VCE Physical Education
Units 3 and 4: 2018–2024

Frequently asked questions (Updated February 2023)

The word ‘sociocultural’ appears throughout the study design. What does this mean?

The term ‘sociocultural’ is defined in the *Advice for teachers*. It means ‘relating to the interaction of social and cultural elements such as family, peers, community, gender, socio-economic status, cultural beliefs and traditions’. In Units 3 and 4 students will consider sociocultural factors that influence skill development and the assessment of fitness.

What types of practice are students required to know for Unit 3
Area of Study 1?

The study design states that amount, distribution (massed and distributed) and variability (blocked and random) of practice are to be covered in Unit 3 Area of Study 1. Part and whole practice are not featured in the study design.

In considering the distribution of practice, it is important to remember this is inclusive of both the distribution of practice sessions **within a week** and the distribution of practice attempts **within a training session**. The terms ‘massed’ and ‘distributed’ (practice) are non-binary, and instead sit on a relative scale. Both terms should be considered in comparison to the other, meaning a training session can be either more massed or distributed in comparison to another training session.

A massed practice session schedule will involve fewer but longer training sessions in a week, whereas a distributed practice schedule will involve more frequent but shorter sessions. The age and skill level of the individual as well as the time available for the individual to train will influence the choice of distribution of practice sessions.

Massed practice of a skill within a training session has minimal rest between practice attempts, whereas distributed practice of a skill within a training session has longer rest between practice attempts. The age and skill level of the individual as well the type of skill (that is, continuous versus discrete) will influence the choice of distribution of practice within a training session.

Will students need to do mathematical calculations for biomechanics in Unit 3 Area of Study 1?

In relation to biomechanics, the study design requires students to undertake qualitative analysis of movement skills. Students need to understand the biomechanical principles listed in the study design and apply these to a range of movement contexts. They are required to understand the relationship between variables and apply this understanding in a range of movement contexts. Students may collect numerical data (such as distances or times) to compare or identify patterns or trends; however, quantitative analysis, including calculations, is not required. Students are not permitted to take a calculator into the end-of-year examination.

Should the terms ‘dominant’ and ‘pre-dominant’ be used to describe energy system contribution?

The terms ‘dominant’ and ‘pre-dominant’ to describe energy system contribution are not contained within the study design or the *Advice for teachers.* They have become increasingly used and have been found to cause confusion for some students in describing the interplay of energy systems. Students are required to refer to the relative contribution of each of the energy systems based on the intensity, duration and type of activity. Terms such as ‘rate’, ‘yield’, ‘increased/decreased contribution’, ‘most relied upon’, ‘significant’ and ‘minimal’ can be used in conjunction with data to describe the contribution of each energy system in a given example.

Are fatigue and recovery part of Unit 3 Area of Study 2?

Yes, there is reference to fatigue and recovery in the current study design; however, the focus relates both fatigue and recovery to energy systems. Students are required to understand the fatiguing/limiting factors of the three energy systems; this will include fuel depletion, the production and accumulation of metabolic by-products, elevated body temperature (thermoregulation) and dehydration. In relation to recovery, the focus is on active and/or passive recovery of the three energy systems.

Is lactate inflection point part of the current study design?

Lactate inflection point (LIP) is part of the current study design. The concept of LIP relates to the key knowledge in:

* Unit 3 Area of Study 2:
* characteristics of the three energy systems (ATP–CP, anaerobic glycolysis, aerobic system) for physical activity, including rate of ATP production, the yield of each energy system, fatigue/limiting factors and recovery rates associated with active and passive recoveries.
* Unit 4 Area of Study 2
* chronic adaptations of the cardiovascular, respiratory and muscular systems to aerobic, anaerobic and resistance training.

Clarification of content: Lactate Inflection Point (docx – 85.12kb) can be found on the [VCE Physical Education](https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/physicaleducation/Pages/Index.aspx) webpage of the VCAA website.

Are absolute and relative measures of oxygen consumption within the scope of the study?

Yes. The Unit 3 Area of Study 2 key knowledge point related to oxygen consumption at rest and during exercise requires students to know the accepted units of measurement for VO2 (L/min) and VO2 max (ml/kg/min). These units identify the need for students to understand the difference between absolute (total amount of oxygen consumed, regardless of weight, age or gender) and relative (considers body weight and therefore can be used to compare measures) oxygen consumption.

Absolute and relative measurements for oxygen consumption are also used through a VO2 max test, which is an example of one of at least two standardised and recognised fitness tests that students are required to know the method for in Unit 4 Area of Study 1.

What fitness tests are students required to know for Unit 4 Area of Study 1?

Students are required to know two standardised, recognised fitness tests for the components of fitness listed. The *Advice for teachers* (pages 27 and 28) contains a list of recognised fitness tests for each component; this includes clarifications (February 2022) to accepted terms for fitness tests for aerobic power and muscular power. In determining an appropriate fitness testing regime, students are required to consider the physiological, psychological and sociocultural needs of the individual and the requirements of the activity.

What information are students required to know when studying high intensity interval training (HIIT)?

