

# BIOS 2012 EXERCISE PHYSIOLOGY

**Credit Points** 10

**Legacy Code** 401142

**Coordinator** Simon Green ([https://directory.westernsydney.edu.au/search/name/Simon Green/](https://directory.westernsydney.edu.au/search/name/Simon%20Green/))

**Description** This subject 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

**Discipline** Human Biology

**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/](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 NATS 1022

**Equivalent Subjects** BIOS 2037 - Sport and Exercise Physiology

## 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. 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.

Type	Length	Percent	Threshold	Individual/Group Task
Report	250 words plus a maximum of four tables and figures	30	N	Individual
End-of-session Exam	60 minutes	42	N	Individual
End-of-session Exam	40 minutes	28	N	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

## Autumn (2022)

### Campbelltown

#### Day

**Subject Contact** Simon Green ([https://directory.westernsydney.edu.au/search/name/Simon Green/](https://directory.westernsydney.edu.au/search/name/Simon%20Green/))

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=BIOS2012\\_22-AUT\\_CA\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=BIOS2012_22-AUT_CA_D#subjects))

## Autumn (2023)

### Campbelltown

#### On-site

**Subject Contact** Simon Green ([https://directory.westernsydney.edu.au/search/name/Simon Green/](https://directory.westernsydney.edu.au/search/name/Simon%20Green/))

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