EXERSCI 301 Exercise Physiology 2
(15 points)
(Semester 1, Grafton & Newmarket Campuses)
Prerequisites: EXERSCI 201 or SPORTSCI 201

Who should take this course?
This second course in Exercise Physiology extends to the biological regulation of adaptation and the contributions and adaptations of the cardiorespiratory, endocrine and immune systems physical exercise or inactivity.

BSc Exercise Sciences (formerly Sport and Exercise Science) major:
- For students in the major prior to 2019: this course is a required course

Calendar Prescription
Biological regulation of the adaptation to physical exercise or inactivity. Homeostasis regulation and the adaptation of the cardiopulmonary, endocrine and immune systems to exercise and training. Evaluation of neuromuscular power and aerobic power and endurance in healthy individuals. Reporting of experimental methods and findings in human exercise physiology.

Intended Learning Outcomes of the Course
By the end of the course, it is expected that students will be able to:
1. Explain in depth the biological processes and mechanisms of the physiological responses and adaptations to habitual exercise or inactivity.
2. Explain in depth the functions of the cardiorespiratory, endocrine and immune systems in the homeostatic regulation of the provision for, and consequences of, acute and chronic exercise.
3. Select and apply laboratory equipment and protocols in the valid and accurate characterization of the responses and adaptations of the neuromuscular and cardiorespiratory systems to acute and chronic exercise, in healthy adult participants.
4. Describe, analyse and interpret laboratory experimentation in written scientific reports.
5. Summarize and explain scientific evidence in the development and application of ‘evidence-based’ concepts and prospective opportunities in health, exercise and performance practice/business/professions.
Learning and Teaching

Students are expected to attend two 1-hour lectures each week and four 3-hour laboratory sessions during the semester. These laboratory classes are a key component to learning and applying the lecture material, using scientific equipment and developing data collection, exercise prescription and physiological assessment skills with human participants (you and your classmates). Above all, a first-hand, scientific perspective (evidence) of how the human body performs and responds to different forms of exercise is gained. Office hours and on-line communications via CANVAS are available for student support at key (pre-assessment preparatory) times or by pre-arrangement, within the semester.

Teaching Staff

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Assessment

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Mid-Semester Test</td>
<td>15%</td>
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<tr>
<td>Pre-lab Quizzes (2)</td>
<td>5%</td>
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<tr>
<td>Laboratory Reports (3)</td>
<td>30%</td>
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<tr>
<td>Final Exam</td>
<td>50%</td>
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Required Readings, Further Readings and Textbook Resources

Essential Readings are mostly research articles and are provided via Talis/CANVAS. Research articles and textbooks identified as Further Resources are similarly available.


