



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

PHYSICAL EDUCATION STUDIES

ATAR COURSE

Year 11 syllabus

IMPORTANT INFORMATION

This syllabus is effective from 1 January 2017.

Users of this syllabus are responsible for checking its currency.

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

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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 and psychological, biomechanical and physiological factors that influence individual and team performance. Students engage as performers, leaders, coaches, analysts and planners 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, apply theoretical principles and plan programs to enhance performance. Physical activity and sport are used to develop skills and performance along with an understanding of physiological, anatomical, psychological, biomechanical and skill learning applications.

The course prepares students for a variety of post-school pathways, including immediate 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.

Course outcomes

The Physical Education Studies ATAR course is designed to facilitate achievement of the following outcomes.

Outcome 1 – Skills for physical activity

Students apply decision making, movement and tactical skills to enhance participation in physical activity.

In achieving this outcome, students:

- make on-the-spot decisions to apply movement patterns in solving tactical problems
- perform movement skills to enhance participation
- implement tactics to enhance participation.

Outcome 2 – Self-management and interpersonal skills for physical activity

Students apply self-management and interpersonal skills to enhance participation in physical activity.

In achieving this outcome, students:

- apply mental skills in undertaking selected roles
- make informed decisions in undertaking selected roles
- apply communication skills in undertaking selected roles
- apply cooperation skills in undertaking selected roles.

Outcome 3 – Knowledge and understanding of movement and conditioning concepts for physical activity

Students understand movement and conditioning concepts that enhance participation in physical activity.

In achieving this outcome, students:

- understand movement concepts
- understand conditioning concepts.

Outcome 4 – Knowledge and understanding of sport psychology concepts for physical activity

Students understand mental skills, motor learning, coaching and tactical concepts that inform the enhancement of participation in physical activity.

In achieving this outcome, students:

- understand mental skills training concepts
- understand motor learning and coaching concepts
- understand tactical concepts of games and activities.

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 to explore anatomical and biomechanical concepts, the body's responses to physical activity, and stress management processes, to improve the performance of themselves and others in physical activity.

Unit 2

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

Each unit includes:

- a unit description – a short description of the focus of the unit
- unit content – the content to be taught and learned.

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.

Developing physical skills and tactics

Students explore the practical and theoretical components required to improve the performance of themselves and others in skills and tactics related to physical activities. They examine basic and advanced movement patterns, apply tactical awareness, and understand the analysis of movement, in order to improve the quality of skill performance. Content includes:

- frameworks for understanding tactical problems and appropriate tactical and technical responses
- development of technique in order to perform a skill repertoire in a selected sport
- knowledge of performance from both technical and tactical perspectives
- effective strategies for improving personal competence.

Motor learning and coaching

Effective instruction and coaching is explored through appropriate skill practices, and the design of strategic and tactical challenges. Content includes:

- roles and leadership styles for the effective management of training and coaching sessions
- analysis of learning and skill development to improve performance
- information processing during skill performance
- the design of effective instruction and provision of feedback
- teaching strategies and techniques to improve skill execution
- analysis of performance.

Functional anatomy

Knowledge of functional anatomy provides a foundation for the development of a biomechanical understanding of movement. Content includes:

- the structure and function of the musculoskeletal systems
- the structure and function of the circulatory, respiratory and neuromuscular systems
- production of movement.

Biomechanics

Note: No calculations required

Observation, description and biomechanical analysis of movement are underpinned by movement principles and concepts. Content includes:

- biomechanical principles, concepts and laws of motion
- analysis of movement
- application of biomechanical principles to improve the quality of movement.

Exercise physiology

Students study physiological capacities and the influence of energy systems to improve performance in physical activity and structured training. Content includes:

- examination of the physiological capacities (metabolic, cardio-respiratory and neuromuscular)
- knowledge of the body's circulatory and respiratory systems as an essential basis for exploring performance potential and preparedness for participation
- nutrition to meet the energy demands of participation in different activities and environmental conditions
- principles of training
- training types to improve components of fitness
- key characteristics of training program design and evaluation
- immediate and extended care of the injured athlete.

Sport psychology

The development of mental skills is recognised as being essential to improving performance and facilitating positive group dynamics. Content includes:

- application of group dynamics theories/models and understandings
- skills and processes associated with goal setting, stress management, visualisation, concentration and motivation
- regulation of self-imagery and arousal levels
- influence of varying groups on mental skill preparation (age, skill level, and type of activity).

