Physical Education 2025 v1.2

General senior syllabus

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Queensland Government
Queensland Curriculum & Assessment Authority
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For all Queensland schools

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Contents

Queensland syllabuses for senior subjects

In Queensland, a syllabus for a senior subject is an official 'map' of a senior school subject. A syllabus's function is to support schools in delivering the Queensland Certificate of Education (QCE) system through high-quality and high-equity curriculum and assessment.

Syllabuses are based on design principles developed from independent international research about how excellence and equity are promoted in the documents teachers use to develop and enliven the curriculum.

Syllabuses for senior subjects build on student learning in the Prep to Year 10 Australian Curriculum and include General, General (Extension), Senior External Examination (SEE), Applied, Applied (Essential) and Short Course syllabuses.

More information about syllabuses for senior subjects is available at www.qcaa.qld.edu.au/senior/senior-subjects and in the 'Queensland curriculum' section of the *QCE and QCIA policy and procedures handbook*.

Teaching, learning and assessment resources will support the implementation of a syllabus for a senior subject. More information about professional resources for senior syllabuses is available on the QCAA website and via the QCAA Portal.

Course overview

Rationale

The knowledge, understanding and skills taught through Health and Physical Education enable students to explore and enhance their own and others' health and physical activity in diverse and changing contexts. Development of the physical, intellectual, social and emotional capacities necessary in the strands of 'Movement and physical activity' and 'Personal, social and community health' is a key component of the P–10 Australian Curriculum: Health and Physical Education. It provides the foundations for learning and alignment to the Physical Education and Health senior syllabuses to build increasingly complex and developmental courses of study in the senior years.

In Physical Education, Arnold's seminal work (1979, 1985, 1988) provides a philosophical and educative framework to promote deep learning in three dimensions: about, through and in movement contexts (Brown & Penney 2012; Stolz & Thorburn 2017). Across the course of study, students will engage in a range of physical activities to develop movement sequences and movement strategies. Students optimise their engagement and performance in physical activity as they develop an understanding and appreciation of the interconnectedness of the dimensions. In becoming physically educated, students learn to see how body and movement concepts and the scientific bases of biophysical, sociocultural and psychological concepts and principles are relevant to their engagement and performance in physical activity.

The Physical Education syllabus is developmental and becomes increasingly complex across the four units. In Unit 1, students develop an understanding of the fundamental concepts and principles underpinning their learning of movement sequences and how they can enhance movement from a biomechanical perspective. In Unit 2, students broaden their perspective by determining the psychological factors, barriers and enablers that influence their performance and engagement in physical activity. In Unit 3, students enhance their understanding of factors that develop tactical awareness and influence ethical behaviour of their own and others' performance in physical activity. In Unit 4, students explore energy, fitness and training concepts and principles to optimise personal performance.

Students learn experientially through three stages of an inquiry approach to ascertain relationships between the scientific bases and the physical activity contexts. Students recognise and explain concepts and principles about and through movement, and demonstrate and apply body and movement concepts to movement sequences and movement strategies. Through their purposeful and authentic experiences in physical activities, students gather, analyse and synthesise data to devise strategies to optimise engagement and performance. They evaluate and justify strategies about and in movement by drawing on informed, reflective decision-making.

Physically educated learners develop the 21st century skills of critical thinking, creative thinking, communication, personal and social skills, collaboration and teamwork, and information and communication technologies skills through rich and diverse learning experiences about, through and in physical activity. Physical Education fosters an appreciation of the values and knowledge within and across disciplines, and builds on students' capacities to be self-directed, work towards specific goals, develop positive behaviours and establish lifelong active engagement in a wide range of pathways beyond school.

Syllabus objectives

The syllabus objectives outline what students have the opportunity to learn.

1. **Recognise and explain concepts and principles about movement.**

   When students recognise, they identify particular features of body and movement concepts, and biophysical, sociocultural and psychological concepts and principles. When students explain, they describe in more detail or reveal relevant facts about the concepts and principles relevant to physical activities.

2. **Demonstrate specialised movement sequences and movement strategies.**

   When students demonstrate, they show evidence of specialised movement sequences and movement strategies performed in authentic performance environments.

3. **Apply concepts to specialised movement sequences and movement strategies.**

   When students apply, they use knowledge and understanding of body and movement concepts to perform specialised movement sequences and movement strategies in an authentic performance environment to achieve a determined outcome.

4. **Analyse and synthesise data to devise strategies about movement.**

   When students analyse, they examine gathered primary data and secondary data to ascertain relationships according to the physical activity context and the body and movement, biophysical, sociocultural and psychological concepts and principles. When students synthesise, they combine information and data about physical activity demands, concepts and principles and personal performance to devise strategies for optimising performance and engagement.

5. **Evaluate strategies about and in movement.**

   When students evaluate, they appraise the effectiveness of strategies by weighing up outcomes and limitations using analysed data and set criteria. Students make decisions to maintain or modify strategies about and in movement.

6. **Justify strategies about and in movement.**

   When students justify, they draw on informed, reflective decision-making to give valid reasons and provide evidence from primary data and secondary data to support decisions about the development, modification and maintenance of strategies about and in movement.

7. **Make decisions about and use language, conventions and mode-appropriate features for particular purposes and contexts.**

   When students make decisions about language, conventions and mode-appropriate features, they use written, visual and spoken features to express meaning for particular purposes in a range of contexts. Written features include language conventions, specific vocabulary and language attributes such as annotations, paragraphs and sentences. Visual features may include photographs, sketches, diagrams and motion graphics. Spoken features include pronunciation, phrasing and pausing, audibility and clarity, volume, pace and silence. Students use referencing conventions to practise ethical scholarship.

Designing a course of study in Physical Education

Syllabuses are designed for teachers to make professional decisions to tailor curriculum and assessment design and delivery to suit their school context and the goals, aspirations and abilities of their students within the parameters of Queensland's senior phase of learning.

The syllabus is used by teachers to develop curriculum for their school context. The term *course of study* describes the unique curriculum and assessment that students engage with in each school context. A course of study is the product of a series of decisions made by a school to select, organise and contextualise subject matter, integrate complementary and important learning, and create assessment tasks in accordance with syllabus specifications.

It is encouraged that, where possible, a course of study is designed such that teaching, learning and assessment activities are integrated and enlivened in an authentic setting.

Course structure

Physical Education is a General senior syllabus. It contains four QCAA-developed units from which schools develop their course of study.

Each unit has been developed with a notional time of 55 hours of teaching and learning, including assessment.

Students should complete Unit 1 and Unit 2 before beginning Units 3 and 4. Units 3 and 4 are studied as a pair.

More information about the requirements for administering senior syllabuses is available in the 'Queensland curriculum' section of the *QCE and QCIA policy and procedures handbook*.

Curriculum

Senior syllabuses set out only what is essential while being flexible so teachers can make curriculum decisions to suit their students, school context, resources and expertise.

Within the requirements set out in this syllabus and the *QCE and QCIA policy and procedures handbook*, schools have autonomy to decide:

- how and when subject matter is delivered
- how, when and why learning experiences are developed, and the context in which learning occurs
- how opportunities are provided in the course of study for explicit and integrated teaching and learning of complementary skills.

These decisions allow teachers to develop a course of study that is rich, engaging and relevant for their students.

Assessment

Senior syllabuses set out only what is essential while being flexible so teachers can make assessment decisions to suit their students, school context, resources and expertise.

General senior syllabuses contain assessment specifications and conditions for the assessment instruments that must be implemented with Units 3 and 4. These specifications and conditions ensure comparability, equity and validity in assessment.

Within the requirements set out in this syllabus and the *QCE and QCIA policy and procedures handbook*, schools have autonomy to decide:

- specific assessment task details
- assessment contexts to suit available resources
- how the assessment task will be integrated with teaching and learning activities
- how authentic the task will be.

In Unit 1 and Unit 2, schools:

- develop at least two but no more than four assessments
- complete at least one assessment for each unit
- ensure that each unit objective is assessed at least once.

In Units 3 and 4, schools develop three assessments using the assessment specifications and conditions provided in the syllabus.

More information about assessment in senior syllabuses is available in 'The assessment system' section of the *QCE and QCIA policy and procedures handbook*.

Subject matter

Each unit contains a unit description, unit objectives and subject matter. Subject matter is the body of information, mental procedures and psychomotor procedures (see Marzano & Kendall 2007, 2008) that are necessary for students' learning and engagement with the subject. Subject matter itself is not the specification of learning experiences but provides the basis for the design of student learning experiences.

Subject matter has a direct relationship with the unit objectives and provides statements of learning that have been constructed in a similar way to objectives.

Aboriginal perspectives and Torres Strait Islander perspectives

The QCAA is committed to reconciliation. As part of its commitment, the QCAA affirms that:

- Aboriginal peoples and Torres Strait Islander peoples are the first Australians, and have the oldest living cultures in human history
- Aboriginal peoples and Torres Strait Islander peoples have strong cultural traditions and speak diverse languages and dialects, other than Standard Australian English
- teaching and learning in Queensland schools should provide opportunities for students to deepen their knowledge of Australia by engaging with the perspectives of Aboriginal peoples and Torres Strait Islander peoples
- positive outcomes for Aboriginal students and Torres Strait Islander students are supported by successfully embedding Aboriginal perspectives and Torres Strait Islander perspectives across planning, teaching and assessing student achievement.

