INSTRUCTOR:
Dr. Renuka Karunagoda TAB 104/F (enter via GSB 105) email: renukakarunagoda@yahoo.com

INSTRUCTIONAL ASSISTANT:
Ryan Belowitz GSB 105 email: ls3m03@mcmaster.ca

COURSE DESCRIPTION:
In this course we will examine how a cell interacts with its microenvironment and its neighbouring cells. Using current techniques in cell imaging, we will begin with an examination of the biochemical and physical properties of the single cell and progress towards an understanding of tissue morphogenesis and development. The topics will be taken in the context of the impact of diseases, pathogens, and chemicals on diverse biological systems.

PREREQUISITES:
Biology 2B03 (or ISci 2A18 A/B), and Biology 2C03 or LifeSci 2G03; and registration in Level III or above of an Honours program in the Faculty of Science.

COURSE OBJECTIVES:
By the end of this course students will be able to:
• Read, interpret, and concisely summarize current research in the field of cell biology
• Understand chemical and physical principles that underlie cell behaviour
• See the importance of understanding underlying principles and models in the study of human health

FORMAT:
There are three 50 minute lectures per week. An online Discussion Board will be utilized to further discuss lecture content.

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. Please go to http://avenue.mcmaster.ca/ to log-on to the course’s home page.

COURSE EVALUATION:
Four tests, 25% each - top 3 marks Total of 75%
Outline of Research Proposal, group 10%
Final Research Proposal, group 15%
(due at the end of the term)

NOTES ON ASSESSMENT
Term Tests: There are a total of 4 term tests that will be scheduled during regular class time. The scheduled tests will not be changed and you must write all 4 tests. The top 3 of 4 test marks 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.

There are NO MAKE-UP TESTS in Life Science 3M03. There is no final exam in Life Science 3M03.

Research Proposal (Outline and Final Submission): Students will work in groups to take the theoretical microscopy and biological technology techniques presented in the course, and apply them towards proposing a research project that would be able to answer a fundamental question related to aspects of cellular dynamics and human health. The end goal will be to design a project that has the potential to contribute to the larger field of cellular and molecular biology.
**COURSE PROCEDURES**

**E-MAIL POLICY:** 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 3M03). All emails will be replied to within 48-72 hours.

**REQUESTS FOR RELIEF FOR MISSED ACADEMIC TERM WORK:** In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work”.

The entire MSAF policy is available in the Undergraduate Calendar 2016-17 (Fall/Winter) > General Academic Regulations > Requests for Relief for Missed Academic Term work. Please review the entire policy prior to submitting any requests.

Students may use this tool to submit a maximum of ONE request for relief of missed academic work per term. Students may report absences lasting up to 3 days by using the McMaster Student Absence Form (MSAF) online, self-reporting tool, in order to request relief for missed academic work. Students may use this tool to submit a maximum of ONE request for relief of missed academic work per term.

**IMPORTANT:** You must put Ryan Belowitz on the MSAF form (ls3m03@mcmaster.ca) and immediately after using the online tool, students MUST contact Ryan Belowitz (ls3m03@mcmaster.ca) regarding the nature of the relief. Failure to do so may negate the opportunity for relief.

If you complete an MSAF for the proposal outline or final, proposal, this assignment must be submitted within 48 hours of the original deadline

**It is the prerogative of the instructor of the course to determine the appropriate relief for missed term work. This relief may differ from what is described above.**

**CHANGES TO THE COURSE OUTLINE:** At certain points in the course it may make good sense to modify the schedule outlined. The instructor reserves the right to modify elements of the course and will notify students accordingly, both in class and on Avenue to Learn). Posted changes take precedence over this course outline.

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.

**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:

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, 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.
3. Copying or using unauthorized aids in tests and examinations.
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 (through Avenue to Learn) 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 Dr. Karunagoda. 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

GRADES obtained in LS 3MO3 will be converted according to the following scheme, which is the one in general use at McMaster University.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
<th>Credit</th>
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<tbody>
<tr>
<td>90 - 100%</td>
<td>A+</td>
<td>12</td>
</tr>
<tr>
<td>85 - 89%</td>
<td>A</td>
<td>11</td>
</tr>
<tr>
<td>80 - 84%</td>
<td>A-</td>
<td>10</td>
</tr>
<tr>
<td>77 - 79%</td>
<td>B+</td>
<td>9</td>
</tr>
<tr>
<td>73 - 76%</td>
<td>B</td>
<td>8</td>
</tr>
<tr>
<td>70 - 72%</td>
<td>B-</td>
<td>7</td>
</tr>
<tr>
<td>67 - 69%</td>
<td>C+</td>
<td>6</td>
</tr>
<tr>
<td>63 - 66%</td>
<td>C</td>
<td>5</td>
</tr>
<tr>
<td>60 - 62%</td>
<td>C-</td>
<td>4</td>
</tr>
<tr>
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<td>D+</td>
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<td>1</td>
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<tr>
<td>0 - 49%</td>
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All grade concerns and discrepancies must be reported to the Instructional Assistant, Ryan Belowitz within two weeks of receiving your grade for each course component.

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 Ryan Belowitz within two weeks of receiving your grade for each course component. Requests for re-evaluation of term tests must be made to Dr. Karunagoda within one-week 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 to Dr. Karunagoda 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.

OTHER RESOURCES

McMaster University Library [http://library.mcmaster.ca](http://library.mcmaster.ca)

Various services are available to students at the McMaster University Library. Services including borrowing, interlibrary loans, online references, computers, copiers, along with assistance pertaining to an array of academic skills [http://library.mcmaster.ca/learning-support](http://library.mcmaster.ca/learning-support). For students who wish to improve their academic skills, study habits, time management, or for students who require specialized services, assistance is also available at the Student Success Centre located in Gilmour Hall (110).

Student Accessibility Services (SAS) [http://sas.mcmaster.ca](http://sas.mcmaster.ca)

Students who require academic accommodations must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Please feel free to contact them, preferably in the first week of class, if you will require any accommodation on these grounds: (905) 525-9140, ext: 28652 or sas@mcmaster.ca, located in the McMaster University Student Centre (B107). For further information, consult McMaster University’s Policy for Academic Accommodation of Students with Disabilities at [http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicAccommodation-StudentsWithDisabilities.pdf](http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicAccommodation-StudentsWithDisabilities.pdf)