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 may find opportunities to incorporate the capabilities into the teaching and learning 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 body structures, functions and psychological concepts relating to human performance. Through the development of the language of human movement, they develop skills that enable them to evaluate and analyse their own performance and that of others, and effectively 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 trajectories, force creation, 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 health and 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. They also use ICT to develop personalised plans for nutrition and physical activity participation.

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 learn how to critically evaluate evidence relating to sporting performance, and generate recommendations for technique refinement.

The course provides students with opportunities to develop and apply problem-solving skills by creatively selecting and using strategic responses in a competitive environment.

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 and compassion, and valuing and respecting diversity and equality for all when participating in physical activity.

Students apply codes of practice appropriate to different contexts, such as in the community, in relationships, on the sporting field, in the natural environment, and when using digital technologies. As 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. They also develop the capacity to apply these skills 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.

They will be able to examine stereotypical representations of various social and cultural groups in relation to concepts of participation, success and failure in physical activity. In doing so, students gain an understanding of how culture shapes personal and social perspectives and interactions. They also gain an understanding of what is valued in terms of health and physical activity within their families, social groups and institutions, and other cultures within the broader community.

Representation of the cross-curriculum priorities

The cross-curriculum priorities address the contemporary issues which students face in a globalised world. Teachers may 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

Through the study of the Physical Education Studies ATAR course, students can be provided with opportunities to explore and appreciate the Aboriginal and Torres Strait Islander Peoples' histories and cultures. The selection of specific contexts will allow students to explore personal, community and group identities. In doing this, it will build understanding about differences and commonalities in systems of knowledge and beliefs. Students will also have the opportunity to participate in physical activities and cultural practices, such as traditional and contemporary sports.

Asia and Australia's engagement with Asia

In the Physical Education Studies ATAR course, the priority of Asia and Australia's engagement with Asia provides opportunities for students to explore the synergy between Asia and Australia in the area of physical activity.

Through participation in selected contexts, the Physical Education Studies ATAR course enables students to appreciate and engage with diverse cultures, traditions and belief systems of the Asia region through the development of communication and interpersonal skills that reflect cultural understanding, empathy and respect. The syllabus provides students with opportunities to recognise the influence within Australian culture of traditional and contemporary movement activities from the Asia region, and their cultural significance for Australian society. While exploring health and movement in the context of Asia, students develop an understanding of the links between humans, environments and active living practices.

Sustainability

In the Physical Education Studies ATAR course, students will 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.

Students will develop an understanding of their potential to contribute to sustainable patterns of living, and develop their world view by exploring the concepts of social justice and consumerism, as they relate to the promotion and maintenance of health and performance. Through movement experiences, students are provided with opportunities to develop a connection in and with environments and to gain an appreciation of the interdependence of people and the health of environments.

Unit 1

Unit description

The focus of this unit is to explore anatomical and biomechanical concepts, the body's responses to physical activity and stress management processes to improve their own performance and that of others in physical activity.

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 and adapt skills and techniques in games and other competitive situations

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
- phases of information processing during skill performance
 - identification of stimuli/input
 - response identification/decision making
 - response/output
 - feedback

Functional anatomy

- use of musculoskeletal structures in the production of movement
 - 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
- structure and function of the circulatory system
 - heart
 - arteries
 - veins
 - capillaries
 - blood
- structure and function of the respiratory system
 - lungs, diaphragm, alveoli
 - mechanics of breathing

Biomechanics

Note: No calculations required

- definition of linear motion and how it applies to a selected sport in relation to speed, velocity, acceleration, instantaneous measure/mean measure
- definition of projectile motion and how it applies to a selected sport in relation to the principle of optimal projection, parabolic trajectory, release of projectiles – angle, velocity and height
- definition of angular motion and how it applies to a selected sport in relation to angular velocity
- definition of general motion and how it applies to a selected sport

Exercise physiology

- immediate responses to physical activity
 - heart rate (HR)
 - stroke volume
 - blood pressure (BP)
 - cardiac output
 - tidal volume
 - respiratory rate
 - gas exchange
 - arteriovenous oxygen difference
 - blood redistribution
- long-term adaptations to training
 - cardiac output
 - heart rate (HR)
 - blood pressure (BP)
 - blood volume/haemoglobin
 - stroke volume
 - maximum oxygen uptake (VO₂ max)