Guidelines about Aboriginal perspectives and Torres Strait Islander perspectives and resources for teaching are available at www.qcaa.qld.edu.au/k-12-policies/aboriginal-torres-strait-islander-perspectives.

Where appropriate, Aboriginal perspectives and Torres Strait Islander perspectives have been embedded in the subject matter.

Complementary skills

Opportunities for the development of complementary skills have been embedded throughout subject matter. These skills, which overlap and interact with syllabus subject matter, are derived from current education, industry and community expectations and encompass the knowledge, skills, capabilities, behaviours and dispositions that will help students live and work successfully in the 21st century.

These complementary skills are:

- literacy — the knowledge, skills, behaviours and dispositions about language and texts essential for understanding and conveying English language content
- numeracy — the knowledge, skills, behaviours and dispositions that students need to use mathematics in a wide range of situations, to recognise and understand the role of mathematics in the world, and to develop the dispositions and capacities to use mathematical knowledge and skills purposefully
- 21st century skills — the attributes and skills students need to prepare them for higher education, work, and engagement in a complex and rapidly changing world. These skills include critical thinking, creative thinking, communication, collaboration and teamwork, personal and social skills, and digital literacy. The explanations of associated skills are available at www.qcaa.qld.edu.au/senior/senior-subjects/general-subjects/21st-century-skills.

It is expected that aspects of literacy, numeracy and 21st century skills will be developed by engaging in the learning outlined in this syllabus. Teachers may choose to create additional explicit and intentional opportunities for the development of these skills as they design the course of study.

Additional subject-specific information

Additional subject-specific information has been included to support and inform the development of a course of study.

Body and movement concepts

In Physical Education, students apply body and movement concepts to specialised movement sequences and movement strategies in selected physical activities. Students select body and movement concepts to use as the criteria for evaluating their performance of specialised movement sequences and movement strategies. Specialised movement sequences represent the combination of movement skills and sequences relative to the position or event in a selected physical activity. Movement strategies refer to a variety of approaches that will help an individual or team achieve a determined outcome.

Examples of body and movement concepts (Meckbach et al. 2014) include:

Quality of movement	Body awareness	Space awareness	Relationships
How the body moves	**What movements the body can perform**	**Awareness of where the body can move**	**Connections with objects**
• accuracy • continuity and outcome of movement • effect • efficiency • effort • flow • force development • sequence • time and speed	• balance • flight • stability • transfer of weight • weight bearing	• direction • levels and planes of movement • pathways of movement • using general space • using personal space	• interaction with opponents • interaction with other players • interaction with implements and objects

Schools provide opportunities for students to demonstrate specialised movement sequences and movement strategies in a range of authentic performance environments. The characteristics of each category of physical activity describe the authentic features of a performance environment.

Categories of physical activity

This syllabus adapts the work of Almond, as cited in Mitchell, Oslin and Griffin (2006), to classify physical activities into six categories:

1. Aesthetic
2. Invasion
3. Net and court
4. Performance
5. Striking and fielding
6. Target

Note: Key information relating to the categories of physical activity can be found in supporting resources.

Selecting physical activities

When schools select physical activities to construct assessment, the following specifications must be applied:

- The selected physical activities must come from the categories of physical activity (Table 2).
- In Units 1 and 2, at least two categories of physical activity must be selected.
- In Units 3 and 4, physical activities must be selected from different categories — one physical activity for each unit from 'Invasion', 'Net and court' or 'Performance' categories.

Table 1: Summary of specifications for selecting physical activities for assessment

Categories of physical activity	Units 1 and 2 (at least two)	Unit 3: Topic 1 (select one)	Unit 4 (select one)
Aesthetic	•		
Invasion	•	•	•
Net and court	•	•	•
Performance	•	•	•
Striking and fielding	•		
Target	•		

Table 2: Categories of physical activity

Aesthetic	Invasion	Performance	Net and court	Striking and fielding	Target
• Aerobic gymnastics (sport aerobics)	• Australian football • Basketball • Futsal • Netball • Soccer • Touch football • Water polo	• Duathlon, aquathlon, triathlon • Swimming • Track and field — jump • Track and field — throws • Track and field — track	• Badminton • Tennis • Volleyball	• Cricket • Softball	• Archery • Golf • Lawn bowls

It is the responsibility of schools, principals and teachers to ensure the health, safety and wellbeing of students, staff and others involved in all curriculum activities at schools or other locations. Refer to your curriculum activity risk management procedures for establishing processes prior to implementing physical activities.

Reporting

General information about determining and reporting results for senior syllabuses is provided in the 'Determining and reporting results' section of the *QCE and QCIA policy and procedures handbook*.

Reporting standards

Reporting standards are summary statements that describe typical performance at each of the five levels (A–E).

A
The student demonstrates accurate recognition and discerning explanation of concepts and principles about physical activities and effective demonstration of specialised movement sequences and movement strategies in authentic performance environments. The student demonstrates effective application concepts and principles relating to specialised movement sequences and movement strategies in authentic performance environments, to allow for insightful analysis and discerning synthesis of relevant data to devise strategies about physical activities. The student demonstrates critical evaluation of the effectiveness of strategies about and in physical activities; discerning justification of strategies using primary data and secondary data; discerning decision-making about and accurate use of language, conventions and mode-appropriate features, for particular purposes and contexts.
B
The student demonstrates recognition and effective explanation of concepts and principles about physical activities, and competent demonstration of specialised movement sequences and movement strategies in authentic performance environments. The student demonstrates competent application of concepts and principles relating to specialised movement sequences and movement strategies in authentic performance environments, allowing for purposeful analysis and considered synthesis of relevant data to devise strategies about physical activities. The student demonstrates considered evaluation of the effectiveness of strategies about and in physical activities; considered justification of strategies using primary data and secondary data; purposeful decision-making about and accurate use of language, conventions and mode-appropriate features, for particular purposes and contexts.
C
The student demonstrates recognition and appropriate explanation of concepts and principles about physical activities, and demonstration of specialised movement sequences and movement strategies in authentic performance environments. The student demonstrates application of concepts and principles relating to specialised movement sequences and movement strategies in authentic performance environments, allowing for appropriate analysis and synthesis of relevant data to devise strategies about physical activities. The student demonstrates feasible evaluation of the effectiveness of strategies about and in physical activities; feasible justification of strategies using primary data and secondary data; appropriate decision-making about and use of language, conventions and mode-appropriate features, for particular purposes and contexts.

D
The student demonstrates variable recognition and superficial explanation of aspects of concepts and principles about physical activities, and variable or inaccurate demonstration of movement sequences and a movement strategy. The student demonstrates variable or inaccurate application of concepts and principles relating to some specialised movement sequences or movement strategies in authentic performance environments, allowing for superficial analysis and synthesis of data to devise strategies about physical activities. The student demonstrates superficial evaluation of the effectiveness of strategies about and in physical activities; superficial justification of aspects of strategies using data; variable decision-making about and use of language, conventions and mode-appropriate features.
E
The student demonstrates elements of recognition and superficial explanation of information about physical activities, and variable or inaccurate demonstration of isolated specialised movement sequences or movement strategies allowing for the collection of primary data. The student demonstrates variable or inaccurate application of concepts and principles relating to limited specialised movement sequences or movement strategies, and explanation of data to devise strategies about physical activities. The student demonstrates elements of description of strategies about and in physical activities and makes variable and/or inappropriate use of language, conventions and features.

Determining and reporting results

Unit 1 and Unit 2

Schools make judgments on individual assessment instruments using a method determined by the school. They may use the reporting standards or develop an instrument-specific marking guide (ISMG). Marks are not required for determining a unit result for reporting to the QCAA.

The unit assessment program comprises the assessment instrument/s designed by the school to allow the students to demonstrate the unit objectives. The unit judgment of A–E is made using reporting standards.

Schools report student results for Unit 1 and Unit 2 to the QCAA as satisfactory (S) or unsatisfactory (U). Where appropriate, schools may also report a not rated (NR).

Units 3 and 4

Schools mark each of the three internal assessment instruments implemented in Units 3 and 4 using ISMGs.

Schools report a provisional mark by criterion to the QCAA for each internal assessment.

Once confirmed by the QCAA, these results will be combined with the result of the external assessment developed and marked by the QCAA.

The QCAA uses these results to determine each student's subject result as a mark out of 100 and as an A–E.

Units

Unit 1: Motor learning, functional anatomy and biomechanics in physical activity

In Unit 1, students engage with concepts, principles and strategies about two topics.

In Topic 1, students engage in learning that includes the integration of motor learning subject matter and selected physical activities.

In Topic 2, students engage in learning that involves the integration of functional anatomy and biomechanics subject matter and selected physical activities.

Students recognise and explain the concepts and principles about motor learning, functional anatomy and biomechanics through purposeful and authentic learning in physical activity contexts. Students investigate body and movement concepts and demonstrate specialised movement sequences and movement strategies.

Students apply concepts and principles to specialised movement sequences and movement strategies in authentic performance environments to gather data about their personal application of motor learning, biomechanical and body and movement concepts. Students analyse and synthesise relationships between the motor learning and biomechanical requirements of physical activity and their personal performance. Students then devise a motor learning and biomechanical strategy to optimise performance in a selected physical activity.

