EXERSCI 202
Principles of Tissue Adaptation

(15 points)
(Semester 2, City Campus)

Prerequisite: 30 points from MEDSCI 100-320 or BSc courses

Who should take this course?
Adaptation of the cardiovascular and neuro-musculo-skeletal systems happen during any physical activity, or lack thereof. A comprehensive scientific understanding requires the integration of knowledge from several core areas: epidemiology, biomechanics, neuroscience, and tissue biology. In this course, we will examine principles of tissue adaptation that occur in nerve, muscle, heart, and bone that occur with increased use, disuse, misuse, and repair after injury, associated with movement and exercise.

Learning Outcomes
1. Explain tissue-level mechanisms by which movement and exercise cause changes to the human body, across a number of key tissue systems.
2. Identify common themes and interrelationships between adaptation mechanisms across different tissue systems.
3. Search, analyse, and synthesize the scientific literature about a topical tissue adaptation process.
4. Demonstrate practical skills and techniques to apply stimuli and measure body properties associated with tissue adaptation processes.

Learning and Teaching
Students are expected to attend 2x 1 hour lectures per week and several 3-hour laboratory/active-learning sessions through the semester.
Teaching Staff

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To Be Determined  
Skeletal muscle

Assessment*  
Laboratory reports (5 labs)  20%  
Quiz (in class)  10%  
Written assignment  20%  
Mid-term test  10%  
Final exam  40%

* subject to change