Cambridge Secondary 2

Cambridge IGCSE

Syllabus

Cambridge IGCSE® (9–1) Physical Education **0995**

For examination in June and November 2019, 2020 and 2021.

Version 2

Please check the syllabus page at **www.cie.org.uk/igcse** to see if this syllabus is available in your administrative zone.

CAMBRIDGE International Examinations

Changes to syllabus for 2019, 2020 and 2021

This syllabus has been updated. This is version 2, published February 2018.

Availability

This syllabus is no longer restricted to centres in the UK. Please check the syllabus page at **www.cie.org.uk/igcse** to see if this syllabus is available in your administrative zone.

You are advised to read the whole syllabus before planning your teaching programme.

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1. Introduction

1.1 Why choose Cambridge?

Cambridge International Examinations prepares school students for life, helping them develop an informed curiosity and a lasting passion for learning. We are part of Cambridge Assessment, a department of the University of Cambridge.

Our international qualifications are recognised by the world's best universities and employers, giving students a wide range of options in their education and career. As a not-for-profit organisation, we devote our resources to delivering high-quality educational programmes that can unlock learners' potential.

Our programmes and qualifications set the global standard for international education. They are created by subject experts, rooted in academic rigour and reflect the latest educational research. They provide a strong platform for learners to progress from one stage to the next, and are well supported by teaching and learning resources.

Every year, nearly a million Cambridge learners from 10 000 schools in 160 countries prepare for their future with an international education from Cambridge.

Cambridge learners

Our mission is to provide educational benefit through provision of international programmes and qualifications for school education and to be the world leader in this field. Together with schools, we develop Cambridge learners who are:

- **confident** in working with information and ideas – their own and those of others
- **responsible** for themselves, responsive to and respectful of others
- **reflective** as learners, developing their ability to learn
- **innovative** and equipped for new and future challenges
- **engaged** intellectually and socially, ready to make a difference.

Recognition

Cambridge IGCSE© is recognised by leading universities and employers worldwide, and is an international passport to progression and success. It provides a solid foundation for moving on to higher level studies. Learn more at **www.cie.org.uk/recognition**

Support for teachers

A wide range of materials and resources is available to support teachers and learners in Cambridge schools. Resources suit a variety of teaching methods in different international contexts. Through subject discussion forums and training, teachers can access the expert advice they need for teaching our qualifications. More details can be found in Section 2 of this syllabus and at **www.cie.org.uk/teachers**

Support for exams officers

Exams officers can trust in reliable, efficient administration of exams entries and excellent personal support from our customer services. Learn more at **www.cie.org.uk/examsofficers**

Our systems for managing the provision of international qualifications and education programmes for learners aged 5 to 19 are certified as meeting the internationally recognised standard for quality management, ISO 9001:2008. Learn more at **www.cie.org.uk/ISO9001**

1.2 Why choose Cambridge IGCSE?

Cambridge IGCSEs are international in outlook, but retain a local relevance. The syllabuses provide opportunities for contextualised learning and the content has been created to suit a wide variety of schools, avoid cultural bias and develop essential lifelong skills, including creative thinking and problem-solving.

Our aim is to balance knowledge, understanding and skills in our programmes and qualifications to enable students to become effective learners and to provide a solid foundation for their continuing educational journey.

Through our professional development courses and our support materials for Cambridge IGCSEs, we provide the tools to enable teachers to prepare learners to the best of their ability and work with us in the pursuit of excellence in education.

Cambridge IGCSEs are considered to be an excellent preparation for Cambridge International AS & A Levels, the Cambridge AICE (Advanced International Certificate of Education) Diploma, Cambridge Pre-U, and other education programmes, such as the US Advanced Placement program and the International Baccalaureate Diploma programme. Learn more about Cambridge IGCSEs at **www.cie.org.uk/cambridgesecondary2**

Guided learning hours

Cambridge IGCSE syllabuses are designed on the assumption that learners have about 130 guided learning hours per subject over the duration of the course, but this is for guidance only. The number of hours required to gain the qualification may vary according to local curricular practice and the learners' prior experience of the subject.

1.3 Why choose Cambridge IGCSE (9–1) Physical Education?

Cambridge IGCSE (9–1) Physical Education is accepted by universities and employers as proof of knowledge and understanding of Physical Education. The Cambridge IGCSE (9–1) Physical Education syllabus encourages learners to develop:

- knowledge, skills and understanding of a range of relevant physical activities
- an ability to plan, perform and evaluate physical activities
- an understanding of effective and safe performance
- an understanding of the role of sport and physical activity in society and in the wider world
- an excellent foundation for advanced study
- an enjoyment of physical activity.