- capillarisation
- ventilation
- oxygen exchange
- muscle hypertrophy
- increased flexibility
- increased aerobic and anaerobic capacity
- utilisation of carbohydrates, fats and proteins as energy sources for physical activity, and their role in the onset of fatigue
- response of energy systems 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

Sport psychology

- mental skills required for improving performance and achieving the ideal performance state ('the zone')
 - intrinsic motivation
 - self-confidence
 - stress management
 - concentration or attentional control – Nideffer's model
 - arousal regulation for optimal performance including the inverted U hypothesis
- mental skills and strategies used to manage stress, motivation, concentration and arousal levels
 - self-talk
 - self-imagery
 - relaxation

Unit 2

Unit description

The focus of this unit is to identify the relationship between skill, strategy 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

- select and apply tactics to solve sport specific tactical problems
 - gain and maintain possession and control
 - start and restart play
 - create, use and define space
 - respond to opposition formations and patterns of play

Motor learning and coaching

- types of feedback
 - intrinsic (inherent)
 - extrinsic (augmented) – terminal, concurrent, verbal, non-verbal
- purpose of feedback
 - reinforcement
 - motivation
- relationship between skill learning processes and individual differences related to age, skill and fitness level, injury, level of competition, and type of activity

Functional anatomy

- characteristics of skeletal muscle tissue and their relationship to the production of movement for physical activity
 - fibre types (slow and fast twitch)
 - 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
 - circumduction
 - extension
 - supination
 - rotation
 - dorsi flexion
 - pronation
 - abduction
 - plantar flexion
 - adduction

Biomechanics

Note: No calculations required

- definition of the principle of balance and how it applies to a selected sport in relation to:
 - the centre/line of gravity, width of base of support, height of centre of gravity
 - static balance
 - dynamic balance
- definition of Newton's First, Second and Third Laws of Motion, and how they apply to sporting contexts
- the coordination of linear motion
 - sequential versus simultaneous movement – accuracy and power
 - summation of velocity

Exercise physiology

- definition of training types
 - resistance training – isometric, isotonic, isokinetic
 - interval training
 - continuous training
 - circuit training
 - fartlek
 - flexibility
 - plyometrics
- principles of training
 - specificity in relation to the nature of activity, positions and roles
 - intensity
 - duration
 - frequency
 - progressive overload
 - reversibility

- components of fitness
 - cardiorespiratory endurance
 - muscular strength
 - muscular endurance
 - flexibility
 - body composition
 - agility
 - balance
 - coordination
 - reaction time
 - speed
 - power
- interrelationship between training types, principles of training and fitness components

Sport psychology

- influence of age, skill level, and type of activity on mental skills in relation to motivation, arousal regulation (inverted U hypothesis), concentration
- evaluation and reassessment of personal goals according to changing situations
 - age
 - skill level
 - type of activity

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

Assessment table – Year 11

Type of assessment	Weighting
<p>Practical (performance)</p> <p>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.</p> <p>Students are assessed in the selected sport(s). The assessment must be completed by the teacher and conducted within the school environment within the nominal hours for the course.</p> <p>Evidence can include: direct observation, checklists, and/or the use of video.</p>	30%
<p>Investigation</p> <p>Students plan and conduct research and communicate their findings.</p> <p>Evidence can include: journals, training diaries, essays, laboratory reports, oral presentations and/or the use of video.</p>	15%
<p>Response</p> <p>Students analyse and respond to questions, stimuli or prompts.</p> <p>Evidence can include: topic tests, summaries, essays and/or oral presentations.</p>	15%
<p>Examination</p> <p>Typically conducted at the end of each semester and/or unit. In preparation for Unit 3 and Unit 4, the examination should reflect the examination design brief included in the ATAR Year 12 syllabus for this course.</p>	40%

Teachers are required to 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).

In the assessment outline for the pair of units, each assessment type must be included at least twice. In the assessment outline where a single unit is being studied, each assessment type must be included at least once.

The set of assessment tasks must provide a representative sampling of the content for Unit 1 and Unit 2.