Students evaluate the effectiveness of the motor learning, biomechanical and movement strategies and justify using primary data and secondary data.

Unit objectives

1. Recognise and explain motor learning, functional anatomy and biomechanical concepts and principles about selected physical activities.
2. Demonstrate specialised movement sequences and movement strategies in selected physical activities.
3. Apply concepts to specialised movement sequences and movement strategies in selected physical activities.
4. Analyse and synthesise data to devise strategies about motor learning, functional anatomy and biomechanics.
5. Evaluate motor learning, functional anatomy, biomechanical concepts and principles and movement strategies.
6. Justify motor learning, functional anatomy, biomechanical concepts and principles and movement strategies.
7. Make decisions about and use language, conventions and mode-appropriate features for particular purposes and contexts.

Subject matter

Topic 1: Motor learning in physical activity

- Recognise and explain that motor learning is a discipline concerned with the learning of skilled movements through biophysical knowledge about neural, muscular and sensory systems, practice and feedback.
- Recognise and explain motor learning concepts, including
  - motor skills — activities that involve voluntary muscular movement to complete a predetermined task
  - motor programs — a movement plan that contains all the commands for the muscles to execute motor skills.
- Recognise and explain classifications of motor skills to include
  - fine and gross motor skills — as determined by the size of the muscles involved in the movement
  - open and closed motor skills — as determined by the stability of the environment
  - discrete, continuous and serial skills — as determined by whether the movement has a specific beginning and ending.
- Recognise and explain characteristics of motor skill learning and performance to include improvement, consistency, stability, persistence and adaptability.
- Recognise and explain that two major approaches to investigate motor learning have developed over time
  - the cognitive systems approach, also referred to as the cognitive model, which is considered the more traditional approach, involves a hierarchical model of control where higher control centres pass commands to lower control centres resulting in linear changes in movement; it requires an understanding of the process that occurs in making decisions, planning and executing movement
  - the dynamic systems approach, also referred to as the ecological model, where movements emerge or self-organise through the dynamic interaction of the environment, the task being performed and the individual; movements are not organised hierarchically, involve non-linear and unpredictable changes, and emerge as part of a complex dynamic system.

- Identify and explore cognitive models of learning, including
  - the information processing model, which assumes that the central nervous system controls the movements of the body. This model describes separate cognitive stages involving perception, decision-making and response execution to enable a performer's decision-making to occur prior to any action
  - Fitts and Posner's (1967) stage model of motor learning, based on learning as a continuous process of information processing and gradual change as learning progresses; the stage model includes the
    - cognitive stage, e.g. identifying the goal, rapid performance gains, error-ridden and inefficient movement sequences
    - associative stage, e.g. associating environmental cues with actions, achieving consistency, refinement, fewer errors, errors can be detected and corrected
    - autonomous stage, e.g. almost automatic, habitual, sub-conscious control, multitask, minimal performance variability and few errors.
- Recognise and explain that rate limiters are factors that have an effect on the learning processes of an individual and may restrict performance; rate limiters can include technical, perceptual, tactical, psychological, physical and physiological factors.
- Investigate rate limiters in relation to personal motor learning and performance in physical activity.
- Recognise and explain that practice of skills is necessary for optimal performance and can be classified into different types, including
  - massed practice and distributed practice
  - whole practice and part practice
  - blocked practice and random practice
  - constant practice and varied practice
  - drills and problem-solving
  - specificity and variability of practice.
- Recognise and explain that feedback is all the information an individual receives about the performance of a skill and is organised into two categories
  - intrinsic feedback — the sensory information that occurs during and after a movement
  - extrinsic feedback — the augmented feedback that is received at the completion of a movement, including knowledge of results and performance.
- Identify and explore how body and movement concepts interact to develop specialised movement sequences and movement strategies in physical activity. Body and movement concepts are
  - body awareness — what movements the body can perform: balance, weight bearing, stability, transfer of weight and flight
  - space awareness — where the body can move: using general or personal space, direction, pathways of movement, and levels and planes of movement
  - quality of movement — how the body moves: time and speed, accuracy, force development, effort, efficiency, effect, flow, sequence, continuity and outcome of movement
  - relationships — connection with implements, interaction with opponents and other players.

- Investigate the use of different types of practice and feedback in relation to personal motor learning and performance in physical activity.
- Gather primary data about the influence of motor learning concepts and principles, including rate limiters, practice and feedback, on personal performance of specialised movement sequences and movement strategies in authentic performance environments.
- Analyse and synthesise primary data and secondary data about the influence of motor learning concepts and principles on specialised movement sequences and movement strategies to ascertain the most significant relationships between the motor learning strategy and movement strategies, concepts and principles, and personal performance.
- Devise a personal motor learning strategy to optimise performance in physical activity that considers
  - stage of learning
  - rate limiters
  - types of practice suitable to the requirements of the physical activity and the individual
  - feedback suitable to the requirements of the physical activity and the individual
  - relevant body and movement concepts, specialised movement sequences and movement strategies.
- Justify the development of the motor learning strategy and movement strategies using evidence from primary data and secondary data.
- Implement the motor learning strategy and movement strategies to gather primary data about the outcomes and limitations of decisions.
- Reflect on primary data and secondary data to evaluate the effectiveness of the motor learning strategy and movement strategies to achieve a determined outcome, including
  - meeting the learning requirements of the individual
  - using suitable types of practice and feedback for physical activity
  - optimising performance of specialised movement sequences and movement strategies.
- Make decisions to maintain or modify the motor learning strategy and movement strategies.
- Justify maintenance or modification of the motor learning strategy and movement strategies using evidence from primary data and secondary data.

Topic 2: Functional anatomy and biomechanics in physical activity

- Recognise and explain that functional anatomy is the study of the function of muscles and bones in movement.
- Recognise and explain that biomechanics is the study of the laws of mechanics related to movement.
- Recognise and explain that specialised movement sequences in physical activity are comprised of phases and sub-routines that can be investigated as part of a biomechanical analysis.
- Analyse and synthesise primary data and secondary data about the influence of biomechanical and functional anatomy concepts and principles on specialised movement sequences and movement strategies.

- Recognise and explain that force is any interaction (e.g. a push or pull) that, when unopposed, will change the motion of an object. Force is made up of
  - internal forces, which are the structures of the body that interact to produce movement, e.g. muscles and tendons that act together to produce forces that cause movement
  - external forces, which result from the interaction between the body and the environment; these can include
    - contact forces, e.g. friction, a ball being struck by a bat
    - non-contact forces, e.g. gravity.
- Recognise and explain that motion is movement that occurs when an object has changed position in space and in time, due to the application of forces. Motion can be
  - linear, where movement is along a straight line, there is no rotation and all body parts move in the same direction at the same speed
  - curvilinear, where movement is along a curved path
  - angular, where all the parts of a body move through a rotational pathway, through the same angle, in the same direction and at the same time. It is the rotary movement about an axis
  - a combination, which recognises that most movements in biomechanics are a combination of linear and angular motion.
- Identify and explore the components of projectile motion in a suitable physical activity, including speed, angle and height of release.
- Recognise and explain that momentum describes a quantity of motion and considers the mass of an object and its velocity.
- Recognise, explain and calculate biomechanical concepts such as
  - summation of forces, which is the sequential combination of forces produced by different parts of the body, acting together to maximise force
  - speed, which is the distance travelled per unit of time
  - velocity, which is the rate at which an object changes position
  - displacement, which is a quantity used to describe the extent of a body's motion
  - acceleration, which is the rate at which an object changes its velocity.
- Identify and explore the concepts of Newton's three laws of motion in physical activity.
- Recognise and explain the concept of balance and stability in force production and movement, including the position of the centre of gravity and base of support.
- Identify and explore first-, second- and third-class levers in physical activity, including force multipliers and speed multipliers.
- Recognise and explain Bernoulli's principle in suitable physical activities, including topspin, backspin, sidespin and lift forces.
- Identify and explore the critical anatomical and joint movements in physical activity, e.g. flexion, extension, abduction, adduction, pronation, supination, rotation, circumduction, dorsiflexion, plantar flexion, eversion and inversion.
- Identify and explore isotonic muscle contractions (concentric and eccentric) and isometric muscle contractions in physical activity.

- Recognise and explain that reciprocal inhibition describes the process of muscles on one side of a joint relaxing to accommodate muscle contraction on the other side of the joint in order to produce movement. Reciprocal inhibition involves the use of agonist and antagonist muscles and stabilisers.
- Gather primary data about the influence of biomechanical and functional anatomy concepts and principles on personal performance of specialised movement sequences and movement strategies in authentic performance environments.
- Use secondary data to analyse how biomechanical and functional anatomy concepts and principles can influence performance in physical activity.
- Analyse primary data and secondary data to ascertain relationships between the biomechanical strategies, concepts and principles, and personal performance.
- Devise personal biomechanical strategies to optimise performance in physical activity that considers the
  - relevant biomechanical and functional anatomy requirements of the specialised movement sequences and movement strategies
  - individual's biomechanical strengths and limitations.
- Justify the development of biomechanical and movement strategies using evidence from primary data and secondary data.
- Implement the biomechanical strategies to gather primary data about the outcomes and limitations of the decisions.
- Reflect on primary data and secondary data to evaluate the effectiveness of the biomechanical strategies to achieve a determined outcome that
  - meets the biomechanical requirements of the individual and the specialised movement sequences and movement strategies
  - optimises performance of specialised movement sequences and movement strategies.
- Make decisions to maintain or modify the biomechanical and movement strategies.
- Justify maintenance or modification of the biomechanical and movement strategies using evidence from primary data and secondary data.