Prior learning

Learners beginning this course are not expected to have studied physical education previously. However, candidates should have an interest and enjoy taking part in physical activities.

Progression

Cambridge IGCSEs are general qualifications that enable learners to progress directly to employment, or to proceed to further qualifications in another subject area or at a higher level, requiring more specific knowledge, understanding and skills.

Candidates who are awarded grades 4 to 9 in Cambridge IGCSE (9–1) Physical Education are well prepared to follow courses leading to Cambridge International AS & A Level Physical Education, or the equivalent.

1.4 How can I find out more?

If you are already a Cambridge school

You can make entries for this qualification through your usual channels. If you have any questions, please contact us at **info@cie.org.uk**

If you are not yet a Cambridge school

Learn about the benefits of becoming a Cambridge school at **www.cie.org.uk/startcambridge**. Email us at **info@cie.org.uk** to find out how your organisation can register to become a Cambridge school.

2. Teacher support

2.1 Support materials

We send Cambridge syllabuses, past question papers and examiner reports to cover the most recent examination series to all Cambridge schools.

You can also go to our public website at **www.cie.org.uk/igcse** to download current and future syllabuses together with specimen papers or past question papers, examiner reports and grade threshold tables from one series.

For teachers at registered Cambridge schools a range of additional support materials for specific syllabuses is available from Teacher Support, our secure online support for Cambridge teachers. Go to **https://teachers.cie.org.uk** (username and password required). If you do not have access, speak to the Teacher Support coordinator at your school.

2.2 Endorsed resources

We work with publishers providing a range of resources for our syllabuses including print and digital materials. Resources endorsed by Cambridge go through a detailed quality assurance process to make sure they provide a high level of support for teachers and learners.

We have resource lists which can be filtered to show all resources, or just those which are endorsed by Cambridge. The resource lists include further suggestions for resources to support teaching. See **www.cie.org.uk/i-want-to/resource-centre** for further information.

2.3 Training

We offer a range of support activities for teachers to ensure they have the relevant knowledge and skills to deliver our qualifications. See **www.cie.org.uk/events** for further information.

3. Syllabus overview

3.1 Content

The syllabus provides candidates with an opportunity to study both the practical and theoretical aspects of Physical Education. It is also designed to foster enjoyment in physical activity. The knowledge gained should enable candidates to develop an understanding of effective and safe physical performance.

Candidates will study all of the following topics:

1: Anatomy and physiology
2: Health, fitness and training
3: Skill acquisition and psychology
4: Social, cultural and ethical influences

Candidates will also undertake four different physical activities chosen from at least two of the seven categories listed in section 6.2. Physical activities make a significant contribution to syllabus aims and objectives, serving as a source of material to facilitate learning.

3.2 Assessment

All candidates take two compulsory components.

Component	Weighting
Paper 1: Theory **1 hour 45 minutes** Candidates answer all questions. 100 marks Externally assessed.	50%
Component 2: Coursework Candidates undertake **four** physical activities from at least **two** of the seven categories listed. Internally assessed / externally moderated.	50%

Availability

This syllabus is examined in the June and November examination series.

Please check the syllabus page at **www.cie.org.uk/igcse** to see if this syllabus is available in your administrative zone.

This syllabus is not available to private candidates.

Detailed timetables are available from **www.cie.org.uk/timetables**

Combining this with other syllabuses

Candidates can combine this syllabus in an examination series with any other Cambridge syllabus, except:

- 0413 Cambridge IGCSE Physical Education
- syllabuses with the same title at the same level.

Please note that Cambridge IGCSE, Cambridge IGCSE (9–1) (Level 1/Level 2 Certificate) and Cambridge O Level syllabuses are at the same level.

4. Syllabus aims and assessment objectives

4.1 Syllabus aims

The aims below describe the educational purposes of a course in Physical Education for the Cambridge IGCSE (9–1) examination. They are not listed in order of priority.

The aims are to enable candidates to:

- develop their knowledge and understanding of the theory underpinning physical performance in a modern world
- use and apply this knowledge and understanding to improve their performance
- perform in a range of physical activities, developing skills and techniques, and selecting and using tactics, strategies and/or compositional ideas
- understand and appreciate safe practice in physical activity and sport
- understand and appreciate the benefit of physical activity and sport for health, fitness and well-being
- gain a sound basis for further study in the field of Physical Education.

4.2 Assessment objectives

The assessment objectives (AOs) are:

AO1 Demonstrate knowledge and understanding of the theoretical principles that underpin performance in physical activity / sport

AO2 Apply knowledge and understanding of the theoretical principles to a variety of physical activities / sports, including the analysis and evaluation of performance

AO3 Demonstrate the ability to select and perform appropriate skills to produce effective performance in practical activities.

4.3 Weighting for assessment objectives

The approximate weightings allocated to each of the assessment objectives (AO) are summarised below.

Assessment objectives as a percentage of the qualification

Assessment objective	Weighting in IGCSE %
AO1	25
AO2	25
AO3	50

Assessment objectives as a percentage of each component

Assessment objective	Weighting in components %	
	Paper 1: Theory	Component 2: Coursework
AO1	50	0
AO2	50	0
AO3	0	100

4.4 Grade descriptions

Grade descriptions are provided to give an indication of the standards of achievement likely to have been shown by candidates awarded particular grades. Weakness in one aspect of the examination may be balanced by a better performance in some other aspect.

A **Grade 7** candidate will be able to:

- know and understand most of the factors affecting performance; the majority of the health and safety aspects of physical activity including many of the advantages and risks associated with a range of training strategies; most of the reasons for participating in physical activity
- demonstrate effectively, through performance, the ability to interrelate planning, performing and evaluating while undertaking activity. They demonstrate a high level of competence in all their chosen physical activities.

A **Grade 4** candidate will be able to:

- know and understand many of the factors affecting performance; many of the health and safety aspects of physical activity including several advantages and risks associated with a range of training strategies and techniques; many of the reasons for participating in physical activity
- demonstrate, through performance, a sound ability to interrelate planning, performing and evaluating while undertaking activity. They demonstrate competence in their chosen physical activities.

A **Grade 2** candidate will be able to:

- know and understand some of the factors affecting performance; a limited number of health and safety aspects of physical activity, including a few advantages and risks associated with a range of training strategies and techniques; some of the reasons for participating in physical activity
- demonstrate, through performance, some ability to interrelate planning, performing and evaluating while undertaking activity. They demonstrate a limited level of competence in their chosen physical activities.

5. Syllabus content

The following areas of study are designed to contribute to the development of understanding and knowledge of the principles involved in safe, health-related exercise. All these sections are interrelated.

Candidates should be able to:

- show an understanding of the learning objectives listed in this section
- apply their knowledge and understanding of the content to physical activities (as listed in Section 6.2).

1: Anatomy and physiology

Skeletal and muscular system

Content	Learning objectives
Functions of the skeleton	The functions of the skeleton, to include: • shape and support • muscle attachment for movement • protection • red blood cell production.
Skeleton	Classify the bones specified below as long, short or flat. The location and function of the following bones: • cranium • clavicle • scapula • humerus • radius • ulna • carpals, metacarpals, phalanges • ribs • pelvis • femur • tibia • fibula • patella • talus • tarsals, metatarsals, phalanges.
Joint types	Examples of the different types of joints: • fixed or immovable joints / fibrous joints • slightly movable / cartilaginous joints • freely movable joints / synovial joints – ball and socket and hinge.

Content	Learning objectives
Joint structure and function	The structure of a synovial joint and function of its components: • synovial membrane • synovial fluid • joint (fibrous) capsule • cartilage • ligaments.
Movement at joints	Describe types of movement in physical activities: • flexion / extension • abduction / adduction • rotation • plantar flexion / dorsiflexion. Compare the range of movement and stability of ball and socket joints with hinge joints.
Muscles	The location and role of the following muscles: • latissimus dorsi • trapezius • deltoid • pectorals • biceps • triceps • abdominals • gluteals • hip flexors • hamstring group (not individual names) • quadriceps group (not individual names) • gastrocnemius • tibialis anterior. The role of tendons.
Antagonistic muscle action	With reference to the shoulder, elbow, hip, knee and ankle: • the action of agonists (prime movers) and antagonists • how the muscles / muscle groups work using isotonic (concentric / eccentric) and isometric contractions.
Muscle fibre types	The differences between muscle fibre types (slow and fast twitch) with reference to physical activities, limited to: • force created • fatigue tolerance • aerobic/anaerobic energy supply.

Respiratory system

Content	Learning objectives
Pathway of air	The pathway of air into the body: • mouth/nasal passage • trachea • bronchi • bronchioles • alveoli.
Gaseous exchange at the alveoli	Identify and explain the characteristics of alveoli that enable gaseous exchange to occur.
Mechanics of breathing	The function of the diaphragm and intercostal muscles in normal breathing.
Breathing volumes and minute ventilation	Describe and explain: • tidal volume • vital capacity • residual volume • minute ventilation. The effect of exercise on these volumes.

Circulatory system

Content	Learning objectives
Components of blood	The function of: • plasma • red blood cells • white blood cells • platelets.
Haemoglobin	The role of haemoglobin in carrying oxygen and carbon dioxide.
Blood vessels	The basic structure (wall thickness, lumen size and presence of valves) and function of: • arteries • capillaries • veins.

Content	Learning objectives
Heart structure and function	The function and location of: • atria • ventricles • valves. (Valve names are **not** required.) The pathway of blood through the heart, to include: • aorta • vena cava • pulmonary artery • pulmonary vein.
Cardiac output	Explain the terms cardiac output, stroke volume and heart rate with reference to how cardiac output can be calculated. The effect of exercise on the heart.

Energy supply and the effects of exercise on the body

Content	Learning objectives
Aerobic and anaerobic respiration	Outline how energy can be released, summarising the equations as: • aerobic (glucose + oxygen → carbon dioxide + water) • anaerobic (glucose → lactic acid). Link duration and intensity to the use of aerobic and anaerobic respiration: • longer, low-intensity activities require aerobic • shorter, intense activities require anaerobic • examples of aerobic and anaerobic energy demands in physical activities.
Recovery	Recovery is required after exercise, with reference to: • Excess Post-exercise Oxygen Consumption (EPOC) (also known as oxygen debt) – caused by anaerobic exercise, producing lactic acid and requiring high breathing rate after exercise to remove lactic acid • factors affecting recovery time.
Short-term effects of exercise	The short-term effects of exercise: • heart rate increases • breathing rate increases • red skin / heat control / sweating • fatigue (feeling tired) • suffering from nausea / feeling light-headed.
Long-term effects of exercise	The long-term effects of exercise on: • heart size (hypertrophy) • resting pulse rate (bradycardia) • stroke volume • ability to tolerate lactic acid.

Simple biomechanics

Content	Learning objectives
Principles of force	Explain the concepts of force, mass and acceleration: • a force can be a pull or a push • force = mass × acceleration • increases/decreases in force can cause acceleration/deceleration.
Applications of force	Identify and explain the forces acting upon: • a moving performer (gravity, air resistance, muscular force) • a sprinter in the blocks (gravity, ground reaction force, air resistance) • an object flying through the air (force applied at release, air resistance, gravity).
Levers	Identify and draw the three classes of levers: • first class • second class • third class. Identify the fulcrum, resistance and effort. State an example of each type of lever in the body.

2: Health, fitness and training

Content	Learning objectives
Health and well-being	The World Health Organization (WHO) defines health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'. Physical health and well-being: • all body systems working well • free from illness / injury / disease • able to carry out everyday tasks. Mental health and well-being: • able to cope with stress • can control emotions • feeling good / self-esteem. Social health and well-being: • essential human needs are met • friendship and support • having value within society • ability to mix with other people.
Fitness	Definition of fitness – the ability to cope with (or meet) the demands of the environment.
The relationship between health and fitness	The relationship between health and fitness, including: • decreased fitness because of ill health, e.g. ill health can lead to an inability to train (lowering fitness) • increased fitness despite ill health, e.g. unhealthy but able to train (increasing fitness). The need to: • live a healthy, active lifestyle • eat a balanced diet • maintain a level of fitness to help maintain health. Exercise and fitness can have positive effects on physical, mental and social health.