Updated supplementary material focused on HIIT was published in February 2022 and is available in the Support Material section on the [VCE Physical Education](https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/physicaleducation/Pages/Index.aspx) webpage of the VCAA website. This updated document is designed to clarify HIIT and contains advice on what students are required to focus on.

How often should progression be applied within a training program design?

Progression is the application of an increased workload stimulus (or stress) within a training program. As the new workload becomes easier to complete and adaptations plateau, this could indicate an appropriate time for a new progression to be applied. How often progression should be applied will vary between individuals and training methods. Given this, the focus for students is to understand how to correctly apply progression, rather than predict the point at which it should occur within a training program.

What resistance training protocols are accepted?

Given the variance that exists in literature of suitable protocols for resistance training (muscular endurance, muscular strength and muscular power), students can refer to a range of protocols used when participating in training sessions within Unit 4 Area of Study 2. Students will not be disadvantaged in an assessment context, provided they have applied the protocols appropriately and accurately to the context or scenario presented. This could include acknowledging that an individual who has done little resistance training should commence at the lower end of prescribed range, whereas a more highly trained individual might need to commence a program towards the upper end of a prescribed range.

Assessment

The Unit 3 Area of Study 1 assessment task requires the application of biomechanical and skill acquisition principles. Can this task be split into two tasks?

No. The task requires a movement skill to be analysed using biomechanical **and** skill acquisition principles, so this is to be done together as part of the same task.

If the task were split into two smaller tasks (i.e. possibly to assess two different movement skills), then an analysis using both biomechanical and skill acquisition principles would need to feature in both tasks. It is important to note that splitting tasks brings into question the VCE assessment principle of ‘efficiency’, which is to help safeguard against ‘over assessment’ and the increased workload for both students and teachers.

What is meant by primary data in Unit 3 Area of Study 1 assessment task (structured questions) and Unit 3 Area of Study 2 assessment task (laboratory report)? What does this mean when constructing the tasks?

Primary data is the data (numbers, description, images) that is collected through performance in/of a physical activity (sport, movement skill, movement sequence). Whilst an agreed set of data may be collated and used for the assessment task, all students should participate in the activity and the collection of the data.

The tasks/questions contained within the assessment task should relate directly to the physical activity and require students to apply their knowledge by using the primary data collected. The task should not contain generic, unrelated questions.

Further information regarding primary data is contained within the *Advice for Teachers* document.

Unit 4 Area of Study 2 lists a reflective folio as an assessment task. What is a reflective folio? How is the reflective folio authenticated?

The reflective folio is intended to be a summary of the practical activities experienced by students. The format of the reflection may be determined by the teacher or students but needs to include components of a training session, the training method undertaken, specific task-based examples of how the training principles were implemented and the intention or desired outcome of the type of training. An example is provided in the *Advice for teachers* (page 32).

It should be noted that the training sessions and the writing up of the reflective folio should be completed in class to enable authentication of student work. Teachers may ask students to respond to specific questions at the end of a training session. Alternatively, teachers may complete a number of training sessions over a week or two and then allocate a separate lesson for students to write up their reflections.

What happens if a student cannot participate in training sessions and is therefore unable to complete the reflective folio in Unit 4?

The folio requires students to reflect on five practical training sessions. The study design lists 10 different training methods. Teachers are encouraged to give students practical experience in all 10 methods. The writing of the reflective folio could involve:

* teachers select which training methods students will include in their reflective folio
* student may write up more than five training sessions and then select which ones they will include in their reflective folio.

If a student is injured and/or unable to complete five training sessions, the teacher may need to apply special provision for this task. This could include:

* rescheduling the assessment task
* giving the student a substitute task
* allowing the student to record observations of others completing the training session and use this information to write up the reflective folio.

How do I assess nutritional, rehydration and psychological strategies in Unit 4 Area of Study 2?

Assessment of nutritional, rehydration and psychological strategies can be built into the reflective folio and/or the written report. For example, the written report focuses on the design of a six-week training program for a given case study; this could include discussion of recovery strategies for rehydration and nutritional replenishment as well as psychological strategies appropriate to the case study.

Carbohydrate loading, high and low GI foods, and sports drinks are not part of the current study design.

How many fitness components should be included in the case study for the design of a training program?

Teachers need to ensure that the case study provided to students is complex enough to enable differentiation between students. The case study should refer to at least two relevant fitness components, which would then allow students to include different training methods within the design of their six-week training program. An example of a case study has been provided in the *Advice for teachers* (page 33).

What abbreviations are acceptable for use in assessment?

In addition to commonly accepted scientific abbreviations (examples include but are not limited to HR, CHO, CO2, H2O and VO2), terms that are written as abbreviations throughout the current study design, the *Advice for teachers* and any Support Material documentation(examples include but are not limited to LIP, PAR-Q, HIIT) can be used in VCE Physical Education assessment without needing to first state the term the abbreviation represents.

If in doubt, students are recommended to write the entire term and not use an abbreviation. Given the use of electronic marking in the end-of-year examination, students can no longer rely on the use of a self-created abbreviation across different exam questions, on different pages.