer both fact-based and applied questions
- Use the breadth of topic specific knowledge from lectures and readings to explain the importance of continued research in the field
- Make connections between disease eradication methods, student learning and career goals

Class Activities:

- All lectures are scheduled two days per week (Mondays and Wednesdays, 4:30-5:20pm) with special mandatory lectures scheduled Thursdays from (4:30-5:20pm) during class time. Tests are scheduled during class times as indicated on the course schedule.
- Tutorial sessions throughout the semester will enable students to make connections between disease eradication and their own learning. Specifically, students will further discuss drug development and design, current health care challenges, the health care professions behind them, and how it relates to their own experiences and future career goals. Note: Any course changes will be posted to Avenue to Learn.

Schedule of Topics:

The topics for this term:

- An Introduction to Homeostasis and Chemical Messengers
- Module 1: Neurodegenerative and neuromuscular disorders
- Module 2: Cardiorespiratory diseases
- Module 3: Cancer
- Module 4: Neglected tropical diseases

Required Texts & Materials:

There is no required course textbook. Reading materials, lecture notes and course outlines will be posted as PDF files on the course website through Avenue to Learn (<http://avenue.mcmaster.ca/>) for students to download and bring to class.

Evaluation:

Four term tests, 18% each, top 3/4 marks	Total:	54%
Test dates:	Test 1: Thursday October 4	
	Test 2: Thursday October 25	
	Test 3: Thursday November 8	
	Test 4: Wednesday November 21	
Essay 1		8%
Essay 2		8%
Tutorial Assignments and Participation		15%
Human Pathophys Film Fest Project and Peer Review		15%
	Total:	100%

Notes on Assessment:

Term Tests will be given at the end of each course Module. There will be a total of 4 term tests that will test material presented during lectures given by Dr. da Silva and any guest lecturer(s) along with any provided readings/lecture notes posted on Avenue to Learn. Term tests will include multiple choice, short answer, labeling figures, definitions, and can include compare and contrast short answer questions.

Term tests will be scheduled during regular class time. The scheduled term tests will not be changed, and you must write all 4 tests. The top 3 of 4 tests will contribute to your final grade. If you submit an MSAF, a zero will be recorded for that one test and the mark will be dropped. Any other missed tests will receive a mark of zero.

There are NO MAKE-UP TESTS in LIFESCI 3AA3. There is no final exam in LIFESCI 3AA3.

Essays will be written by students so that they can take the information, concepts, and ideas from lecture and apply them to new questions or alternate scenarios. Students will utilize informational search engines (including PubMed, Medline, or Google Scholar) to find recent and relevant articles pertaining to their topic, and to address a set of questions posed for a specific essay topic. It is anticipated that through the two essay assignments, students will be able to concisely explain the answers to the assigned essay questions in the format of an interesting and engaging paper.

Tutorial Assignments will enable students to connect the core course material with a better understanding of the greater implications of disease eradication. This includes the many challenges that are faced during drug development and design, the healthcare professions of this day and age, and will provide students with an understanding of the skill set that they require as they embark towards their future careers.

The **Human Pathophys Film Fest Project** is the most exciting part of LIFESCI 3AA3. Building upon the work that they have done in tutorials, students will work in a group towards the preparation and presentation of a 3-minute video project based on one of a list of topics that build upon the course tutorial work and that are assigned by Dr. da Silva. Each group will have the opportunity to sign up for a topic once the course has begun. A project "storyboard" will be completed partway through the semester. Students will be assessed as a group on the storyboard and on their final Film Fest video and presentation. Students will be evaluated for providing peer review during the Human Pathophys Film Fest.

Absences & Missed Work:

If you are absent from the university for a minor medical reason, lasting up to 3 calendar 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 office, with documentation, and relief from term work may not necessarily be granted. When using the MSAF, you must contact Dr. da Silva immediately (normally within 2 working days) by email to report your absence. Please refer to the contact list on the first page of this outline for appropriate email addresses. Dr. da Silva will indicate what relief may be granted for the work you have missed, and relevant details such as revised deadlines. Please note that the MSAF may not be used for final deliverables, nor can it be used for a final examination or its equivalent.

*****IMPORTANT****:** You must identify Dr. da Silva (rosa.dasilva@mcmaster.ca) as the contact on the MSAF form and immediately after using the online tool, students MUST contact Dr. da Silva at this email regarding the nature of the relief. Failure to do so may negate the opportunity for relief.

