Physiology & Pharmacology  
PHYSIOL 4520B—Stem Cells & Regenerative Medicine

This course overview has been created to communicate expectations for 2020/2021 courses offered by the basic medical science departments to help you plan your semesters. This is a draft and final details will be reflected in the syllabus closer to the start date of the course. Refer to previous course syllabi for learning outcomes.

Instructor: Dr. David A. Hess  
Email: dhess@robarts.ca

Course description
Central concepts in regenerative medicine are explored, with a focus on the preclinical development of stem cell therapies. Emphasized are: fundamentals of tissue-specific (post-natal) stem cell isolation, expansion and functional characterization using xenotransplantation into immunodeficient mouse models for the treatment of human hematopoietic disorders, ischemic vascular diseases, diabetes, and diseases of the gastrointestinal system and skin. The role of stem cells in the development of cancer will also be discussed.

Required:
- Stable internet connection
- Laptop or computer
- Working microphone
- Working webcam

Delivery mode:
This course will be delivered completely online. Virtual sessions will be a combination of synchronous (live) and asynchronous (recorded). Asynchronous lectures (2 hours) will be posted weekly by the lecturer. Timetables synchronous sessions (1 hour) will provide details for Blog Assignment discussions and an opportunity for question and answer tutorials will be held by the lecturer and Graduate TAs over Zoom. Students could be expected to complete work prior to attending sessions. Below are details about the sessions.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Dates</th>
<th>Time</th>
<th>Frequency**</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual synchronous*</td>
<td>Thursday</td>
<td>2-3 PM</td>
<td>weekly</td>
<td>Optional</td>
</tr>
<tr>
<td>Virtual asynchronous</td>
<td>N/A</td>
<td>2 hours</td>
<td>weekly</td>
<td>N/A</td>
</tr>
</tbody>
</table>

[*Virtual synchronous sessions will be recorded for later viewing]
[**A schedule will be posted]

Assessments:
Examples of assessments that could be assigned in this course are highlighted in yellow; these examples are based on previous offerings of the course and the learning outcomes that have been set.

Weekly quizzes  Participation  Take home tests/exams
Written assignments  Discussion forums  Timed tests/exams
Oral presentations  Groupwork  Proctored tests/exams
Other:  Other:  Other: