Government of **Western Australia**
School Curriculum and Standards Authority

PHYSICAL EDUCATION STUDIES

ATAR course

Year 11 syllabus

Acknowledgement of Country

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

Important information

This syllabus is effective from 1 January 2025.

Users of this syllabus are responsible for checking its currency.

Syllabuses are formally reviewed by the School Curriculum and Standards Authority (the Authority) on a cyclical basis, typically every five years.

Content

Rationale

Study of the Physical Education Studies ATAR course contributes to the development of the whole person. It promotes the physical, social and emotional growth of students. Throughout the course, emphasis is placed on understanding and improving performance in physical activities. The integration of theory and practice is central to studies in this course.

The Physical Education Studies ATAR course focuses on the complex interrelationships between motor learning, psychological, biomechanical, anatomical and physiological factors that influence individual and team performance. Students engage as performers, leaders, coaches and analysts of physical activity. Physical activity serves both as a source of content and data and as a medium for learning. Learning in the Physical Education Studies ATAR course cannot be separated from active participation in physical activities, and involves students in closely integrated written, oral and physical learning experiences, based upon the study of selected physical activities.

The course appeals to students with varying backgrounds, physical activity knowledge and dispositions. Students analyse the performance of themselves and others and apply theoretical principles to enhance performance. Physical activity and sport are used to develop skills and performance along with an understanding of physiological, anatomical, psychological, biomechanical and motor learning applications.

The course prepares students for a variety of post-school pathways, leading to employment or tertiary studies. It provides students with an increasingly diverse range of employment opportunities in the sport, leisure and recreation industries, education, sport development, youth work, and health and medical fields linked to physical activity and sport. The course also equips students to take on volunteer and leadership roles in community activities.

Aims

The Physical Education Studies ATAR course enables students to:

- enhance performance through the display and application of movement skills and tactical responses
- understand motor learning concepts in relation to learning and acquisition of motor skills
- understand functional anatomy and the roles of the respiratory and circulatory systems and the relationship between the musculoskeletal system and performance
- understand and apply biomechanical principles and their effect on performance, skill execution and/or equipment
- understand and apply exercise physiology concepts in relation to the body's responses to physical activity, energy demands, training principles and methods
- understand and apply sports psychology considerations to improve performance.

Organisation

This course is organised into a Year 11 syllabus and a Year 12 syllabus. The cognitive complexity of the syllabus content increases from Year 11 to Year 12.

Structure of the syllabus

The Year 11 syllabus is divided into two units, each of one semester duration, which are typically delivered as a pair. The notional time for each unit is 55 class contact hours.

Unit 1

The focus of this unit is functional anatomy and exercise physiology concepts and how students apply these to their own and others' performance.

Unit 2

The focus of this unit is biomechanical, psychological and motor learning and coaching concepts and how students apply these to their own and others' performance.

Organisation of content

The course content is divided into six interrelated content areas:

- Developing physical skills and tactics
- Motor learning and coaching
- Functional anatomy
- Biomechanics
- Exercise physiology
- Sport psychology.

Progression from the Year 7–10 curriculum

The Physical Education Studies ATAR course continues to develop student learning around the knowledge, understandings and skills within the P–10 Health and Physical Education curriculum. Content within the Movement and physical activity strand, and associated sub-strands, is consolidated and extended through the study of the course units.

Representation of the general capabilities

The general capabilities encompass the knowledge, skills, behaviours and dispositions that will assist students to live and work successfully in the twenty-first century. Teachers should find opportunities to incorporate the capabilities into the teaching, learning and assessment program for the Physical Education Studies ATAR course. The general capabilities are not assessed unless they are identified within the specified unit content.

Literacy

The Physical Education Studies ATAR course assists in the development of literacy by introducing specific terminology used in the various content areas. Students use and understand the language associated with performance that enables them to evaluate and analyse the performance of themselves and others, and communicate their observations.

Numeracy

The Physical Education Studies ATAR course provides students with opportunities to recognise the mathematics that exists in a variety of movement contexts. Students use calculation, estimation, and measurement to collate information related to biomechanical concepts and, spatial awareness in relation to positioning, and scoring systems. Students interpret and analyse physical activity information using statistical reasoning, identifying patterns and relationships in data. Using these, they consider trends, draw conclusions, make predictions and inform practices to improve performance.

Information and communication technology capability

The Physical Education Studies ATAR course enhances information and communication technology (ICT) learning by helping students to access online physical activity information and services effectively to manage their own and others' performance. Students develop an understanding of ethical online behaviour, including protocols and practices for using ICT as a key tool for communicating, collaborating, creating content, seeking help, accessing information, and analysing and enhancing performance in the course.

Critical and creative thinking

The Physical Education Studies ATAR course develops a student's ability to think logically, critically, and creatively in response to a range of issues, ideas and challenges. Students problem-solve, inquire, evaluate evidence to generate recommendations for improved performance.

Personal and social capability

In the Physical Education Studies ATAR course, students use personal and social skills to work collaboratively with others in a variety of activities, to appreciate their own strengths and abilities and those of their peers, and develop a range of interpersonal skills, such as communication, negotiation, teamwork, leadership, and an appreciation of diverse perspectives.

Ethical understanding

The Physical Education Studies ATAR course provides opportunities for students to focus on the importance of treating others with integrity, fairness, compassion, respecting diversity and equality for all when participating in physical activity.

Students explore concepts and consequences of fair play, equitable participation, empathy and respect in relationships, they develop skills to support them in making ethical decisions and understanding the consequences of their actions in everyday situations and movement based contexts.

Intercultural understanding

The Physical Education Studies ATAR course provides opportunities for students to recognise and respect different ways of thinking, and to learn about different individual, group, and intergroup participation in physical activity. Students learn to appreciate that differences in beliefs and perspectives may affect how some people make choices regarding types of, and participation in, various physical activities.

Representation of the cross-curriculum priorities

The cross-curriculum priorities address the contemporary issues which students face in a globalised world. Teachers should find opportunities to incorporate these priorities into the teaching and learning program for the Physical Education Studies ATAR course. The cross-curriculum priorities are not assessed unless they are identified within the specified unit content.

Aboriginal and Torres Strait Islander histories and cultures

The Physical Education Studies ATAR course provides students with opportunities to explore and appreciate the Aboriginal and Torres Strait Islander Peoples' histories and cultures and their involvement and achievements in sport. This enables students to build cultural understanding, empathy and respect for differences and commonalities in the knowledge, appreciation and impact of sport.

Asia and Australia's engagement with Asia

The Physical Education Studies ATAR course provides opportunities for students to explore the differences and commonalities between Asia and Australia in the area of physical activity. This enables students to develop communication and interpersonal skills that reflect cultural understanding, empathy and respect.

Sustainability

The Physical Education Studies ATAR course provides opportunities for students to explore how they connect and interact with the environment and people in different social groups within their social networks and wider communities. They will consider how these connections and interactions within systems play an important role in promoting, supporting and sustaining the wellbeing of individuals, the community, and the environment as a whole, now and into the future.

Through physical activity, students are provided with opportunities to develop a connection in and with environments and to gain an appreciation of the effects on people's health.

Unit 1

Unit description

The focus of this unit is to explore the physiological effects of training and the body's responses to physical activity. Content will focus on various aspects of functional anatomy and how they may improve performance in physical activity.

The focus of this unit is to identify the relationship between skill, tactics and the body in order to improve the effectiveness and efficiency of performance.

Unit content

This unit includes the knowledge, understandings and skills described below.

Developing physical skills and tactics

- develop a range of sport-specific movement skills and techniques to enhance performance
- select, adapt and apply skills and techniques in games and other competitive situations
- select and apply tactics to solve sport specific tactical problems
  - use of space
  - positioning
  - decision making

Functional anatomy

- bones
  - humerus
  - radius
  - ulna
  - femur
  - patella
  - tibia
  - fibula
  - pelvis
  - sternum
  - ribs
  - carpals
  - metacarpals
  - phalanges
  - tarsals
  - metatarsals
- muscles
  - biceps
  - triceps
  - gastrocnemius
  - trapezius
  - deltoid
  - quadriceps
  - hamstrings
  - tibialis anterior
  - adductor group
  - latissimus dorsi
  - soleus
  - abdominal
  - gluteus maximus
  - pectorals
  - hip flexors
- characteristics of skeletal muscle tissue and their relationship to the production of movement for physical activity
  - excitability
  - contractibility
  - extendibility
  - elasticity
- relationship between the musculoskeletal system and joint movement in the creation of movement
  - antagonist pairs
  - origin and insertion points of muscles

- movement types created by muscle action and joint movement
  - flexion
  - extension
  - supination
  - pronation
  - circumduction
  - rotation
  - dorsi flexion
  - plantar flexion
  - adduction
  - abduction
- structure and function of the circulatory system
  - heart
  - arteries
  - veins
  - capillaries
  - blood
- structure and function of the respiratory system
  - lungs, diaphragm, alveoli (gaseous exchange)
  - inspiration (inhalation)
    - diaphragm contracts
    - thoracic cavity expands
    - air pressure in the lungs drops
    - air is drawn into lungs due to pressure difference
  - expiration (exhalation)
    - diaphragm relaxes
    - pleural cavity contracts
    - air pressure in the lungs increases
    - air is pushed out of the lungs

Exercise physiology

- responses to physical activity
  - heart rate (HR)
  - stroke volume
  - blood pressure (BP)
  - cardiac output
  - respiratory rate
  - perspiration
  - blood redistribution
- long-term cardiovascular and respiratory effects of training
  - cardiac hypertrophy
  - heart rate (HR)
  - stroke volume
  - blood pressure (BP)

    - blood volume/haemoglobin
    - maximum oxygen uptake (VO2 max)
    - capillarisation
    - ventilation
    - oxygen exchange
- utilisation of carbohydrates, fats and proteins as energy sources for physical activity
- the energy systems and their response to physical activity
    - anaerobic
        - adenosine triphosphate creatine phosphate (ATP-CP)
        - lactic acid
    - aerobic
- relationship between energy systems and types of physical activity
    - the energy system continuum
- interrelationship between training methods, principles of training and fitness components
- training methods
    - resistance training – isometric, isotonic, isokinetic
    - interval training (short and long)
    - continuous training
    - circuit training
    - fartlek
    - flexibility
    - plyometrics
- principles of training
    - progressive overload
        - frequency
        - intensity
        - time (duration)
        - type
    - specificity
    - reversibility (detraining)
- components of fitness
    - cardiorespiratory endurance
    - muscular strength
    - muscular endurance
    - flexibility
    - body composition
    - agility
    - balance
    - coordination
    - reaction time
    - speed
    - power

Unit 2

Unit description

The focus of this unit is to explore biomechanical concepts, skilled movement analysis, and the effects of feedback on sporting performance. Content will focus on the effects of psychological considerations on performance in various physical activities.

The focus of this unit is to identify the relationship between skill, tactics and the body in order to improve the effectiveness and efficiency of performance.

Unit content

This unit builds on the content covered in Unit 1.

This unit includes the knowledge, understandings and skills described below.

Developing physical skills and tactics

- develop a range of sport-specific movement skills and techniques to enhance performance
- select, adapt and apply skills and techniques in games and other competitive situations
- select and apply tactics to solve sport specific tactical problems
  - use of space
  - positioning
  - decision making

Motor learning and coaching

- classification of motor skills
  - gross
  - fine
  - open
  - closed
  - discrete
  - serial
  - continuous
- Fitts and Posner phases of motor learning and how they can be used to develop/improve specific physical skills
- types of cues used to improve performance
  - visual
  - verbal
  - proprioceptive
- information processing model during skill performance
  - identification of stimuli/input
  - response identification/decision making
  - response/output
  - feedback

- types of feedback
  - intrinsic (inherent)
  - extrinsic (augmented)
    - terminal – knowledge of results, knowledge of performance
    - concurrent
    - verbal
    - non-verbal
- purpose of feedback
  - reinforcement
  - motivation

Biomechanics

- definition of the following terms:
  - linear motion
  - angular motion
  - general motion
  - projectile motion
- application of linear motion to sport in relation to:
  - speed
  - velocity
  - acceleration
- application of projectile motion to sport in relation to:
  - optimal projection
  - parabolic trajectory
  - release of projectiles
    - angle
    - velocity
    - height
- definition of the principle of balance and how it applies to sport in relation to:
  - base of support
  - height of centre of gravity
  - line of centre of gravity
  - mass
  - static balance
  - dynamic balance
- definition of Newton's First, Second and Third Laws of Motion, and how they apply to sporting contexts
- definition of the three classes of levers
  - axis (fulcrum)
  - resistance (load)
  - force (effort)

Sport psychology

- psychological considerations for improved performance and achieving the ideal performance state ('the zone')
  - motivation
  - self-confidence
  - stress management
  - concentration or attentional control – Nideffer's model
  - arousal regulation for optimal performance, including the inverted U hypothesis
- influence of age, skill level, and type of activity on motivation, arousal regulation (inverted U hypothesis), concentration in physical activity
- goal setting
  - characteristics of goals (SMARTER)
  - types of goals
    - performance
    - outcome
    - process

Assessment

Assessment is an integral part of teaching and learning that at the senior secondary years:

- provides evidence of student achievement
- identifies opportunities for further learning
- connects to the standards described for the course
- contributes to the recognition of student achievement.

Assessment for learning (formative) and assessment of learning (summative) enable teachers to gather evidence to support students and make judgements about student achievement. These are not necessarily discrete approaches and may be used individually or together, and formally or informally.