Unit 2: Sport psychology and equity in physical activity

In Unit 2, students engage with concepts, principles and strategies about two topics.

In Topic 1, Students recognise and explain the concepts and principles about sport psychology through purposeful and authentic learning in and about a selected physical activity. In physical activity, students explore body and movement concepts and demonstrate specialised movement sequences and movement strategies.

Students apply concepts to specialised movement sequences and movement strategies in authentic performance environments to gather data about their personal application of sport psychology and body and movement concepts. Students analyse and synthesise relationships between the sport psychology demands in physical activity and personal and team performance. Students then devise a psychological strategy to optimise performance in physical activity.

Students evaluate the effectiveness of the psychological and movement strategies and justify using primary data and secondary data.

In Topic 2, Students recognise and explain the concepts and principles about equity in physical activity. In a range of physical activities, students explore barriers and enablers to gather data about the influence on equity.

Students analyse data to synthesise relationships between the barriers and enablers in physical activity, and engagement and performance to identify an equity dilemma. Student then devise an equity strategy in response to the dilemma to optimise engagement and performance in physical activity.

Students evaluate the effectiveness of the equity strategy on engagement and performance, and justify using primary data and secondary data.

Unit objectives

1. Recognise and explain sport psychology and equity concepts and principles about selected physical activities.
2. Demonstrate specialised movement sequences and movement strategies in selected physical activities.
3. Apply concepts to specialised movement sequences and movement strategies in selected physical activities.
4. Analyse and synthesise data to devise strategies about sport psychology and equity.
5. Evaluate sport psychology, equity and movement strategies.
6. Justify sport psychology, equity and movement strategies.
7. Make decisions about and use language, conventions and mode-appropriate features for particular purposes and contexts.

Subject matter

Topic 1: Sport psychology in physical activity

- Recognise and explain that sport psychology aims to optimise performance through the application of psychological knowledge and strategies.
- Recognise and explain the concept of
  - motivation as a continuum, from extrinsic to intrinsic
  - confidence, including self-confidence, self-belief and self-efficacy
  - arousal as a continuum from relaxed drowsiness, wakefulness, curiosity and attentiveness to joy, exhilaration, anxiety, panic and rage, including inverted U theory
  - attention and concentration, including broad, narrow, internal and external foci
  - team dynamics and cohesion, including group roles, group norms and social support.
- Analyse and synthesise primary data and secondary data about the influence of sport psychology concepts and principles on specialised movement sequences and movement strategies.
- Identify and explore the impact of motivation, confidence, arousal, attention, concentration and team dynamics on personal performance in physical activity.
- Investigate information about psychological techniques that can be used to optimise performance
  - goal-setting techniques — process goals, outcome goals and performance goals
  - mental rehearsal techniques — mental rehearsal of the entire performance, visualisation of one aspect of skill execution prior to performance, and internal and external perspectives of imagery
  - positive self-talk techniques — using positive cue words and positive emotions to create self-belief
  - self-confidence techniques — identifying how thoughts can affect self-confidence, e.g. situation, thoughts, emotions and reactions, using affirmations to change personal reactions to situations
  - pre-performance techniques — construction of a pre-performance routine and checklist; investigating mental rehearsal and pre-event tasks and cues to prepare for training and competition, e.g. technical points, triggers or competition segments
  - relaxation and energiser techniques — progressive muscle relaxation (PMR), deep breathing techniques, music and visualisation techniques
  - attention and concentration techniques — selective attention, using trigger words, performance segmenting, pre-performance routines and within-competition routines
  - team dynamics and cohesion techniques — leadership, communication, norms, rules and discipline.
- Investigate the use of psychological techniques on personal performance in authentic performance environments.
- Gather primary data about the influence of psychological techniques on personal performance of specialised movement sequences and movement strategies in authentic performance environments.

- Use secondary data to analyse how the sport psychology concepts and principles can influence performance in physical activity.
- Analyse primary data and secondary data to ascertain relationships between the sport psychology and movement strategies, concepts and principles, and personal performance.
- Optimise performance in physical activity by devising personal and team sport psychology strategies that consider the
  - influence of sports psychology concepts and principles on specialised movement sequences and movement strategies
  - effect of the psychological techniques on personal and team motivation, confidence, arousal, attention, concentration and/or team dynamics
  - factors affecting the implementation of the techniques.
- Justify the development of sport psychology and movement strategies using evidence from primary data and secondary data.
- Implement the sport psychology strategies and movement strategies to gather primary data about the outcomes and limitations of decisions.
- Reflect on primary data and secondary data to evaluate the effectiveness of sport psychology and movement strategies to achieve a determined outcome including
  - meeting the requirements of personal and team performance in physical activity
  - using suitable sport psychology techniques to optimise personal and team motivation, confidence, arousal, attention, concentration and/or team dynamics
  - optimising the performance of specialised movement sequences and movement strategies.
- Make decisions to maintain or modify the sport psychology strategies and movement strategies.
- Justify maintenance or modification of the sport psychology and movement strategies using evidence from primary data and secondary data.

Topic 2: Equity — barriers and enablers

- Recognise and explain that equity is concerned with giving value to, and celebrating personal, social, and cultural differences in society.
- Recognise and explain that access includes the opportunity to participate in physical activity.
- Identify and explore how equity and access interact and impact engagement in physical activity.
- Recognise and explain that barriers are personal, social, cultural and environmental factors that limit access to personal, social and community resources.
- Recognise and explain that enablers are personal, social, cultural and environmental factors that increase access to personal, social and community resources.
- Analyse and synthesise primary data and secondary data about access, equity and engagement in physical activity contexts.
- Identify relationships between personal, social, cultural and environmental factors, including
  - personal factors, e.g. enabling choice of activities to suit personal preference, acknowledging personal attitudes, values and beliefs
  - social factors, e.g. grouping and team selection, performance environment modifications, manipulation of rules and constraints in physical activity
  - cultural factors, e.g. community promotion and engagement related to physical activity, media and marketing strategies, rules, policies and procedures, risk assessment within a school context
  - environmental factors, e.g. active travel, planning of walkways and cycleways, design of green public spaces.
- Identify and explore information about personal factors acting as barriers and enablers for self or others to influence equity and access, including
  - motivation
  - confidence
  - personality traits, e.g. enjoyment, temperament or preference, self-esteem and self-concept
  - personal ability
  - genetic disposition
  - gender
  - previous experiences of physical activity.
- Identify and explore information about social factors acting as barriers and enablers for self or others to influence equity and access, including
  - agents of socialisation
  - siblings, peers, parents, teachers and coaches
  - the social construction of gender
  - diversity
  - physical activity preferences.

- Identify and explore information about cultural factors acting as barriers and enablers to influence equity and access, including
  - demographic, generational and cultural change
  - the role of government funding
  - mass media promotion and marketing of physical activity
  - institutional rules, policies and procedures.
- Identify and explore information about environmental factors acting as barriers and enablers to influence equity and access including built and natural environments, green space.
- Investigate the emerging megatrends in Australia of ‘being physically active’, including
  - personalised sport for health and fitness
  - the rise of lifestyle sports
  - demographic, generational and cultural change
  - the attainment of health and community objectives via physical activity.
- Identify and explore how the emerging megatrends may interact as barriers or enablers to influence personal, social, cultural and environmental factors related to engagement in physical activity.
- Gather primary data about the influence of equity and access concepts and principles, including personal, social, cultural and environmental factors acting as barriers and enablers, on engagement in physical activity.
- Use secondary data to analyse how equity and access concepts and principles influence engagement in physical activity.
- Analyse primary data and secondary data to identify relationships between the equity strategies and engagement in physical activity contexts.
- Devise equity strategies to influence personal, social, cultural and environmental factors in a physical activity context, e.g. event or tournament, come-and-try session or group participation activity.
- Justify the development of the equity strategies using evidence from primary data and secondary data.
- Implement equity strategies to gather primary data about the outcomes and limitations of decisions.
- Reflect on primary data and secondary data to evaluate the effectiveness of the equity strategies to achieve a determined outcome.
- Make decisions to maintain or modify the equity strategies to optimise engagement in physical activity contexts.
- Justify maintenance or modification of the equity strategies using evidence from primary data and secondary data.

Unit 3: Tactical awareness and ethics in physical activity

In Unit 3, students engage with concepts, principles and strategies about two topics.

In Topic 1 students recognise and explain the concepts and principles about dynamic systems of motor learning and tactical awareness through purposeful and authentic learning about and in selected physical activity. In physical activity, students explore body and movement concepts and demonstrate specialised movement sequences and movement strategies.

Students apply concepts to specialised movement sequences and movement strategies in authentic performance environments to gather data about their personal application of tactical and body and movement concepts. Students analyse and synthesise relationships between the constraints of movement strategies and their personal performance. Students then devise a tactical strategy to optimise performance of movement strategies in physical activity.

