BIOS 2012 EXERCISE PHYSIOLOGY

Credit Points 10

Legacy Code 401142

Coordinator Simon Green (https://directory.westernsydney.edu.au/search/name/Simon Green/)

Description This unit covers the essential physiology that helps us understand how we control our exercise behaviour. In lectures there is a focus on physiological control, with emphasis on neuromuscular, cardiovascular, respiratory and thermoregulatory responses during exercise, as well as adaptation of these responses in response to ageing, disease and exercise training. In laboratory classes, there is a focus on the acquisition and interpretation of physiological responses during exercise.

School Health Sciences

Student Contribution Band HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 2 subject

Pre-requisite(s) NATS 1009 AND
NATS 1010 AND
SPRT 1001 AND
BIOS 1015

Equivalent Subjects BIOS 2037 - Sport and Exercise Phyiology

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Explain how the central nervous system controls muscle force during common types of movement and exercise.
2. Explain how the cardiovascular system adjusts to exercise and how it supports the increased muscular work.
3. Explain how the respiratory system adjusts to exercise and how it supports the increased muscular work.
4. Explain how body temperature is regulated during exercise.
5. Explain the signs and symptoms of heat stress during exercise using the understanding required in the above-mentioned learning outcomes (#1-4).
6. Analyse and interpret physiological data recorded during an exercise experiment.
7. Collate and organise experimental observations in a simple, neat and useful manner.

Subject Content

1. Overview of the essential physiology of movement and exercise, including metabolism (covered in Bioenergetics).
2. Neuromuscular physiology and exercise.
3. Cardiovascular physiology and exercise.
4. Respiratory physiology and exercise.
5. Thermoregulation and exercise.
6. Integrative physiology, exercise and heat stress.
7. Laboratory classes focused on ergometry and the recording, analysis and interpretation of neuromuscular, cardiovascular, respiratory and thermal responses during rest and exercise.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Item	Length	Percent	Threshold	Individual/ Group Task
On-Line Quizzes x4	Up to 90 minutes	20	N	Individual
Laboratory Manual and Attendance - The manual should include all practical class handouts and additional tables and figures required as part of the practical classes.	Manual requires six completed handouts and figures as identified in each handout.	20	N	Individual
Final written examination	2 hours	60	Y	Individual

Prescribed Texts

- Kenney, W.L., Wilmore, J.H., Costill, D.L. Physiology of Sport and Exercise. Seventh Edition. Human Kinetics Publishers. 2020

Teaching Periods

2022 Semester 1

Campbelltown

Day

Subject Contact Simon Green (https://directory.westernsydney.edu.au/search/name/Simon Green/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=BIOS2012_22-AUT_CA_D#subjects)