Formative assessment involves a range of informal and formal assessment procedures used by teachers during the learning process in order to improve student achievement and to guide teaching and learning activities. It often involves qualitative feedback (rather than scores) for both students and teachers, which focuses on the details of specific knowledge and skills that are being learnt.

Summative assessment involves assessment procedures that aim to determine students' learning at a particular time, for example when reporting against the standards, after completion of a unit/s. These assessments should be limited in number and made clear to students through the assessment outline.

Appropriate assessment of student work in this course is underpinned by reference to the set of pre-determined course standards. These standards describe the level of achievement required to achieve each grade, from A to E. Teachers use these standards to determine how well a student has demonstrated their learning.

Where relevant, higher order cognitive skills (e.g. application, analysis, evaluation and synthesis) and the general capabilities should be included in the assessment of student achievement in this course. All assessment should be consistent with the requirements identified in the course assessment table.

Assessment should not generate workload and/or stress that, under fair and reasonable circumstances, would unduly diminish the performance of students.

School-based assessment

The *Western Australian Certificate of Education (WACE) Manual* contains essential information on principles, policies and procedures for school-based assessment that needs to be read in conjunction with this syllabus.

Teachers design school-based assessment tasks to meet the needs of students. As outlined in the *WACE Manual*, school-based assessment of student achievement in this course must be based on the Principles of Assessment:

- Assessment is an integral part of teaching and learning
- Assessment should be educative
- Assessment should be fair
- Assessment should be designed to meet its specific purpose/s
- Assessment should lead to informative reporting
- Assessment should lead to school-wide evaluation processes
- Assessment should provide significant data for improvement of teaching practices.

The table below provides details of the assessment types and the weighting for the Physical Education Studies ATAR Year 11 syllabus.

Summative assessments in this course must:

- be limited in number to no more than eight tasks
- allow for the assessment of each assessment type at least once over the year/pair of units
- have a minimum value of 5 per cent of the total school assessment mark
- provide a representative sampling of the syllabus content.

Assessment tasks not administered under test or controlled conditions require appropriate authentication processes.

Assessment table – Year 11

Type of assessment	Weighting
Practical (performance) Performance is assessed in the sport(s) studied at school which will provide students with the opportunity to refine and adjust skills and tactics within a competitive situation. Students are assessed in the selected sport(s). The assessment must be administered by the teacher and conducted within the school environment within the nominal hours of the course. Evidence can include: direct observation, checklists, and/or the use of video.	30%
Investigation Students plan and conduct research and communicate their findings. Evidence can include: journals, training diaries, essays, laboratory reports, oral presentations and/or the use of video.	10%
Response Students analyse and respond to questions, stimuli or prompts. Evidence can include: topic tests, summaries, essays and/or oral presentations.	20%
Examination Typically conducted at the end of each semester and/or unit. In preparation for Unit 3 and Unit 4, the examination should reflect the written examination design brief included in the ATAR Year 12 syllabus for this course.	40%

Teachers must use the assessment table to develop an assessment outline for the pair of units (or for a single unit where only one is being studied).

The assessment outline must:

- include a set of assessment tasks
- include a general description of each task
- indicate the unit content to be assessed
- indicate a weighting for each task and each assessment type
- include the approximate timing of each task (for example, the week the task is conducted, or the issue and submission dates for an extended task).

Reporting

Schools report student achievement, underpinned by a set of pre-determined standards, using the following grades:

Grade	Interpretation
A	Excellent achievement
B	High achievement
C	Satisfactory achievement
D	Limited achievement
E	Very low achievement

The grade descriptions for the Physical Education Studies ATAR Year 11 syllabus are provided in Appendix 1. They are used to support the allocation of a grade. They can also be accessed, together with annotated work samples, on the course page of the Authority website at www.scsa.wa.edu.au.

To be assigned a grade, a student must have had the opportunity to complete the education program, including the assessment program (unless the school accepts that there are exceptional and justifiable circumstances).

Refer to the *WACE Manual* for further information about the use of a ranked list in the process of assigning grades.

The grade is determined by reference to the standard, not allocated on the basis of a pre-determined range of marks (cut-offs).

