WESTERN UNIVERSITY
Schulich School of Medicine and Dentistry
Department of Medical Biophysics

BIOPHYS 9513A: Preparing for Scientific Research (0.50)
Fall 2018 Course Syllabus

Course Objectives and Learning Outcomes:
The primary objective of this course is to provide students with a practical introduction to undertaking scientific research and provide experience with presenting science information in a public forum. Emphasis will be placed on presentation to a scientifically educated, but non-specialist audience. Feedback will be provided from both experienced speakers as well as graduate student peers.

Learning outcomes and expectations for learners who complete this course include:

- Understand the requirement for professional conduct in a graduate program and how to successfully progress in graduate school
- Understand the need for ethical scientific research and conduct
- The role of the scientific method in research and how to generate research questions and hypotheses that can lead to publications
- How to efficiently generate high impact short oral presentations
- How to use statistics in research and generate data constructs for manuscripts and posters/presentations

Course Instructor:

Available for questions or feedback at any time via email or in person (by chance or appointment).

Professor        Dr. Matt Teeter (matthew.teeter@lhsc.on.ca)
TA                Ajay Rajaram (arajara2@uwo.ca)

Evaluation:

3 minute thesis presentation  60%
Curriculum Vitae             10%
Reference letter             10%
Scholarship proposal         10%
Proposal peer review         10%

Attendance, Participation and Other Policies:

The course is designed to be interactive and having peer feedback in improving presentation skills is vital for the class. Communication is the transfer of information between two people. Part of the skills being learned is that of asking questions; as such we encourage active participation in the lectures and feedback sessions for the presentations. If for some legitimate reason you cannot attend a particular lecture, please email us to let us know.

Attendance Policy:
All classes are mandatory, unless otherwise stated. Any student who, in the opinion of the course co-ordinator is absent too frequently from class periods will receive a failing grade after due warning has been given in writing from the course co-ordinator and Graduate Chair.
**Cheating and Plagiarism Policy:**
Students are encouraged to work together, but each student must take total responsibility for his/her submitted work. Students must write their laboratory reports and final projects in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. University policy states that cheating, including plagiarism, is a scholastic offence. The commission of a scholastic offence is attended by academic penalties which might include expulsion from the program. If a student is caught cheating, there will be no second warning.

All written reports and projects may be subject to submission for textual similarity review to commercial plagiarism detection software under license to the University for the detection of plagiarism. All reports will be included as source documents on the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between the University of Western Ontario and Turnitin.com (http://www.turnitin.com).

See the School of Graduate and Postdoctoral Studies Scholastic Offence Policy: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

**Use of Electronic Devices Policy:**
No electronic devices (e.g., cell phones, MP3 players) may be used during lectures or examinations. The use of non-programmable calculators is permitted during examinations; programmable calculators are prohibited during examinations.

**OWL Internet/Bulletin Board Policy:**
It is the student’s responsibility to read the course website posted on Western’s on-line learning management system, OWL (https://owl.uwo.ca/portal). This includes the course bulletin board and all information and/or assignments posted about the course. If the student fails to act on information that has been posted on the course site and does so without a legitimate explanation (i.e., those covered under the illness/compassionate form), then there are NO grounds for an appeal.

**Request for Assignments Extensions:**
Students are advised to inform the course co-ordinator as soon as possible regarding an extension for assignment submissions due to medical reasons or other compassionate reasons. Extensions will only be granted by the course co-ordinators at their discretion.

**Absence Due to Medical Illness:**
Students must familiarize themselves with the Policy on Accommodation for Medical Illness: https://studentservices.uwo.ca/secure/index.cfm
If you are unable to meet a course requirement due to illness or other serious or compassionate circumstances, you must provide valid medical or other supporting documentation to the course co-ordinator immediately. It is the student's responsibility to make alternative arrangements with the co-ordinator to complete missing course requirements.

A student requiring academic accommodation due to illness, should use the Student Medical Certificate: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf when visiting an off-campus medical facility or request a Record's Release Form for visits to Student Health Services. The form is available at: http://www.health.uwo.ca/services/students/policies.html. The release form will allow the course co-ordinator to confirm with Student Health Services that a student’s absence from regular attendance or inability to meet scheduled course commitments is due to medical reasons. The nature of the illness will not be divulged by Student Health Services.

**Graduate Students’ Mental Health and Physical Wellness:**
As part of a successful graduate student experience at Western, students are encouraged to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western’s Campus Recreation Centre: http://www.uwo.ca/campus_life/athletics.html
All facets of extracurricular campus life in which graduate students can participate are available on this URL: http://www.uwo.ca/campus_life/arts_culture.html

Information regarding health and wellness-related services available to students may be found at http://www.health.uwo.ca. Students seeking help regarding mental health concerns are advised to speak to someone in whom they feel comfortable confiding, such as their graduate supervisor, their program director (Graduate Chair), or other relevant administrators in their unit. Campus mental health resources may be found at: http://www.health.uwo.ca/mental_health/resources.html

Accessibility to the Course and Course Materials:
Please contact the course co-ordinator if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.
# Fall 2019 Class Schedule

Location: Thompson Room, B2-075, St. Joseph's Health Care

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Time</th>
<th>Location</th>
<th>Lecture Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>9</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Course introduction and preparing for success as a graduate student</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Ethics in research and scientific misconduct</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td><em>No class – Department Event</em></td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Preparing scholarship applications</td>
</tr>
<tr>
<td>October</td>
<td>7</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Presenting scientific research and asking questions</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td><em>No class – Thanksgiving Day</em></td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>3 minute thesis presentation</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>3 minute thesis presentation</td>
</tr>
<tr>
<td>November</td>
<td>4</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>3 minute thesis presentation</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td><em>No class – Remembrance Day</em></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Principles of peer review</td>
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<tr>
<td></td>
<td>25</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Scholarship peer review deliberations</td>
</tr>
<tr>
<td>December</td>
<td>2</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Scientific method and generating research questions</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Authorship, intellectual property, and conflicts of interest in science</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>10:00-12:00</td>
<td>B2-075</td>
<td>Data visualization and statistics</td>
</tr>
</tbody>
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## Assignment Due Dates

- 3 minute thesis presentation  
  Due October 21st, 28th & November 4th (in class)
- CV, reference letter, and proposal  
  Due November 18th (via OWL)
- Scholarship proposal peer review  
  Due November 25th (via OWL & in class)