Content	Learning objectives
Diet and energy sources	The function of nutrients, including carbohydrates, fats, proteins and water. Examples of sources of these nutrients in food. The energy balance suitable for physical activities. Different energy needs for performers: males compared with females, teenagers compared with children, active lifestyles compared with sedentary lifestyles. Unused energy is stored as fat, which could cause obesity. Energy is derived from food sources: • muscle cells release energy from glucose in a process called respiration • some glucose is converted to glycogen and stored in the muscles and liver.
Components of fitness	The recognised components of health-related and skill-related fitness, linking these to performance in physical activities: • agility • balance: static and dynamic • cardiovascular endurance / stamina • coordination • flexibility • muscular endurance • power • reaction time • speed • strength.
Test protocols	How to carry out the following fitness tests: • cardiovascular endurance / stamina (Multi-Stage Fitness Test / 12-Minute Cooper Run) • flexibility (Sit and Reach Test) • muscular endurance (Multi-Stage Abdominal Curl Conditioning Test) • power (Vertical Jump Test) • speed (30-Metre Sprint Test) • strength (1 Rep Max Test / Hand Grip Dynamometer Test). Skill-related components of fitness: • agility (Illinois Agility Test) • balance: static and dynamic (Standing Stork Test – static) • coordination (Anderson Wall Toss Coordination Test) • reaction time (Ruler Drop Test).

Content	Learning objectives
Reasons for fitness testing	The main reasons for carrying out fitness tests, linked to: • suitability for different physical activities • identifying strengths and weaknesses • monitoring improvement • comparison to others • informing the design of a training programme • motivation.
VO_2 max (maximum oxygen uptake)	Describe and explain VO_2 max and its importance as a measure of cardiovascular endurance / stamina. Factors which affect VO_2 max level: • age • gender • genetics • lifestyle • training.
Principles of training and overload	How to apply SPORT and FITT to a training programme. Principles of training (SPORT): • Specificity • Progression • Overload • Reversibility • Tedium. Principles of overload (FITT): • Frequency • Intensity • Time • Type (method of training). Identify the dangers of overtraining.
Methods of training	The reasons for using the following training methods, including a description of each type and how to achieve the training aim. Continuous training: • advantages and disadvantages • methods to use – run, swim, cycle, row • calculating a suitable intensity for aerobic gains – 60–80% of maximal heart rate • safety considerations, e.g. footwear. *continued*

Content	Learning objectives
Methods of training *continued*	Weight training: • advantages and disadvantages • methods to use (isotonically) – free weights, kettle bells, resistance machines • use of one rep. max. to calculate suitable intensity • safety considerations, e.g. spotter. Fartlek training: • advantages and disadvantages • methods to use – running, cycling (variation of speed and terrain), etc. • use of Borg scale to measure intensity • safety considerations, e.g. equipment checks. Plyometric training: • advantages and disadvantages • links to improvement in power • methods to use, e.g. depth jumping, hurdle jumps • safety considerations, e.g. injury prevention. Circuit training: • advantages and disadvantages • stations can be assigned to improve different components of fitness • periods of work and rest that can be manipulated for different gains • safety considerations, e.g. equipment. High-Intensity Interval Training (HIIT): • advantages and disadvantages • periods of work and rest that can be manipulated for different gains • reasons for the period of rest – removal of waste products • safety considerations, e.g. risk of overexertion.
High-altitude training as a specialist training method	The reasons for carrying out altitude training: • increase in red blood cell count • advantages with link to endurance activities • disadvantages with link to difficulties in completing the training.
Reasons for warming up and cooling down	The physiological and psychological reasons for a warm up and cool down. The phases of a warm up and cool down. Describe a suitable warm up and cool down related to a specific physical activity: • warm up – pulse raiser, stretches, familiarisation / skill-related activities • cool down – gradual decrease in pulse, stretches.

3: Skill acquisition and psychology

Content	Learning objectives
Skill and ability	The difference between skill and ability. The factors affecting variations in skill level: • age and maturity • culture • motivation • anxiety • arousal conditions • facilities • environment • teaching and coaching.
Skilled performance	The characteristics of a skilled performance, including: • fluent • aesthetically pleasing • consistent • accurate • goal-directed • coordinated.
Skill classification continua	Different types of skills, including: • basic and complex • fine and gross • open and closed. Place specific physical skills on the various continua and justify these choices.
Simple information processing model	The stages of a basic information processing model: • input • decision-making • output • feedback. Identify the role of each stage. Explain the difference between short-term and long-term memory. Apply the stages of information processing to physical activities. Explain the concept of limited channel capacity / single-channel hypothesis.
The stages of learning	The characteristics of a performer at each stage of learning, naming and explaining: • cognitive • associative • autonomous.

