

## UNIT OUTLINE

Year: 11 and 12 Accreditation: Accredited

Timetable Period: Semester 2 2020

Classroom Teachers: Tim Davies

Executive Teacher: Mark Armstrong

<b>Course Title</b>	Exercise Science A	<b>Course Code:</b>	9193
<b>Semester Unit</b>	Body in Motion	<b>Unit Value/Code:</b>	1.0/93957
<b>Term Unit (a)</b>	Body in Motion a	<b>Unit Value/Code:</b>	0.5/93961
<b>Term Unit (b)</b>	Body in Motion b	<b>Unit Value/Code:</b>	0.5/93978

### Unit Description

In this unit students will explore the biomechanical and physiological principles involved in analysing and interpreting the body in motion and energy production. Students will apply a variety of methods used to analyse movement patterns and examine the physiological adaptations to exercise. Students will investigate the biomechanical and physiological factors that influence athletic performance.

### Specific Unit Goals

This unit should enable students to:

<b>A Course</b>
<ul style="list-style-type: none"> <li>understand biomechanical and physiological terminology and theories which relate to movement</li> <li>investigate the use of technology and techniques used to analyse the physiological demands of sports performance</li> </ul>

### Content Descriptions

All knowledge, understanding and skills below must be delivered:

<b>A Course</b>
<b>Concepts, theories and models</b>
<ul style="list-style-type: none"> <li>analyse concepts, theories and models related to the body in motion, for example; biomechanical terminology, newton's laws of motion, sliding filament theory (EXSA01)</li> <li>analyse the limitations and assumptions of the body in motion, for example; physiological responses and biomechanical influences (EXSA02)</li> </ul>
<ul style="list-style-type: none"> <li>analyses data, procedures and evaluates their validity and reliability, for example; physiological responses, mass/ weight, speed/velocity, distance/displacement, acceleration, momentum (EXSA03)</li> </ul>
<ul style="list-style-type: none"> <li>apply concepts, theories and models in a range of activities related to the body in motion, for example; biomechanical and physiological laboratories (EXSA04)</li> </ul>
<b>Principles, strategies, methodology</b>
<ul style="list-style-type: none"> <li>analyses principles that influence the body in motion, for example; biomechanical principles and physiological responses to exercise (EXSA05)</li> <li>analyses strategies used to examine the body in motion, for example; testing strategies and movement analysis (EXSA06)</li> <li>understand the strategic methodologies of the body in motion (EXSA07)</li> </ul>

<b>A Course</b>
<b>Nature and purpose</b>
<ul style="list-style-type: none"> <li>● evaluate the nature and purpose of the body in motion, for example; acute and chronic physiological responses (EXSA08)</li> <li>● understand the basic physiological responses of the body in motion (EXSA09)</li> <li>● understand the mechanics of the body in motion (EXSA10)</li> </ul>

<b>Representations and interpretations</b>
<ul style="list-style-type: none"> <li>● analyse issues, problems and practices associated with the body in motion, for example; technique analysis, muscle contraction physiology (sft), fatigue and recovery (EXSA12)</li> <li>● analyse protocols and procedures for the body in motion (EXSA11)</li> <li>● evaluate whether sources of information are valid and reliable (EXSA13)</li> <li>● understands the implications on the body in motion for example; physiological responses (EXSA14)</li> <li>● understands the significance and sequence of the body in motion, for example; sliding filament theory, and laws of motion (EXSA15)</li> <li>● interpret data of physiological outcomes of the body in motion for example; biomechanical and physiological laboratories (EXSA16)</li> </ul>

<b>A</b>	<table border="1"> <thead> <tr> <th style="text-align: center;"><b>Communication</b></th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>● apply varying communication skills and methodologies within the context of structure and function of the human body (EXSA17)               <ul style="list-style-type: none"> <li>● use instruments to compare measurements, grouping, estimating, counting, statistical information, interpreting, and using graphs, tables and diagrams (EXSA18)</li> <li>● communicates correct terminologies, language convention, forms and acknowledging sources (EXSA19)</li> </ul> </li> </ul> </td> </tr> </tbody> </table>	<b>Communication</b>	<ul style="list-style-type: none"> <li>● apply varying communication skills and methodologies within the context of structure and function of the human body (EXSA17)               <ul style="list-style-type: none"> <li>● use instruments to compare measurements, grouping, estimating, counting, statistical information, interpreting, and using graphs, tables and diagrams (EXSA18)</li> <li>● communicates correct terminologies, language convention, forms and acknowledging sources (EXSA19)</li> </ul> </li> </ul>
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### **A guide to reading and implementing content descriptions**

In this course there are opportunities to use a range of practical and theoretical applications to promote understanding. Content descriptions specify the knowledge, understanding and skills that students are expected to learn and that teachers are expected to teach. Teachers are required to develop a program of learning that allows students to demonstrate all the content descriptions. The lens which the teacher uses to demonstrate the content descriptions may be determined by the teacher when developing their program of learning.