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

Grading

Schools report student achievement in terms of the following grades:

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

The teacher prepares a ranked list and assigns the student a grade for the pair of units (or for a unit where only one unit is being studied). The grade is based on the student's overall performance as judged by reference to a set of pre-determined standards. These standards are defined by grade descriptions and annotated work samples. The grade descriptions for the Physical Education Studies ATAR Year 11 syllabus are provided in Appendix 1. They can also be accessed, together with annotated work samples, through the Guide to Grades link 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.

Appendix 1 – Grade descriptions Year 11

A

Developing physical skills and tactics

Demonstrates a broad repertoire of skills showing consistent control, fluency, balance, power, speed and precision, where relevant.

Uses a range of relevant tactics to outwit an opponent, improve personal performance, and contribute to team success.

Appropriately adapts and refines skills and tactical responses in response to a range of changing situations.

Functional anatomy: Biomechanics: Exercise physiology

Identifies and accurately applies a range of relevant anatomical and theoretical movement concepts and conditioning principles in a range of contexts.

Identifies relevant movement concepts and conditioning principles to enhance the efficiency of movement, and evaluates the effectiveness of their use.

Consistently uses appropriate terminology.

Sport psychology: Motor learning and coaching

Analyses the interactions between psychological factors influencing physical performance.

Clearly and accurately explains a range of mental skills designed to enhance practical performance in the short and medium term.

Provides clear and coherent explanations of motor learning and coaching concepts, and their relationship to skill acquisition and game performance.

B

Developing physical skills and tactics

Demonstrates a repertoire of skills showing control, fluency, balance, power, speed and precision, where relevant.

Uses relevant tactics to outwit an opponent, improve personal performance, and contribute to team success.

Adapts and refines skills and tactical responses in response to changing situations.

Functional anatomy: Biomechanics: Exercise physiology

Identifies and applies a range of relevant anatomical and theoretical movement concepts and conditioning principles in straightforward contexts.

Identifies most relevant movement concepts and conditioning principles to enhance the efficiency of movement and undertakes simple evaluations of their use.

Uses appropriate terminology.

Sport psychology: Motor learning and coaching

Undertakes simple analysis of the interactions between psychological factors influencing physical performance.

Clearly explains some mental skills designed to enhance practical performance in the short and medium term.

Provides clear explanations of motor learning and coaching concepts and their relationship to skill acquisition and game performance.

C	<p>Developing physical skills and tactics</p> <p>Demonstrates a basic repertoire of skills showing some control, fluency, balance, power, speed and precision, where relevant.</p> <p>Uses basic tactics to outwit an opponent, improve personal performance, and contribute to team success.</p> <p>Adapts and refines skills and basic tactical responses on some occasions.</p>
	<p>Functional anatomy: Biomechanics: Exercise physiology</p> <p>Identifies and applies some relevant anatomical and theoretical movement concepts and conditioning principles.</p> <p>Describes, in general terms, how relevant movement concepts and conditioning principles enhance the efficiency of movement.</p> <p>Uses mostly appropriate terminology.</p>
	<p>Sport psychology: Motor learning and coaching</p> <p>Identifies some straightforward analysis of psychological factors influencing physical performance.</p> <p>Provides generalised explanations of mental skills designed to enhance practical performance.</p> <p>Provides generalised explanations of motor learning and coaching concepts; makes simple judgements about the relationship between motor learning and coaching concepts, skill acquisition and game performance.</p>
D	<p>Developing physical skills and tactics</p> <p>Demonstrates a basic repertoire of skills showing limited control, fluency, balance, power, speed, and precision.</p> <p>Uses few basic tactics to outwit an opponent, improve personal performance and contribute to team success.</p> <p>Adapts and refines skills and tactical responses in a very limited way.</p>
	<p>Functional anatomy: Biomechanics: Exercise physiology</p> <p>Names one or two basic anatomical and theoretical movement concepts and conditioning principles and provides simple descriptions of their use.</p> <p>Uses mostly informal terminology.</p>
	<p>Sport psychology: Motor learning and coaching</p> <p>Identifies one or two basic psychological factors influencing physical performance.</p> <p>Provides basic explanations of mental skills designed to enhance practical performance.</p> <p>Provides basic explanations of motor learning and coaching concepts and overlooks some aspects of their relationship to skill acquisition and game performance.</p>
E	<p>Does not meet the requirements of a D grade and/or has completed insufficient assessment tasks to be assigned a higher grade.</p>