Content	Learning objectives
Feedback	The different types of feedback, naming and describing: • intrinsic • extrinsic • knowledge of performance • knowledge of results. Explain examples of how the types of feedback may be given, e.g. extrinsic feedback from a coach. Make links between the most appropriate types of feedback and the stages of learning: • cognitive performers make more use of extrinsic feedback / knowledge of results • autonomous performers can use intrinsic feedback / knowledge of performance. Explain the importance of receiving feedback.
Guidance	The different types of guidance, naming and describing: • visual • verbal • manual/mechanical. Explain examples of how the types of guidance may be given, e.g. visual guidance via demonstrations. Make links between the most appropriate types of guidance and the different stages of learning.
Goal-setting	The principles of SMARTER goal-setting (Specific, Measurable, Agreed, Realistic, Time-phased, Exciting, Recorded). Apply knowledge of goal-setting to suggest appropriate use of SMARTER targets in physical activities. Using goal-setting as a means to control anxiety.
Motivation	The types of motivation, naming and describing: • intrinsic • extrinsic. Provide examples of intrinsic and extrinsic motivation. Explain the effect of intrinsic motivation and extrinsic motivation and how they can be used in physical activities.
Arousal	The definition of arousal. Draw and explain the Inverted-U theory (Yerkes-Dodson law). Explain how optimal arousal varies for different skills, e.g. fine skills require lower levels of arousal than gross skills. Apply knowledge to explain the effects of underarousal and overarousal.

Content	Learning objectives
Anxiety	The two types of anxiety, naming and describing: • cognitive • somatic. Explain the causes of anxiety in physical activities.
Relaxation techniques	The need to combine techniques to control arousal and anxiety. Describe appropriate relaxation techniques, including mental rehearsal, visualisation and deep breathing. Explain how relaxation techniques control arousal, including: • increased concentration • controlled breathing • reduced heart rate.
Personality types	The terms introvert and extrovert. Describe the typical characteristics of introvert and extrovert personality types. Suggest physical activities usually adopted by introvert and extrovert personality types.

4: Social, cultural and ethical influences

Content	Learning objectives
Leisure and recreation	The terms: • leisure time • (physical) recreation • play • sport. Identify and explain factors that influence what recreational activities people do during leisure time: • age • interests • social circumstances • family influences • peer influences • facilities available • area where you live, e.g. geography/culture/tradition.
Growth in leisure activities	The factors that influence growth in leisure activities: • increase in leisure time • advances in technology • improvements in healthcare • better health awareness • more leisure facilities • reduced cost of equipment • improvements in travel methods • wider media coverage.
The sports development pyramid	The characteristics of each level of the sports development pyramid: • elite (highest) • performance • participation • foundation (lowest).
Sponsorship	The types of sponsorship: • financial support • clothing/footwear/equipment • provision of specialist facilities. Advantages and disadvantages of sponsorship to: • the performer or team • the sponsor • the sport or event • the audience/spectators.

Content	Learning objectives
Media	The types of media coverage: • television • internet and social media • print • radio. The advantages and disadvantages of media coverage to: • the performer • the sport or event • the audience/spectators.
Global events	The advantages of being a host nation: • stadia and training facilities • home advantage • increase in national pride • improved tourism • increased employment • legacy implications • infrastructure.
Professional and amateur performers	The difference between being a professional and an amateur: • traditional differences • increased blurring between professional and amateur status • both amateurs and professionals competing at the Olympic Games.
Technology	The use of technology in sport, including: • decision-making by officials, e.g. in tennis, football and rugby • recording time and distance, e.g. in athletics • enhancing performance, e.g. in cycling. The positive and negative impact of technology on: • officials • performers • the audience/spectators • the sport or event.

Content	Learning objectives
Factors affecting access and participation in physical activities	The factors that affect access to physical activity: • age • gender • disability • social and cultural influences. The factors that affect participation: • access • discrimination • education • environment and climate • family • financial considerations • media coverage • role models • time and work commitments. Explain strategies to increase participation and overcome barriers (promotion, provision and access).
Performance-enhancing drugs (PEDs)	The reasons why some performers use prohibited performance-enhancing drugs, including: • to enhance performance • to keep up with the competition • fame and increased wealth. The types of PEDs and their effects on performance: • anabolic steroids – increase muscle mass • beta blockers – reduce anxiety • stimulants – increase alertness • diuretics – weight loss. The role of organising bodies in preventing and reducing the use of PEDs: • types of testing • reasons for banning drugs. Suggest physical activities in which these PEDs could give an advantage.

