



# Unit Outline (Higher Education)

<b>Institute / School:</b>	Institute of Health and Wellbeing
<b>Unit Title:</b>	EXERCISE PHYSIOLOGY AND FITNESS
<b>Unit ID:</b>	EXSCI4000
<b>Credit Points:</b>	15.00
<b>Prerequisite(s):</b>	Nil
<b>Co-requisite(s):</b>	Nil
<b>Exclusion(s):</b>	Nil
<b>ASCED:</b>	069903

## Description of the Unit:

In this unit students will develop an understanding of the concept of fitness and the various methods used to develop the components of fitness. Students will study and apply the physiological processes and systems involved with exercise, exploring how these systems respond, interact and ultimately enable the body to engage in exercise. Students will also explore the methods used to train these systems to improve performance and capability in youth and develop a fitness training program to compliment these methods.

**Grade Scheme:** Graded (HD, D, C, P, MF, F, XF)

## Work Experience:

No work experience: Student is not undertaking work experience in industry.

**Placement Component:** No

**Supplementary Assessment:** Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

## Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	■	■	■

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Advanced	■	■	✓	■	■	■

### Learning Outcomes:

#### Knowledge:

- K1.** Understand and apply the characteristics and interplay of the three energy systems (ATP-CP, anaerobic glycolysis, aerobic system) for physical activity to meet energy needs.
- K2.** Explain oxygen uptake at rest, and during exercise and recovery.
- K3.** Identify and discuss acute physiological responses to exercise in the cardiovascular, respiratory and muscular system.
- K4.** Discuss and critically evaluate various fitness tests, including limitations and assumptions within a school environment.
- K5.** Define components of fitness and describe how fitness is attained.
- K6.** Assess and apply training principles for the development of fitness appropriate to the physical and intellectual development, and school stage of the student.

#### Skills:

- S1.** Administer and evaluate a variety of fitness based testing in a safe and effective manner.
- S2.** Critically evaluate a fitness training program.

#### Application of knowledge and skills:

- A1.** Evaluate an individual's fitness levels, develop fitness and behavioural based goals and plan a comprehensive training program based on knowledge of the physical and intellectual development and school stage of a student.
- A2.** Application of various modes of exercise for specific purposes and to target specific energy systems.

#### Unit Content:

This unit will include:

- Fuels required for resynthesis of ATP at rest and during physical activity.
- Characteristics of the three energy systems (ATP-CP, anaerobic glycolysis, aerobic system).
- Interplay of energy systems in relation to intensity, duration and type of activity.
- Oxygen uptake at and rest and during exercise and recovery.
- Acute physiological responses to exercise.
- Activity analysis.
- Fitness component definitions and characteristics.
- Fitness testing purposes and protocols.
- Fitness training program structure, development and monitoring.

#### Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1-K6, A1-A2, S1	Participation in practical sessions	At least 90% attendance and participation in practical sessions.	S/U

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
A1-A2, S2, K6	Develop, plan and evaluate a fitness training program for a student at a specific school stage.	Written Assignment. Training program.	20-40%
K1-K6	Participation in lectures, practical sessions, prescribed readings and self- directed study.	Test	30-50%
S1, A2, K4	Administer a fitness test designed to assess a selected fitness component.	Practical Assessment	20-40%

### Adopted Reference Style:

APA

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)