A program of learning is what a college provides to implement the course for a subject. It is at the discretion of the teacher to emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided that it meets the specific unit goals. This will be informed by the student needs and interests.

#### **Assessment:**

<b>TASK</b>	<b>DUE DATE</b>	<b>WEIGHTING</b>
<b>Practical Assessment Booklet</b>	Week 10	25%
<b>Exam</b>	Week 10	25%
<b>Physiology Practical Lab</b>	Week 15	25%
<b>Exam</b>	Week 16	25%

#### **SPECIFIC ENTRY & EXIT REQUIREMENTS FOR TERM UNITS:**

This is a Semester Unit; students wishing to enter or exit after the end of term must have the change approved by the Academy Executive Leader and need to complete at least 50% of the assessment

## **ASSESSMENT CRITERIA FOR ASSESSMENT AND REPORTING OF STUDENT ACHIEVEMENT**

### **Attendance and Participation**

It is expected that students will attend and participate in all scheduled classes/contact time/structured learning activities for the units in which they are enrolled, unless there is due cause and adequate documentary evidence is provided. Any student whose attendance falls below 90% of the scheduled classes/contact time or 90% participation in structured learning activities in a unit, without having due cause with adequate documentary evidence will be deemed to have voided the unit. However, the principal has the right to exercise discretion in special circumstances if satisfactory documentation is supplied.

### **Completion of Assessment Items**

Students are expected to substantially complete and submit all assessment items. Exemption from an item and/or alternative assessment without penalty is available to students providing adequate documentary evidence. In order to meet the minimum assessment requirements of a unit, a student must substantially complete and submit at least 70% of the total assessment. However, the principal has the right to exercise discretion in the award of a grade or score in special circumstances where satisfactory documentation is supplied.

### **Late Submission of Assessment Items**

Students are encouraged to submit work on time as this is a valuable organisational skill. Students are also encouraged to complete work even if it is late as there are educational benefits in so doing. The following policy is to ensure equity for all students:

- All assessment tasks are expected to be submitted by the specified due date
- Where marks are awarded for assessment tasks, a late penalty will apply unless an extension is granted. The penalty for late submission is 5% of possible marks per calendar day late, including weekends and public holidays, until a notional zero is reached. If an item is more than 7 days late, it receives the notional zero. Submission on weekends or public holidays is not acceptable. Calculation of a notional zero is based on items submitted on time or with an approved extension (Refer to Notional Zeros)
- Where marks are not awarded, and a grade only is given for an assessment task, teachers will take into account the extent to which students have demonstrated their ability to complete and submit the task by the due date (taking into account any extensions granted) in awarding the grade
- Unless there are exceptional circumstances, students must apply for an extension to the specified due date in advance, providing due cause and adequate documentary evidence for late submission
- It may not be possible to grade or score work submitted late after marked work in a unit has been returned to other students
- The principal has the right to exercise discretion in the application of the late penalty in special circumstances where satisfactory documentation has been provided.

### **Notional Zeros**

Where students fail to hand in assessment items for which marks are awarded, they will be awarded a notional zero for that assessment item. The notional zero will be a score, which lies between 0.1 of a standard deviation below the lowest genuine score for that item and zero. Note: if the lowest genuine score is zero, the notional zero is zero.

### **Cheating and Dishonest Practice**

The integrity of the College's assessment system relies upon all involved acting in accordance with the highest standards of honesty and fairness. Plagiarism is the copying, paraphrasing or summarising of work, in any form, without acknowledgement of sources, and presenting this as a student's own work. Examples of plagiarism could include, but are not limited to:

- submitting all or part of another person's work with/without that person's knowledge
- submitting all or part of a paper from a source text without proper acknowledgement
- copying part of another person's work from a source text, supplying proper documentation, but leaving out quotation marks
- submitting materials which paraphrase or summarise another person's work or ideas without appropriate documentation
- submitting a digital image, sound, design, photograph or animation, altered or unaltered, without proper acknowledgement of the source.

**Right to Appeal**

The ACT system operates a hierarchy of reviews and appeals:

- Student seeks review from teacher regarding assessment task mark/grade, unit score, unit grade, course score
- Student seeks review from head of department, if required following review by teacher
- Student appeals to her/his college principal for a review of college assessment relating to assessment task grade/mark, unit grade, unit score, course score, penalty imposed for breach of discipline in relation to assessment
- Student, who has been through the college appeal process, may appeal to the Board against the college procedures by which the appeal decision was reached.

