

# SPRT 3001 APPLIED EXERCISE SCIENCE FOR PERSONAL TRAINERS AND COACHES

**Credit Points** 10

**Legacy Code** 401056

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

**Description** Students will learn the functional anatomy, exercise physiology, physical fitness, motor development and exercise training content required to function as competent personal trainers and/or sports coaches. Students will also administer and undertake laboratory exercises designed to test and administer fitness programs for healthy individuals

**School** Health Sciences

**Discipline** Sport and Recreation Activities

**Student Contribution Band** HECS Band 4 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 3 subject

**Pre-requisite(s)** BIOS 1022 AND SPRT 1001

**Equivalent Subjects** LGYA 7759 - Personal Training and Coaching

**Restrictions** Students must be enrolled in 4659 Bachelor of Health Science (PDHPE), 4742 - Bachelor of Health Science (HPE) - Pathway to Teaching (Secondary), 4747 - Bachelor of Health Science (HPE) or 6001 Diploma in Health Science/Bachelor of Health Science (Health and Physical Education).

**Assumed Knowledge**

An understanding of human biology and fundamental principles in exercise science.

## Learning Outcomes

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

1. Describe cardiorespiratory, neuromuscular, anaerobic and aerobic energy systems and analyse their application to fitness and performance
2. Conduct exercise consultations, select suitable exercise tests and administer them to assess various components of physical fitness and performance
3. Develop exercise programs for healthy individuals to achieve desired performance and/or fitness gains
4. Use and justify an evidence-based approach to personal training and coaching practices
5. Compare and contrast key physiological differences between trained and untrained individuals
6. Analyse the use of ergogenic aids in sport and exercise

## Subject Content



1. Neural control of muscle contraction
2. Muscle physiology and contraction
3. Aerobic and anaerobic energy systems
4. Cardiorespiratory physiology
5. Pre-exercise screening and consultation
6. Exercise testing for healthy clients
7. Exercise prescription (cardiorespiratory, resistance training, flexibility)
8. Personal experience of exercise testing and training
9. Physiological differences between trained and untrained individuals
10. Ergogenic aids in sport 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
Quiz	20-25 minutes each	40	N	Individual
Report	1,000 words	25	N	Individual
Case Study	Maximum 1,500 words + 10 minutes presentation	35	N	Group

Prescribed Texts

- American College of Sports Medicine (2013). ACSM  resources for the personal trainer (4th ed.). Philadelphia: American College of Sports Medicine. ISBN  9781451108590
- McArdle, W. D., Katch, F. I. & Katch, V. L. (2016). Essentials of exercise physiology (5th ed.). Baltimore, Md: Lippincott Williams & Wilkins. ISBN: 9781496302090

Teaching Periods

## Spring (2022)

### Penrith (Kingswood)

**Day**

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

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=SPRT3001\\_22-SPR\\_KW\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=SPRT3001_22-SPR_KW_D#subjects))

## Spring (2023)

### Penrith (Kingswood)

**On-site**

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

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=SPRT3001\\_23-SPR\\_KW\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=SPRT3001_23-SPR_KW_1#subjects))