Students evaluate the effectiveness of the tactical and movement strategies, and justify using primary data and secondary data.

In Topic 2 students recognise and explain the concepts and principles about ethics and integrity in physical activity. In a range of physical activities, students explore the factors that influence fair play, ethical behaviour and integrity to gather data about engagement.

Students use the ethical decision-making framework to analyse data and synthesise relationships between the factors that influence engagement in physical activity to identify an ethical dilemma. Students then devise an ethics strategy in response to the dilemma to optimise engagement in physical activity.

Students evaluate the effectiveness of the ethics strategy to optimise integrity and engagement, and justify using primary data and secondary data.

Unit objectives

1. Recognise and explain tactical awareness and ethics and integrity concepts and principles about selected physical activities.
2. Demonstrate specialised movement sequences and movement strategies in selected physical activities.
3. Apply concepts to specialised movement sequences and movement strategies in selected physical activities.
4. Analyse and synthesise data to devise strategies about tactical awareness and ethics and integrity.
5. Evaluate tactical, ethics and movement strategies.
6. Justify tactical, ethics and movement strategies.
7. Make decisions about and use language, conventions and mode-appropriate features for particular purposes and contexts.

Subject matter

Topic 1: Tactical awareness in physical activity

- Recognise and explain that two major approaches to investigate motor learning have developed over time: cognitive systems and dynamic systems
  - the cognitive systems approach also referred to as the cognitive model, which is considered the more traditional approach, involves a hierarchical model of control where higher control centres pass commands to lower control centres resulting in linear changes in movement; it requires an understanding of the process that occurs in making decisions, planning and executing movement
  - the dynamic systems approach also referred to as the ecological model, where movements emerge or self-organise through the dynamic interaction of the environment, the task being performed and the individual; movements are not organised hierarchically, involve non-linear and unpredictable changes, and emerge as part of a complex dynamic system.
- Recognise and explain that tactical awareness is a personal response to the interaction of constraints of the learner, task and environment during goal-directed behaviour in physical activity.
- Recognise and explain the alignment of dynamic systems to the complex nature of authentic game play.
- Identify and explore ecological models of learning, including dynamic systems.
- Recognise and explain that dynamic systems theory views the learner as a complex movement system of many independent and interacting parts, and that this system self-organises in response to the constraints placed upon it. This includes the understanding that
  - self-organisation involves the dynamic interaction of constraints on movement and, when specific constraints are present, the system organises into a specific yet stable state or preferred method of movement
  - constraints are the boundaries within which learners can explore and search for movement solutions within a physical activity, including
    - task constraints — the characteristics of the task that can influence movement, e.g. number of players, rules and equipment
    - learner or individual constraints (or individual learner constraints) — any personal characteristics of the learner that can influence movement, e.g. height, weight, body composition, motor skills and motivation
    - environmental constraints — any characteristics of the physical and social environment that can influence movement, e.g. playing surface, playing area, movement, noise, weather conditions, teacher, coach, peers and family
  - movement changes and progressions are non-linear as they involve abrupt changes from one stable state to another, e.g. changing from walking to running when increasing the speed on a treadmill.
- Analyse and synthesise primary data and secondary data about the influence of the constraints-led approach to learning and tactical awareness concepts and principles on movement sequences and movement strategies in physical activity.

- Recognise and explain that the ecological model focuses more on how an individual interacts with the environment and proposes that information to control action is consistently and directly available from our senses through a perception–action coupling. This includes the understanding that
  - perception–action coupling provides a direct link between the process of interpreting or giving meaning to information from the environment and a specific action, e.g. perceiving the space between the defenders and responding with the action of running through the space
  - perception can drive the action, but action can also drive the perception
  - affordances are opportunities for action provided by the environment or task in relation to the learner's ability, e.g. a space between touch football defenders affords the opportunity for a performer to exploit, by running through the gap, but only if they have the appropriate speed
  - as a skill is learned, individuals become more attuned to the environment and the affordances that are available for movement. This enables the learner to identify opportunities for action from the environment, e.g. attune to the size of the space between the defenders that affords the opportunity for a performer to run through.
- Recognise and explain that a constraints-led approach to learning is a physical education teaching methodology that combines an understanding of the dynamic systems theory, which considers the constraints on the individual, and the ecological model, which considers how the system interacts with the environment.
- Identify and explore a constraints-led approach to learning in physical activity to allow opportunity for the emergence of movement sequences and development of movement strategies through
  - manipulation of task constraints, e.g. manipulating the scoring system, adapting specialised movement sequences
  - consideration of variations among learners' individual constraints, e.g. considering strengths and limitations of teammates and opponents
  - interaction with environmental constraints, e.g. varying dimensions within the area of play.
- Recognise and explain the principles of decision-making in physical activity, including
  - reading play
  - recognising information and responding
  - reacting to implement movement
  - recovering with appropriate movements, e.g. recover with 'on the ball' and 'off the ball' movements.
- Identify and explore the principles of play, which are fundamental movement strategies used by individuals or teams to effectively adapt to any tactical situation in authentic performance environments, including
  - setting up attack
  - defending against attack
  - creating, defending and exploiting space
  - attacking opposition space and scoring.

- Investigate ‘on-the-ball’ and ‘off-the-ball’ movements and decision-making in authentic performance environments, using body and movement concepts as criteria. Examples include
  - body awareness, e.g. movement execution, pass or shot selection
  - space awareness, e.g. movement pathways, use of space, when to run into space or when to pass
  - quality of movement, e.g. force development, efficiency and outcome
  - relationships, e.g. interaction with opponent and team members.
- Gather primary data about the relationships between a constraints-led approach to learning, tactical awareness concepts and principles, and personal performance of specialised movement sequences and movement strategies in authentic performance environments.
- Use secondary data to analyse how tactical awareness concepts and principles and a constraints-led approach to learning can influence performance in physical activity.
- Analyse primary data and secondary data to ascertain the relationships between tactical strategies, concepts and principles, and personal and team performance.
- Optimise performance in physical activity by devising personal and team tactical strategies that consider the
  - manipulation of task, learner and environmental constraints as part of a constraints-led approach
  - relevant body and movement concepts, and specialised movement sequences
  - two different principles of play
  - determined outcomes of performance in physical activity.
- Justify the development of tactical and movement strategies using evidence from primary data and secondary data.
- Implement tactical and movement strategies to gather primary data about the outcomes, and limitations of decisions.
- Reflect on primary data and secondary data to evaluate the effectiveness of tactical strategies to achieve a determined outcome
  - meeting the performance requirements of the physical activity
  - manipulating task, learner and environmental constraints as part of the constraints-led approach
  - optimising the performance of specialised movement sequences and movement strategies.
- Make decisions to maintain or modify the tactical and movement strategies to optimise performance in physical activity.
- Justify maintenance or modification of the tactical and movement strategies using evidence from primary data and secondary data.

Topic 2: Ethics and integrity in physical activity

- Recognise and explain that ethics is the set of norms and ways of life through which we realise acceptable behaviour and values of right and wrong.
- Recognise and explain that ethics in physical activity is developed as a system of values that form the character or integrity of each player and translate, through action, into a player's engagement in physical activities.
- Comprehend and explain the concept of integrity in physical activity, which includes
  - the demonstration of the ethics and values that promote community confidence in physical activity
  - fair and honest performances and outcomes, unaffected by illegitimate enhancements or external interests
  - positive engagement by athletes, administrators, officials, supporters and other stakeholders in and around physical activities, which enhances the reputation and standing of the contest and perception of physical activity.
- Understand and describe the concept of fair play, which includes
  - observing rules
  - demonstrating attitudes and behaviours in physical activity consistent with the belief that it is an ethical pursuit
  - eliminating forms of exploitation in an effort to win, e.g. acts of violence, cheating, drug abuse
  - fair competition and equality
  - respect
  - team spirit
  - respect for written and unwritten rules such as integrity, solidarity, tolerance, care, excellence and joy.
- Identify the role of peers, family, coaches, school and community in the development of personal values and ethical behaviours in physical activity.
- Explain how a system of ethical values and ethics strategies influence fair play and integrity of individuals or teams in physical activity.
- Comprehend and describe how ethics strategies can positively or negatively influence integrity.
- Access codes of behaviour and conduct, and rules and policies (including risk assessment) in class, school and community contexts to identify how they support ethical behaviour and fair play in physical activity.
- Identify and explain how globalisation and media coverage have influenced ethical values and behaviours.
- Identify ethical dilemmas (gender inclusion or exclusion, ability, enhancements in technology and equipment, corruption) through involvement in physical activity contexts.