Content	Learning objectives
Disadvantages of PEDs	The disadvantages of PEDs, including: • health implications • financial penalty • public humiliation • disqualification or being banned • effect on other competitors. The negative consequences of drugs scandals.
Blood doping	The reasons why some performers use blood doping. How blood doping is carried out. The effects of blood doping on performance. The potential side effects of blood doping.
Sportsmanship and gamesmanship	The terms sportsmanship and gamesmanship, including: • how sportsmanship can be displayed • how gamesmanship can be displayed. Examples of sportsmanship and gamesmanship in physical activities.
Risk	The difference between real risk and perceived risk. Identify examples of real and perceived risks.
Risk assessment	Risks in different environments, including indoor sports halls, playing fields, swimming pools, artificial surfaces. Strategies to reduce the risk and severity of injury in physical activities: • protective clothing and equipment • appropriate clothing and footwear • lifting and carrying equipment safely • maintaining hydration • use of warm up and cool down • following rules • suitable level of competition.
Injuries	Potential causes of, and simple treatments for, the following minor injuries: • winding • simple cuts or grazes • blisters. Explain the causes of bruises, muscle, tendon and ligament injuries and the RICE method for treating these injuries.

6. Description of components

6.1 Paper 1: Theory

1 hour 45 minutes, 100 marks

The examination assesses candidates' knowledge and understanding in relation to the syllabus content. Candidates are required to demonstrate skills of description, interpretation and evaluation. The question paper has a weighting of 50 per cent of the total marks of the qualification and uses a mix of short answer questions and structured questions.

Note that candidates may **only** use physical activities listed in Section 6.2 as examples in their answers to Paper 1.

Externally assessed.

6.2 Component 2: Coursework

100 marks

Coursework is worth 50 per cent of the total marks of the qualification and each activity is marked out of 25 marks.

The coursework component assesses candidates' performance in **four** physical activities from at least **two** of the seven categories listed below.

The physical activities are:

Categories	Physical activities	
Games	• Association Football • Badminton • Baseball, Rounders or Softball • Basketball • Cricket • Golf • Handball • Hockey	• Lacrosse • Netball • Rugby League or Rugby Union • Squash • Table Tennis • Tennis • Volleyball
Gymnastic Activities	• Artistic Gymnastics (Floor and Vault) or Rhythmic Gymnastics • Individual Figure Skating	• Trampolining
Dance Activities	• Dance	
Athletic Activities	• Cross-Country Running • Cycling • Rowing and Sculling	• Track and Field Athletics • Weight Training for Fitness

Categories	Physical activities	
Outdoor and Adventurous Activities	• Canoeing • Hill Walking or Orienteering • Horse Riding • Mountain Biking	• Rock Climbing • Sailing • Skiing or Snowboarding • Windsurfing
Swimming	• Competitive Swimming • Life Saving or Personal Survival	• Water Polo
Combat Activities	• Judo or Taekwondo	

Planning physical activities

The performance of physical activities is a central and integral part of the course. Wherever possible, in the delivery of the course, theory is related to practice and practice is related to theory. This approach enables candidates to understand, as well as to apply, the theoretical concepts.

Physical activities make a significant contribution to syllabus aims and objectives, serving as a source of material to facilitate learning.

The selection of physical activities should be influenced by:

- interests, stages of development and abilities of candidates
- teaching resources and the expertise of staff
- facilities and equipment
- time
- number of candidates.

Candidates may use external facilities and local clubs, but in all cases the Centre must retain the responsibility for monitoring the work and for its assessment and standardisation.

Safety

Candidates may be placed in physically demanding situations when taking part in physical activities. It is the responsibility of the Centre, through the Head of Physical Education or equivalent, to ensure that:

- candidates are capable of taking part in physical activities; if there is any doubt then medical advice should be sought
- the health and safety of candidates is paramount and is maintained at all times when candidates are engaged in physical activities as part of this course
- the necessary facilities and equipment are available and safe for each activity that candidates take part in.

A textbook that Centres may find helpful is *Safe Practice in Physical Education, Sport and Physical Activity*, by the Association for Physical Education (2016; ISBN 978-1-909012-35-6).

Pupils with disabilities

You should not prevent any candidate from participating in the physical activities on the grounds of disability.

Within the range of physical activities offered, candidates with disabilities will be capable of achievement in the assessment objectives with or without adaptation in their chosen activities.