If you submit an MSAF for an essay, the essay must be submitted within 48 hours of the original deadline. Late essays will be deducted 10% per day late. If you are unable to present during your Film Fest presentation you (or one of your group members) must submit an MSAF, an alternate time may be arranged to present.

Checking Your Grades:

All grade concerns and discrepancies must be reported to Dr. da Silva (rosa.dasilva@mcmaster.ca). When the final marks are obtained, ALL borderline cases will be reviewed and, where warranted, adjustments will be made in the final mark.

Re-mark Policy:

All grade concerns and discrepancies must be reported to Dr. da Silva within two weeks of receiving your grade for each course component. Requests for re-evaluation of term tests must be made to Dr. da Silva within two weeks of return of the marked term test or assignment. Only tests/assignments that are fully written in non-erasable pens or are typewritten will be considered for remarking. All requests must be made in writing Dr. da Silva who will then consider a possibility of a re-mark. Please be aware that an approval for a remark can result in an increase, decrease or no change to the original mark.

Communication between Students and Faculty:

The University's official method of correspondence with students is through a valid McMaster University e-mail account. It is the student's responsibility to keep his/her @mcmaster.ca account active and check it on a regular basis. All emails from students must include your full name and course code (LIFESCI 3AA3). All emails will be replied to within 48-72 hours.

Inclusivity and Accommodations:

McMaster University aims to foster a supportive, inclusive learning environment that will encourage both individual and collective growth. Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. Any student who then wishes to invoke an accommodation for any aspect(s) of this course must contact the instructor at the beginning of the semester to discuss how the accommodations detailed in their SAS letter will be fulfilled in this course.

McMaster Accommodation for Religious, Indigenous and Spiritual Observances Form (RISO):

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students requiring a RISO accommodation should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

Student Responsibilities:

To get the most out of the course, you must be prepared to:

- attend all sessions, make up all missed work, and provide documentation for authorized absences;
- interact frequently with faculty, students, TAs, and other support staff;
- plan and manage your own time;
- complete preparatory tasks (such as reading, writing assignments, and initial research) in advance of sessions;
- develop and use reflective learning skills (for example identifying learning objectives, planning and carrying out research tasks, acting on academic feedback);
- work as an effective, efficient, and responsive team member on group assignments;
- check the course Avenue site, and your McMaster and Avenue e-mail daily for updates; and,
- follow all university policies and guidelines, and in all ways be a responsible university member

Senate Student Policies

Students can view full policies here (<http://www.mcmaster.ca/policy/Students-AcademicStudies/>).

Senate Policy Statements are also available from the Senate Secretariat Office, Room 104, and Gilmour Hall.

- **Academic Integrity** - <http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>
Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and 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. The following illustrate only four of many 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;
 - copying or using unauthorized aids in laboratory exercises
 - improper collaboration in group work; and
 - copying or using unauthorized aids in quizzes, tests and examinations

All students are reminded of the importance of academic integrity, and the serious consequences of academic dishonesty.

- **Student Code of Conduct** - <http://www.mcmaster.ca/policy/Students-AcademicStudies/StudentCode.pdf>
You acknowledge that your behavior in all aspects of this course should meet the standards of the McMaster University Student Code of Conduct. You understand that any inappropriate behavior directed against any of your colleagues, teaching assistants, or the instructional team will not be tolerated. Disruptive behavior during any session (e.g. lecture, seminar, lab, tutorial) such as talking, sleeping or non-class computing while an individual presents information, or constantly being late, will also not be tolerated. Abuse, ridicule, slander, inappropriate language, and discrimination towards instructors teaching staff, teaching assistants and other students will not be tolerated in any capacity. Shared spaces including e-spaces such as the Avenue to Learn course discussion board are to be considered inclusive and safe.

Use of Turnitin.com

In this course, we will be using a web-based service (Turnitin.com) to reveal plagiarism. Students will be expected to submit their work electronically to Turnitin.com and/or in hard copy so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to www.mcmaster.ca/academicintegrity; <https://www.mcmaster.ca/academicintegrity/turnitin/students/index.html>

Copyright Policy

In this course you will have access to material that is subject to copyright laws. This includes (but is not limited to) textbooks and all resources developed by the instructors such as lab manuals, demonstration videos, quizzes, assignments, tests, class notes and class slides. Under no circumstance are you allowed to share or redistribute this material in any printed or electronic form without the explicit written consent of the copyright holder. This includes posting any course material on Internet bulletin boards, course repositories, social networks, etc.

The instructors and the university reserve the right to alter this outline if necessary.

The instructors 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 Avenue to Learn websites weekly during the term and to note any changes.