- Recognise and explain the ethical decision-making framework for exploring ethical dilemmas
  - identify the ethical dilemma, i.e. the problem or situation, and the tension that exists between the organisation's or player's values
  - find information about
    - the relevant facts of the problem or situation
    - individuals and groups who have an important stake in the outcome
    - strategies that have been used in response to similar problems or situations
  - evaluate alternatives by determining which strategies will
    - produce the most good and do the least harm
    - best respect the rights of all who have a stake
    - treat people equally or proportionately
    - best serve the community as a whole
    - lead players to act with integrity
  - devise strategies that provide a course of action to improve the integrity of the player or organisation
  - reflect on the outcome by determining the effectiveness of the ethics strategy on all stakeholders.
- Apply the ethical decision-making framework to investigate the factors that influence integrity in class, school and community physical activity contexts.
- Gather primary data about the relationship between ethical dilemmas, the influence of concepts and principles about ethics and integrity, and engagement in physical activity.
- Use secondary data to analyse how the development of ethics strategies can influence engagement in physical activity.
- Analyse primary data and secondary data to ascertain relationships between the ethical dilemma, ethics strategy, concepts and principles and engagement in the class, school and community physical activity contexts.
- Analyse and synthesise primary data and secondary data about ethical dilemmas in class, school and community contexts to identify individuals and groups who have an important stake in the outcome and strategies that have been used in response to similar problems or situations.
- Devise ethics strategies that provide a course of action in response to the ethical dilemmas that identify the audience, context and outcome to be achieved.
- Justify the development of the ethics strategies using evidence from primary data and secondary data.
- Propose or implement the ethics strategies to gather primary data about the potential outcome and limitations about decisions.
- Reflect on primary data and secondary data to evaluate the effectiveness of the ethics strategies to enhance integrity and optimise engagement for all stakeholders in the class, school and community physical activity contexts.
- Make decisions to maintain or modify the ethics strategies to optimise integrity and engagement in the class, school and community physical activity contexts.
- Justify maintenance or modification of the ethics strategies using evidence from primary data and secondary data.

Unit 4: Energy, fitness and training in physical activity

In Unit 4, students engage with concepts, principles and strategies about energy, fitness, training and physical activity.

Students recognise and explain the concepts and principles about energy, fitness and training through purposeful and authentic learning in selected physical activities. In selected physical activities, students investigate body and movement concepts and demonstrate specialised movement sequences and movement strategies.

Students apply concepts and principles to specialised movement sequences and movement strategies in authentic performance environments to gather data about their personal application of energy, fitness and training concepts. Students analyse and synthesise relationships between the energy and fitness demands of physical activity and their personal performance. Students then devise a training strategy to optimise performance for an identified movement strategy in a selected physical activity.

Students evaluate the effectiveness of the training strategy and movement strategies and justify using primary and secondary data.

Unit objectives

1. Recognise and explain energy, fitness and training concepts and principles about physical activity.
2. Demonstrate specialised movement sequences and movement strategies in selected physical activities.
3. Apply concepts to specialised movement sequences and movement strategies in selected physical activities.
4. Analyse and synthesise data to devise a training strategy.
5. Evaluate training and movement strategies.
6. Justify training and movement strategies.
7. Make decisions about and use language, conventions and mode-appropriate features for particular purposes and contexts.

Subject matter

Topic 1: Energy, fitness and training integrated in physical activity

- Recognise and explain that energy for physical activity is provided by adenosine triphosphate (ATP).
- Recognise and explain that energy requirements for physical activity
  - involve an ongoing process of ATP resynthesis using various fuel sources
  - are provided by the interplay of three different pathways, known as energy systems
  - are dependent on the intensity and duration of exercise.
- Recognise and explain which energy systems are used in a range of physical activity contexts. Energy systems include
  - ATP–PC — provides energy anaerobically, without oxygen, for high intensity, short duration exercise
  - lactic acid — provides energy anaerobically, without oxygen, for high intensity, moderate duration exercise, where ATP is resynthesised using muscle glycogen as the fuel, with resulting lactate formation
  - aerobic — provides energy aerobically, with oxygen, for sub-maximal intensity, longer duration exercise.
- Recognise and explain how fitness requirements for physical activity are classified as components of fitness and include aerobic capacity, muscular endurance, speed, strength, power, flexibility and agility.
- Recognise and explain physiological responses to training, including
  - VO_2 max
  - lactate threshold
  - lung capacity
  - the effects on slow and fast twitch muscle fibres
  - hypertrophy
  - stroke volume
  - cardiac output.
- Identify and explore the energy requirements for specialised movement sequences and movement strategies in physical activity by analysing
  - how ATP is resynthesised and transferred during performance
  - the contribution ratios and interplay of the different energy systems during performance.
- Identify and explore the fitness requirements for physical activity contexts by considering the components of fitness necessary for the specialised movement sequences.

- Recognise and explain the application of the principles of training in physical activity, including
  - progressive overload — the planned, gradual increase in training load to ensure that fitness continues to be optimised
  - frequency — the number of times training occurs in a given period
  - reversibility — the reversal of adaptations due to a cease in training or training load
  - intensity — the magnitude of exertion required
  - duration — the length of training time
  - specificity — relevant to the energy system, position-specific movements and fitness requirements of an activity
  - individuality — considerate of personal needs, goals, fitness levels, motivation and skills
  - variety — the inclusion of a range of movement options, activities and contexts in training.
- Identify and explore the application of training methods for physical activity, including
  - flexibility training — to enhance the motion of the body's joints
  - resistance training — to enhance muscular strength, power and muscular endurance
  - variations of interval training — manipulation of work periods and rest periods to enhance specific components of fitness and enhance the aerobic, lactic acid and ATP–PC energy systems, e.g. high-intensity interval training (HIIT), sprint interval training (SIT), aerobic interval training
  - circuit training — to enhance specific components of fitness
  - continuous training — to enhance aerobic capacity
  - fartlek training — to enhance aerobic capacity.
- Recognise and explain how the application of different training phases can be sequenced to form an annual plan, known as periodisation, that includes the preparatory phase, pre-competition phase, competition phase and transition phase.
- Recognise and explain how the different parts of an annual plan can target a specific or series of energy and/or fitness requirements within a designated period of time; the parts include
  - mesocycles — a training period of generally 4–6 weeks with a specific training focus
  - microcycles — a shorter training period, generally one week, with a more specific training focus and made up of a number of training sessions
  - training sessions — the organised description of activities within an identified time frame.
- Recognise and explain the features of a training program, including
  - specific training objectives to achieve a determined outcome
  - game analysis
  - work volume, frequency, intensity and duration of exercise
  - tapering and recovery to achieve the determined outcome for a particular phase.
- Recognise and explain the features of a training session, including
  - warm-up — e.g. RAMP (raise, activate, mobilise and prepare) approach designed to
    - raise body temperature, heart rate, respiration rate and joint viscosity
    - activate and mobilise key muscle groups, joints and range of motion
    - prepare for exercise by incorporating dynamic stretching

  - conditioning phase — specifies the relevant fitness components being developed, training methods used, intensity and volume of work, work:rest (W:R) ratios and repetitions, while following relevant training principles
  - cool down — gentle cardiovascular exercise and stretching designed to gradually reduce heart rate, body temperature, remove waste products and relax muscles.
- Recognise and explain the importance of recovery in training, including active recovery, to allow the body to overcome the effects of fatigue and increase readiness for competition or future training.
- Gather primary data about personal energy, fitness and training requirements for specialised movement sequences and movement strategies in authentic performance environments.
- Use primary and secondary data to
  - analyse how energy, fitness and training concepts and principles can influence performance in physical activity
  - ascertain the most significant relationships between the training strategy, energy, fitness and training concepts and principles, and personal performance of the specialised movement sequences and movement strategies.
- Analyse and synthesise primary data and secondary data about
  - position- or event-specific fitness testing of the relevant components of fitness to identify personal performance capacities
  - specialised movement sequences and movement strategies in authentic performance environments to identify the frequency, direction, intensity and duration of movements
  - work:rest (W:R) ratios
  - target heart rate (THR) and maximum heart rate (MHR) to identify training zones.
- Optimise performance in physical activity by devising one personal training strategy for a mesocycle or microcycle that considers the
  - components of fitness and energy demands of the physical activity
  - relevant training methods, principles of training and recovery principles
  - personal performance of specialised movement sequences and movement strategies
  - training objectives to achieve a determined outcome.
- Justify the development of the training strategy and movement strategies using evidence from primary data and secondary data.
- Implement sessions from the training strategy to gather primary data about the outcomes, and limitations of decisions.
- Reflect on primary data and secondary data to evaluate the effectiveness of the training strategy to achieve a determined outcome, including
  - meeting the energy and fitness requirements of the physical activity
  - using relevant training principles, training methods and recovery principles
  - optimising performance of the specialised movement sequences and movement strategies.
- Make decisions to maintain or modify the training and movement strategies using evidence from primary and secondary data.
- Justify maintenance or modification of the training strategy using evidence from primary data and secondary data.

Assessment

Internal assessment 1: Project — folio (25%)

Students devise a constraints-led approach to provide opportunity for the emergence of a personal tactical strategy, focusing on the specialised movement sequences for one movement strategy. The project focuses on Unit 3 Topic 1 concepts and principles about tactical awareness and one selected physical activity. Students will apply concepts and principles about tactical awareness to body and movement concepts, specialised movement sequences for one movement strategy for a position or event in a selected physical activity context. Individual student performance within the selected authentic performance environment will be supported by visual evidence.