Appendix 1 – Grade descriptions Year 11

A	**Developing physical skills and tactics** Demonstrates a broad repertoire of skills within a competitive game with proficiency and application by showing consistent control, fluency, balance, power, speed, precision and decision making, where relevant. Uses an extensive range of relevant advanced offensive and defensive tactics to outwit the opposition, improve personal performance, and contribute to team success. Consistently and appropriately adapts and refines skills and tactical responses in response to a range of changing situations.
	Functional anatomy Clearly and articulately applies relevant terminology to explain how the cardiorespiratory systems function within the body and explains the relationship with the musculoskeletal system and characteristics to create joint movement for physical activity. Applies these concepts to movements in a variety of sporting contexts.
	Exercise physiology Clearly interprets and analyses the relationship between energy systems and the types of physical activity and explains how macronutrients may affect performance in physical activity. Describes and analyses the interrelationship between training methods, principles of training and fitness components.
	Motor learning and coaching Clearly and articulately explains how the phases of motor learning and types of cues can be employed to improve or develop an athlete's performance. Describes how feedback is utilised and applied in a range of sporting contexts to enhance an athlete's performance.
	Biomechanics Clearly and articulately explains how the types of motion can influence or enhance the path of an object and applies this to a variety of sporting contexts. Describes the principle of balance and how it impacts and applies to a variety of sporting contexts.
	Sport psychology Clearly and articulately explains the psychological considerations for improved performance to achieve the ideal performance state in a variety of sporting contexts. Describes how goal setting can be applied to various sporting contexts to enhance performance outcomes.

B	**Developing physical skills and tactics** Demonstrates a broad repertoire of skills within a competitive game with proficiency and application by showing consistent control, fluency, balance, power, speed, precision and decision making, where relevant. Uses relevant advanced offensive and defensive tactics to outwit the opposition, improve personal performance, and contribute to team success. Adapts and refines skills and tactical responses in response to a range of changing situations.
	Functional anatomy Clearly applies relevant terminology to explain how the cardiorespiratory systems function within the body and explains some of the relationship with the musculoskeletal system and characteristics to create joint movement for physical activity. Makes some links to movements in a variety of sporting contexts.
	Exercise physiology Interprets the relationship between energy systems and the types of physical activity and explains how some of the macronutrients may affect performance in physical activity. Explains most aspects of the interrelationship between training methods, principles of training and fitness components.
	Motor learning and coaching Explains how the phases of motor learning and types of cues can be employed to improve or develop an athlete's performance. Describes feedback in a range of sporting contexts to enhance an athlete's performance.
	Biomechanics Clearly explains how the types of motion can influence or enhance the path of an object and applies this to some sporting contexts. Defines the principle of balance and how it impacts and applies to some sporting contexts.
	Sport psychology Explains most of the psychological considerations for improved performance to achieve the ideal performance state in some sporting contexts. Describes most types of goals in a sporting context to enhance performance outcomes.

C	**Developing physical skills and tactics** Demonstrates a basic repertoire of skills, within a competitive game with proficiency and application by showing consistent control, fluency, balance, power, speed, precision and decision making, where relevant. Uses relevant offensive and defensive tactics to outwit the opposition, improve personal performance and contribute to team success. Adapts and refines skills and tactical responses in response to simple changing situations.
	Functional anatomy Provides a description of the structure and role of the cardiorespiratory systems. Accurately labels components of the musculoskeletal system.
	Exercise physiology Identifies the energy systems and their response to physical activity. Makes links between immediate and long term effects of physical training on the body.
	Motor learning and coaching Identifies and outlines the information processing model and outlines the classification of motor skills with some links to sporting contexts.
	Biomechanics Identifies some of the types of motion and their effect on an object and applies this to some sporting contexts. Identifies the three types of levers with some links to a sporting context.
	Sport psychology Outlines some of the psychological considerations used by athletes and provides with appropriate examples. Identifies the purpose of goal setting for some sporting contexts.

D	**Developing physical skills and tactics** Demonstrates a partial repertoire of skills, within a competitive game with limited proficiency and application by showing limited control, fluency, balance, power, speed, and precision. Uses a few basic tactics to outwit the opposition, improve personal performance and contribute to team success. Infrequently adapts and refines skills and tactical responses in a very limited way.
	Functional anatomy Provides a limited description of the structure and role of the cardiorespiratory systems Identifies some of the musculoskeletal system.
	Exercise physiology Identifies some of the basic characteristics of energy systems. Identifies some immediate and long term effects of physical training on the body.
	Motor learning and coaching Defines some classifications of motor skills and lists the phases of earning categories.
	Biomechanics Provides a simple outline of some the types of motion and their effect on an object. Labels the three types of levers.
	Sport psychology Names most of the psychological considerations used by athletes. Identifies the characteristics of goals (SMARTER).

E	Does not meet the requirements of a D grade and/or has completed insufficient assessment tasks to be assigned a higher grade.