**Executive Teacher:     Mark Armstrong**

**FURTHER INFORMATION ON RELEVANT BSSS POLICIES CAN BE FOUND HERE:**

[http://www.bsss.act.edu.au/\\_data/assets/pdf\\_file/0010/313777/P\\_and\\_P\\_Manual\\_2019\\_V5.pdf](http://www.bsss.act.edu.au/_data/assets/pdf_file/0010/313777/P_and_P_Manual_2019_V5.pdf)

## Achievement Standards for Exercise Science A Course Year 12

	<i>A student who achieves an A grade typically</i>	<i>A student who achieves a B grade typically</i>	<i>A student who achieves a C grade typically</i>	<i>A student who achieves a D grade typically</i>	<i>A student who achieves an E grade typically</i>
<b>Knowledge and understanding</b>	<ul style="list-style-type: none"> <li>analyses exercise science theories, concepts and models and explains their limitations and assumptions</li> <li>analyses exercise science principles, strategies, methodology, approaches to data, procedures and explains their validity and reliability</li> <li>analyses exercise science topics and explains their significance</li> <li>communicates ideas with coherent arguments using appropriate evidence, language and accurate referencing</li> </ul>	<ul style="list-style-type: none"> <li>explains exercise science theories, concepts and models and discusses their limitations and assumptions</li> <li>explains exercise science principles, strategies, methodology, approaches to data, procedures and discusses their validity and reliability</li> <li>explains exercise science topics and discusses their significance</li> <li>communicates ideas and arguments using appropriate evidence, language and accurate referencing</li> </ul>	<ul style="list-style-type: none"> <li>discusses exercise science theories, concepts and models and describes their limitations and assumptions</li> <li>discusses exercise science principles, strategies, methodology, approaches to data, procedures and describes their validity and reliability</li> <li>discusses exercise science topics and describes their significance</li> <li>communicates ideas and arguments with referencing</li> </ul>	<ul style="list-style-type: none"> <li>describes exercise science theories, concepts and models with some reference to their limitations and assumptions</li> <li>describes exercise science principles, strategies, methodology, approaches to data, procedures with some reference to their validity and reliability</li> <li>describes exercise science topics and makes some reference to their significance</li> <li>communicates ideas and information with minimal referencing</li> </ul>	<ul style="list-style-type: none"> <li>identifies exercise science theories, concepts and models with little to no reference to their limitations and assumptions</li> <li>identifies exercise science principles, strategies, methodology, approaches to data, procedures with little or no reference to their validity and reliability</li> <li>identifies exercise science topics and makes little or no reference to their significance</li> <li>communicates limited ideas and information with limited or no referencing</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>applies concepts, models, principles, methodology, ideas with control and precision to a practical context and specific physical, health or outdoor education activities</li> <li>plans and undertakes independent inquiries and analyses relevant data and information based on critical evaluation of valid and reliable sources</li> <li>makes discerning and effective choice of principles, strategies, methodology, procedures to solve a wide range of complex problems and to enhance meaning and the physical performances of self and others</li> <li>analyses practical techniques and performance with reference to specific skills criteria</li> </ul>	<ul style="list-style-type: none"> <li>applies concepts, models, principles, methodology, ideas with control to a practical context and specific physical, health or outdoor education activities</li> <li>plans and undertakes independent inquiries and explains relevant data and information based on an assessment of valid and reliable sources</li> <li>makes effective and justified choice of principles, strategies, methodology, procedures to solve a range of problems and to enhance meaning and the physical performances of self and others</li> <li>explains practical techniques and performance with reference to specific skills criteria</li> </ul>	<ul style="list-style-type: none"> <li>applies concepts, models, principles, methodology, ideas with some control to a practical context and specific physical, health or outdoor education activities</li> <li>undertakes guided inquiries and describes data and information based on a appropriate sources</li> <li>makes effective choice of strategies, methodology, procedures to solve problems and to enhance physical performances of self and others</li> <li>describes practical techniques and performance with reference to specific skills criteria</li> </ul>	<ul style="list-style-type: none"> <li>applies concepts, models, principles, methodology, ideas with minimal control to a practical context and specific physical, health or outdoor education activities</li> <li>undertakes guided inquiries with some reference to data using limited sources</li> <li>makes some effective choice of strategies, methodology, procedures to solve problems with some impact on physical performances of self and others</li> <li>identifies practical techniques and performance with some reference to specific skills criteria</li> </ul>	<ul style="list-style-type: none"> <li>applies concepts, models, principles, methodology, ideas with little or no control in a practical context</li> <li>undertakes guided research with little or no reference to data and sources</li> <li>selects strategies, methodology, procedures to solve problems with little or no impact on physical performances of self and others</li> <li>identifies practical techniques and performance with little or no reference to specific skills criteria</li> </ul>

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