Assessment objectives

2. Demonstrate specialised movement sequences and movement strategies.
3. Apply concepts to specialised movement sequences and movement strategies.
4. Analyse and synthesise data to devise a constraints-led learning activity/practice to provide opportunity for the emergence of a tactical strategy for optimising performance of one movement strategy.
5. Evaluate a tactical strategy and movement strategies relevant to the selected physical activity.
6. Justify a tactical strategy and movement strategies relevant to the selected physical activity.
7. Make decisions about and use language, conventions and mode-appropriate features to communicate information about strategies to a technical audience.

Specifications

This task requires students to:

- analyse primary data and secondary data to ascertain the most significant relationships between the
  - demands of the specialised movement sequences for one movement strategy
  - task, learner and environmental constraints that limit or enable personal performance of the specialised movement sequences for one movement strategy
  - application of the principles of decision-making based on the presented opportunities for action in the specialised movement sequences for one movement strategy
- synthesise the most significant relationships to devise a constraints-led learning activity/practice to provide opportunity for the emergence of a personal tactical strategy, to optimise performance for one movement strategy
- justify the development of the constraints-led learning activity/practice for one movement strategy to optimise performance, using evidence from primary data and secondary data

- evaluate the effectiveness of constraints-led learning activity/practice in providing opportunity for the emergence of the personal tactical strategy by appraising the outcome and limitations of the
  - task, learner and environmental constraints
  - applied principles of decision-making
- justify the modification and maintenance of the personal tactical strategy for one movement strategy to optimise performance, using evidence from primary data and secondary data
- make decisions about and use language, conventions and mode-appropriate features to communicate information about the strategies to a technical audience
- record visual personal performance evidence in an authentic performance environment. Visual evidence will illustrate
  - demonstration of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments
  - application of quality of movement and one other body and movement concept to the performance of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments.

It is recommended that this task is designed so that students can develop a response in approximately 5 hours of class time.

Conditions

- Students can develop their responses in class time and their own time.
- This is an individual task.

Response requirements

Presentation

Multimodal (at least two modes (visual, written, spoken) delivered at the same time and integrated so that each mode contributes significantly to the response: up to 11 minutes

Demonstrating and applying

Visual evidence: up to 3 minutes

Mark allocation

Criterion	Assessment objectives	Marks
Analysing	4	5
Evaluating	5	5
Justifying	6	6
Communicating	7	3
Demonstrating and Applying	2, 3	6
	Total marks:	25

Instrument-specific marking guide (IA1)

Analysing	Marks
The student response has the following characteristics:	
• insightful analysis of relevant primary data and secondary data to ascertain the most significant relationships between the – demands of the specialised movement sequences for one movement strategy – task, learner and environmental constraints that limit or enable personal performance of the specialised movement sequences for one movement strategy – application of the principles of decision-making based on the presented opportunities for action in the specialised movement sequences for one movement strategy • discerning synthesis of the relevant specialised movement sequences, constraints and principles of decision-making to devise a constraints-led learning activity/practice providing opportunity for the emergence of a personal tactical strategy	4–5
• appropriate analysis of relevant primary data and/or secondary data to ascertain the most significant relationships between the – demands of the specialised movement sequences for one movement strategy – task, learner and environmental constraints that limit or enable personal performance of the specialised movement sequences for one movement strategy – application of the principles of decision-making based on the presented opportunities for action in the specialised movement sequences for one movement strategy • appropriate synthesis of specialised movement sequences, constraints and principles of decision-making to devise a constraints-led learning activity/practice providing opportunity for the emergence of a personal tactical strategy	2–3
• superficial analysis and synthesis of primary data or secondary data to identify a relationship between the physical activity and a constraints-led learning activity/practice.	1
The student response does not match any of the descriptors above.	0

Evaluating	Marks
The student response has the following characteristics:	
• critical evaluation of the – effectiveness of the constraints-led learning activity/practice in providing opportunity for the emergence of the personal tactical strategy by appraising the outcomes and limitations – applied constraints and the applied principles of decision-making	4–5
• considered evaluation of the – effectiveness of the constraints-led learning activity/practice in providing opportunity for the emergence of the personal tactical strategy by appraising the outcomes and limitations – applied constraints and the applied principles of decision-making	2–3
• feasible evaluation of the constraints-led learning activity/practice by appraising outcomes or limitations reflective of constraints or the principles of decision-making.	1
The student response does not match any of the descriptors above.	0

Justifying	Marks
The student response has the following characteristics:	
• discerning justification, using primary and secondary data, of the – development of the constraints-led learning activity/practice – modification and maintenance of the personal tactical strategy to optimise performance	5–6
• considered justification, using primary and secondary data, of the – development of the constraints-led learning activity/practice – modification and maintenance of the personal tactical strategy to optimise performance	3–4
• feasible justification, using primary or secondary data of the – development of the constraints-led learning activity/practice – modification or maintenance of the personal tactical strategy to optimise performance.	1–2
The student response does not match any of the descriptors above.	0

Communicating	Marks
The student response has the following characteristics:	
• appropriate decision-making about and accurate use of – at least two modes (visual, written, spoken) to achieve a particular purpose – language suitable for a technical audience – referencing and folio genre conventions	2–3
• variable or inaccurate decision-making about and use of – at least two modes (visual, written, spoken) to achieve a particular purpose or – language suitable for a technical audience or – referencing and folio genre conventions.	1
The student response does not match any of the descriptors above.	0

Demonstrating and Applying	Marks
The student response has the following characteristics:	
• effective demonstration of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments • effective application of quality of movement and one other body and movement concept to the performance of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments	5–6
• competent demonstration of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments • competent application of quality of movement and one other body and movement concept to the performance of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments	3–4
• variable or inaccurate demonstration of isolated movement sequences and a movement strategy in authentic performance environments • variable or inaccurate application of a body and movement concept to movement sequences and a movement strategy in authentic performance environments.	1–2
The student response does not match any of the descriptors above.	0

Internal assessment 2: Investigation — report (25%)

Students research an ethical dilemma through collection, analysis and synthesis of primary data and secondary data. This investigation will focus on Unit 3 Topic 2. The investigation uses research or investigative practices to assess a range of cognitions in a class, school or community physical activity context.

Assessment objectives

1. Recognise and explain concepts and principles about ethics and integrity relevant to a class, school or community physical activity context.
4. Analyse and synthesise data to devise an ethics strategy about an ethical dilemma relevant to a class, school or community physical activity context.
5. Evaluate an ethics strategy relevant to a class, school or community physical activity context.
6. Justify an ethics strategy relevant to a class, school or community physical activity context.
7. Make decisions about and use language, conventions and mode-appropriate features to communicate information about a strategy to inform a technical audience.

Specifications

This task requires students to:

- select an ethical dilemma in a class, school or community physical activity context to devise an ethics strategy
- identify the class, school or community physical activity context to frame the investigation
- use the ethical decision-making framework to conduct a context analysis
- define the ethical dilemma
- analyse and synthesise primary data and secondary data to ascertain the most significant relationships between the
  - ethical dilemma
  - influence of stakeholders on the ethics and values demonstrated in the class, school or community physical activity context
  - tensions that exist in relation to integrity and fair play
  - strategies that have been used in response to similar ethical dilemmas
- analyse and synthesise primary data and secondary data to devise an ethics strategy that provides a course of action in response to the ethical dilemma
- justify the development of the ethics strategy using evidence from primary data and secondary data
- evaluate the effectiveness of the ethics strategy to optimise integrity and positive engagement in the class, school or community physical activity context by appraising the potential outcome and limitations
- make decisions about and use language, conventions and mode-appropriate features to communicate information about the strategies to a technical audience in a written report.

It is recommended that this task is designed so that students can develop a response in approximately 5 hours of class time.

Conditions

- Students can develop their responses in class time and their own time.
- This is an individual task.

Response requirements

Written: up to 2000 words

Mark allocation

Criterion	Assessment objectives	Marks
Explaining	1	5
Analysing	4	5
Justifying	6	6
Evaluating	5	6
Communicating	7	3
	Total marks:	25

Instrument-specific marking guide (IA2)

Explaining	Marks
The student response has the following characteristics:	
• accurate recognition and discerning explanation of concepts and principles relevant to a class, school or community physical activity context including – the ethical dilemma – ethics and values – integrity and fair play	4–5
• recognition and appropriate explanation of aspects of concepts or principles relevant to a class, school or community physical activity context including – the ethical dilemma – ethics and/or values – integrity and/or fair play	2–3
• recognition and/or explanation of an aspect of a concept or principle relevant to a class, school or community physical activity context relating to – the ethical dilemma or – ethics or values or – integrity or fair play.	1
The student response does not match any of the descriptors above.	0

Analysing	Marks
The student response has the following characteristics:	
• insightful analysis of primary data and secondary data, using the ethical decision-making framework, to ascertain the most significant relationships between the ethical dilemma and – the influence of relevant stakeholders on the ethics and values demonstrated in the class, school or community physical activity context – the tensions that exist in relation to integrity and fair play – strategies that have been used in response to similar ethical dilemmas • discerning synthesis of stakeholder influence, tensions and strategies to devise an ethics strategy in response to the ethical dilemma	4–5
• appropriate analysis of primary data and secondary data, using the ethical decision-making framework, to ascertain relationships between the ethical dilemma and – the influence of stakeholders on the ethics and values demonstrated in the class, school or community physical activity context – the tensions that exist in relation to integrity and fair play – strategies that have been used in response to similar ethical dilemmas • appropriate synthesis of stakeholder influence, tensions or strategies to devise an ethics strategy in response to the ethical dilemma	2–3
• superficial analysis and synthesis of primary data or secondary data, relevant to ethics, to ascertain a relationship between the ethical dilemma, integrity, fair play or the influence of stakeholders in the physical activity context.	1
The student response does not match any of the descriptors above.	0

