

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 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

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/) 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. 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.

Special Requirements

Legislative pre-requisites

Special Requirements - NSW Health Legislative Prerequisites

Student Compliance Information for all Health-Related Placements

Prior to enrolling in this subject, students must have submitted a Student Undertaking Form and undertake to apply for a National Police Check, which is required to be submitted before placement, and a Working with Children Check Student Declaration. Use the link to the Special Requirements webpage below for more information.

To be eligible to enrol in this subject and complete any required health-related placements or experiences, students must meet Western Sydney University program requirements as well as any special, legislated, or policy-mandated requirements.

Western Program Requirements

Visit the Special Requirements webpage for details about your program.

Special Requirements (https://www.westernsydney.edu.au/currentstudents/current_students/enrolment/special_requirements/)

Mandatory NSW Health student placement policy requirements

To be able to undertake placement in any NSW Health facility you must be assessed as compliant with NSW Health student placement policy in the first year of your program, regardless of when you expect to go on your first placement. Access and read the NSW Student Compliance Information Booklet.

NSW Student Compliance Information Booklet (https://issuu.com/uwspublications/docs/wsu_student_compliance_booklet_2020_v6/)

Please ensure that you

1. Find your existing National Police Check or apply for one
2. Gather documentary evidence of your vaccination history
3. Print and complete all relevant NSW Health forms relevant to the campus you are enrolled at or online enrolment requirements
4. Follow booklet instructions on how to have your compliance documents assessed by NSW health staff.

International students have additional requirements; the link to the booklet will inform you of these requirements.

School Requirements

Contact your School for further details regarding your School's requirements, if any, such as

- If you live outside of NSW or Australia and need to meet your state, territory or country's compliance requirements
- If you need to meet different state, territory or country compliance requirements.
- NSW Working with Children Check (WWCC) or other state equivalent, valid for your entire program.
- Current approved first aid certificate valid for your entire program - approved program providers can be found at the Government Training website
- <http://training.gov.au> (<http://training.gov.au/>)
- Other non-health related requirements.

Student Compliance Resources are also available on the Placements Hub web page (NSW students only)

https://www.westernsydney.edu.au/learning_futures/home/placements_hub/placements_hub/student_compliance (https://www.westernsydney.edu.au/learning_futures/home/placements_hub/placements_hub/student_compliance/)

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
Quiz	Up to 90 minutes	20	N	Individual
Log/ Workbook	Manual requires six completed handouts and figures as identified in each handout.	20	N	Individual
Final Exam	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

Autumn

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)