INSTRUCTOR
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ACADEMIC DISHONESTY
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. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located athttp://www.mcmaster.ca/senate/academic/ac_integrity.htm

COURSE OVERVIEW
This course will explore current and emerging topics in exercise physiology from a molecular and cellular perspective. Skeletal muscle development will be explored with an emphasis on relevant molecular pathways. Molecular processes such as pre-transcriptional regulation of gene expression, molecular regulation of muscle satellite cells and adult muscle stem cells, inter and intra-cellular signaling for muscle adaptation, and apoptosis in muscle may be examined. Relevant molecular events associated with muscle aging will also be explored.

COURSE FORMAT
Each major topic will be introduced by the instructor and a general discussion on the topic will be facilitated by the instructor. Following the introduction, each class will consist of student led discussions of original manuscripts on the topic. A student will be chosen, on a rotating basis, to informally present a manuscript and there will be an informal discussion regarding the manuscript and the scientific issues surrounding the manuscript.

TOPIC OUTLINE
1. Embryonic Skeletal Muscle Development
2. Muscle Satellite Cell Biology
3. Atypical Myogenic Progenitors
4. Molecular Exercise Physiology
5. Adaptation to Endurance Training
6. Adaptation to Resistance Training
**GRADING SCHEME**
Successful completion of this course will include the submission of a term paper, two major presentations, and weekly class participation. The breakdown is as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly participation</td>
<td>20%</td>
</tr>
<tr>
<td>Conference presentation</td>
<td>15%</td>
</tr>
<tr>
<td>Teaching presentation</td>
<td>25%</td>
</tr>
<tr>
<td>Term Paper</td>
<td>40%</td>
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</tbody>
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Details for each of these assignments will be discussed in class.

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**Please note:** This graduate course outline is subject to change based on learning needs of the enrolled cohort. Changes will be undertaken and are the decision of the instructor. Where there are conflicts, the instructor’s version of the outline is deemed to be correct.

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August 30, 2009