Justifying	Marks
The student response has the following characteristics:	
• discerning justification of the development of the ethics strategy in response to the ethical dilemma, using evidence from primary data and secondary data	6
• considered justification of the development of the ethics strategy in response to the ethical dilemma, using evidence from primary data and secondary data	4–5
• feasible justification of the development of the ethics strategy in response to the ethical dilemma, using evidence from primary data and/or secondary data	2–3
• superficial justification of the development of an aspect within the ethics strategy.	1
The student response does not match any of the descriptors above.	0

Evaluating	Marks
The student response has the following characteristics:	
• critical evaluation of the effectiveness of the ethics strategy to optimise integrity and positive engagement in the physical activity context by appraising the potential outcome and limitations of the course of action	6
• considered evaluation of the effectiveness of the ethics strategy to optimise integrity and positive engagement in the physical activity context by appraising the potential outcome and limitations of the course of action	4–5
• feasible evaluation of the effectiveness of aspects of the ethics strategy to optimise engagement in the physical activity context by appraising the potential outcome and/or limitations of the course of action	2–3
• superficial evaluation of the effectiveness of an aspect of the ethics strategy.	1
The student response does not match any of the descriptors above.	0

Communicating	Marks
The student response has the following characteristics:	
• appropriate decision-making about and accurate use of – visual and written modes to achieve a particular purpose – language suitable for a technical audience – referencing and report genre conventions	2–3
• variable or inaccurate decision-making about and use of – visual or written modes or – language suitable for a technical audience or – referencing or report genre conventions.	1
The student response does not match any of the descriptors above.	0

Internal assessment 3: Project — folio (25%)

Students focus on the specialised movement sequences for one movement strategy to devise a personal training strategy. The project focuses on Unit 4 concepts and principles about energy, fitness and training, and one selected physical activity. They document the iterative process of demonstrating and applying conceptual understandings through the psychomotor domain to devise a personal training strategy. Students evaluate the effectiveness of the personal training strategy and movement strategies and justify using primary and secondary data. Individual student performance within the selected authentic performance environment will be supported by visual evidence.

Assessment objectives

2. Demonstrate specialised movement sequences and movement strategies.
3. Apply concepts to specialised movement sequences and movement strategies.
4. Analyse and synthesise data to devise a training strategy for optimising performance of the specialised movement sequences and one movement strategy.
5. Evaluate a training strategy and movement strategies relevant to the selected physical activity.
6. Justify a training strategy and movement strategies relevant to the selected physical activity.
7. Make decisions about and use language, conventions and mode-appropriate features to communicate information about strategies to a technical audience.

Specifications

This task requires students to:

- analyse primary data and secondary data to ascertain the most significant relationships between the
  - demands of the specialised movement sequences for the selected movement strategy
  - energy systems and fitness components relevant to the specialised movement sequences for the selected movement strategy
  - personal performance of the demonstrated specialised movement sequences for the selected movement strategy
- synthesise the most significant relationships to devise a personal training strategy to optimise personal performance of the specialised movement sequences for the selected movement strategy
- justify the development of the personal training strategy for the selected movement strategy to optimise performance, using evidence from primary data and secondary data
- evaluate the effectiveness of the personal training strategy using selected principles of training to appraise the outcome and limitations
- justify the modification and maintenance of the training strategy for one movement strategy to optimise performance, using evidence from primary data and secondary data
- make decisions about and use language, conventions and mode-appropriate features to communicate information about the strategies to a technical audience

- record visual personal performance evidence in an authentic performance environment. Visual evidence will illustrate
  - demonstration of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the ‘Invasion’ or ‘Net and court’ categories) in authentic performance environments
  - application of quality of movement and one other body and movement concept to the performance of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the ‘Invasion’ or ‘Net and court’ categories) in authentic performance environments.

It is recommended that this task is designed so that students can develop a response in approximately 5 hours of class time.

Conditions

- Students can develop their responses in class time and their own time.
- This is an individual task.
- The category selected for the physical activity must be different from the category selected for IA1.

Response requirements

Presentation

Multimodal (at least two modes (visual, written, spoken) delivered at the same time and integrated so that each mode contributes significantly to the response: up to 11 minutes

Demonstrating and applying

Visual evidence: up to 3 minutes

Mark allocation

Criterion	Assessment objectives	Marks
Analysing	4	5
Evaluating	5	5
Justifying	6	6
Communicating	7	3
Demonstrating and Applying	2, 3	6
	Total marks:	25

Instrument-specific marking guide (IA3)

Analysing	Marks
The student response has the following characteristics:	
• insightful analysis of relevant primary data and secondary data to ascertain the most significant relationships between the – demands of the specialised movement sequences and one movement strategy – relevant energy systems and fitness components – personal performance of the specialised movement sequences and one movement strategy • discerning synthesis of the specialised movement sequences, energy systems and fitness components and personal performance to devise a personal training strategy to optimise performance in the selected movement strategy	4–5
• appropriate analysis of relevant primary data and/or secondary data to ascertain the most significant relationships between the – demands of the specialised movement sequences and one movement strategy – relevant energy systems and fitness components – personal performance of the specialised movement sequences and one movement strategy • appropriate synthesis of the specialised movement sequences, energy systems and fitness components and personal performance to devise a personal training strategy to optimise performance in the selected movement strategy	2–3
• superficial analysis and synthesis, using primary or secondary data to identify a relationship between the physical activity or energy systems or fitness components or the training strategy.	1
The student response does not match any of the descriptors above.	0

Evaluating	Marks
The student response has the following characteristics:	
• critical evaluation of the – effectiveness of the training strategy by appraising the outcomes and limitations – selected principles of training, training methods, energy systems and fitness components	4–5
• considered evaluation of the – effectiveness of the training strategy by appraising the outcomes and limitations – selected principles of training, training methods, energy systems and fitness components	2–3
• feasible evaluation of the training strategy by appraising outcomes or limitations reflective of the principles of training, training methods energy systems or fitness components.	1
The student response does not match any of the descriptors above.	0

Justifying	Marks
The student response has the following characteristics:	
• discerning justification, using primary and secondary data, of the – development of the training strategy to optimise performance – modification and maintenance of the training strategy to optimise performance	5–6
• considered justification, using primary and secondary data, of the – development of the training strategy to optimise performance – modification and maintenance of the training strategy to optimise performance	3–4
• feasible justification, using primary or secondary data, of the – development of the training strategy to optimise performance – modification or maintenance of the training strategy to optimise performance.	1–2
The student response does not match any of the descriptors above.	0

Communicating	Marks
The student response has the following characteristics:	
• appropriate decision-making about and accurate use of – at least two modes (visual, written, spoken) to achieve a particular purpose – language suitable for a technical audience – referencing and folio genre conventions	2–3
• variable or inaccurate decision-making about and use of – at least two modes (visual, written, spoken) to achieve a particular purpose or – language suitable for a technical audience or – referencing and folio genre conventions.	1
The student response does not match any of the descriptors above.	0

Demonstrating and Applying	Marks
The student response has the following characteristics:	
• effective demonstration of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments • effective application of quality of movement and one other body and movement concept to the performance of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments	5–6
• competent demonstration of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments • competent application of quality of movement and one other body and movement concept to the performance of specialised movement sequences and two movement strategies (from two different principles of play for physical activities from the 'Invasion' or 'Net and court' categories) in authentic performance environments	3–4
• variable or inaccurate demonstration of isolated movement sequences and a movement strategy in authentic performance environments • variable or inaccurate application of a body and movement concept to movement sequences and a movement strategy in authentic performance environments.	1–2
The student response does not match any of the descriptors above.	0

External assessment: Examination — combination response (25%)

External assessment is developed and marked by the QCAA. The external assessment in Physical Education is common to all schools and administered under the same conditions, at the same time, on the same day.

Assessment objectives

1. Recognise and explain energy, fitness and training concepts and principles about movement.
4. Analyse and synthesise data to devise strategies about energy, fitness and training.
5. Evaluate energy, fitness and training strategies about movement.
6. Justify energy, fitness and training strategies about movement.
7. Make decisions about and use mode-appropriate features, language and conventions to communicate meaning to inform a technical audience.

Specifications

This examination:

- consists of a number of different types of questions relating to Unit 4
- may ask students to respond using
  - multiple choice
  - short responses (single words, sentences, paragraphs, images, labels or diagrams)
  - extended responses.

Conditions

- Mode: written
- Time allowed
  - Perusal time: 5 minutes
  - Working time: 120 minutes

Glossary

The syllabus glossary is available at www.qcaa.qld.edu.au/downloads/senior-qce/common/snr_glossary_cognitive_verbs.pdf.

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Version history

Version	Date of change	Information
1.0	January 2024	Released for familiarisation and planning (with implementation starting in 2025)
1.1	July 2024	Released for implementation with minor updates
1.2	October 2024	ISBN removed