Who should take this course?

Students who are interested in developing a more thorough understanding of the physiological adaptation to exercise and physical inactivity. This course advances students understanding on the biological regulations and adaptations to physical exercise during a life span. It suits students in Honours, Postgraduate Diploma or Masters’ year in exercise sciences, physiology, or clinical exercise physiology. The course is divided into 6 modules. Each module has a specific area of exercise physiology focus and is covered during the 2 weeks (4 lectures). Topics include cardiorespiratory and muscle adaptations, nutrition and performance, paediatric exercise physiology, pregnancy, and exercise.

The course also introduces students to new research methods used in the exercise field. Students are required to deliver presentations on specific exercise physiology topics therefore basic understanding on exercise physiology is expected.

Course prescription

A seminar-based course examining the physiological responses and adaptations to physical exercise or inactivity. Students evaluate, present, and discuss seminal and contemporary research publications on selected topics largely focusing on the cardiovascular, metabolic, and musculoskeletal systems. Emphasis will be placed upon investigations of the explanatory elements of adaptation, from the level of the genome to the living human, and the use of relevant contemporary experimental techniques.

Learning Outcomes

On completion of this course, a student would be expected to:

1. Explain in depth the physiological response and adaptation to exercise and physical inactivity.

2. Evaluate experimental approaches to the manipulation and determination of the response and adaptation to exercise and physical inactivity.

3. Describe and critically interpret relevant research literature.

Learning and Teaching

Students are expected to prepare for, attend and actively contribute to 24 (90 minutes) seminar-type classes.
Assessments*

Each student will:

1. Critically analyse, present and lead discussions of selected research articles (15%)
2. Critically analyse, present and discuss a selected experimental method and its application (15%).
3. Critically analyse, present and lead discussions of selected research review articles (15%)
4. Present and discuss on a point-counterpoint presentation of selected topic (15%)
5. Class interaction will be assessed based on the student's involvement on discussions, subject matter and relevance of the questions raised. Class integration will also include the peer feedback submitted by each student for every presentation. Peer feedback will be completed in class and sheets returned to lecturer at end of lecture (10%).
6. Write a final examination on material covered in the seminars (30%).

*subject to change

11.02.21