Where a candidate with a disability chooses an activity which needs adaptation to meet their needs, you must take steps to ensure that they are not penalised. In such instances, and before beginning to teach the course, you must inform Cambridge, indicating the nature of the candidate's disability and suggesting ways in which the activity might be adapted. Cambridge and the Principal Moderator will then consider the situation. See 'Access arrangements' in the *Cambridge Handbook*.

Teaching physical activities

For each physical activity candidates must:

- respond readily to instructions
- recognise and follow relevant rules, laws, codes, etiquette and safety procedures for different activities or events, in practice and during competitions
- understand the safety risks of wearing inappropriate clothing, footwear and jewellery, and why particular clothing, footwear and protection are worn for different activities
- know how to use equipment safely
- be familiar with a warm-up routine prior to exercise and cool-down routine after exercise relevant to the exercise or physical activity
- be familiar with the practices, drills and games that are used for assessment.

The assessment, including the production of filmed evidence, of candidates performing in physical activities is an integral part of the Cambridge IGCSE (9–1) Physical Education course.

It is the responsibility of the Centre, through the Head of Physical Education or equivalent, to ensure that:

- they oversee the assessment process and that there is effective internal standardisation across the Centre's assessments and all the staff involved in the assessments, including off-site activities
- the filmed evidence is sufficiently comprehensive and in the correct format, see 'Submission of filmed evidence' on page 31, to enable external moderation to take place efficiently.

Centres must refer to the *Cambridge IGCSE (9–1) Physical Education Coursework Guidelines Booklet* for use from 2019.

Method of assessment

The mark for Component 2: Coursework is the total of the marks for the four physical activities. Each activity is marked out of 25, giving a total mark out of 100.

It is recommended that assessment takes place at least three times during the course so that records of progress are available and to allow for any unforeseen circumstances, such as candidate ill health, that may prevent a final assessment taking place. Centres are reminded that if physical activities are taught on a modular basis over the course, filmed evidence of candidates' ability may need to be recorded at the end of a module and retained for moderation purposes.

Teachers must ensure that all work produced by candidates and records of assessment are retained and are available for inspection, if required, by the external Coursework Moderator.

Marking criteria for coursework

The marking criteria for each physical activity can be found in the *Coursework Guidelines Booklet*. Assessment of candidates' performance should take place during the activity and not be based on the filmed evidence.

The general marking principles for activities are as follows:

- each level descriptor covers all the relevant assessment objectives
- the descriptors should be read and applied as a whole
- make a best-fit match between the whole performance and the level descriptors.

Candidates do not have to meet all the requirements within a level before a performance can be placed in that level. The question to be asked about a performance is: does it match this level better than another level, e.g. does it match Level 4 better than it matches Level 3?

To select the most appropriate mark within each set of descriptors, teachers/Examiners should use the following guidance:

- If most of the descriptors fit the work, then the teacher/Examiner will award the middle mark in the band.
- If the descriptors fully fit the work (and the teacher/Examiner had perhaps been considering the band above), the highest mark will be awarded.
- If there is just enough evidence (and the teacher/Examiner had perhaps been considering the band below), then the lowest mark in the band will be awarded.

Activities should be standardised against each other to ensure that all activities and candidates have been marked to a comparable standard (i.e. it should be equally difficult to achieve, for example, 21 marks in Association Football as it is in Hill Walking).

For some activities, candidates' performance is based on times/distances. The marking criteria are objective and measurable and the above guidance may not apply.

Marks should be recorded on the Coursework Assessment Summary Form. For each activity an Order of Merit sheet should also be completed. Please note that there are variations of this form for some activities and a generic form for other activities. For some activities we may require the collection of additional evidence produced by the candidates, such as route sheets for Hill Walking and Orienteering.

Internal moderation

When several teachers in a Centre are involved in internal assessment, arrangements must be made within the Centre for all candidates to be assessed to the same standard. It is essential that the marks for each skill assigned within different teaching groups (or classes) are moderated internally for the whole Centre entry. The Centre assessments will then be moderated externally by Cambridge.

The internally moderated marks for all candidates must be recorded on the Coursework Assessment Summary Form. Examples of assessment forms and the instructions may be downloaded from **www.cie.org.uk/samples**

Evidence of assessment

1 All Centres must provide filmed evidence of performances in **every** physical activity.

2 All candidates assessed in an activity should be filmed together and not individually, where possible. Of these, at least five should be identified who will represent the full range of marks awarded by the Centre. These candidates should be identified by large numbered bibs or card numbers pinned back and front in **each** activity. The sample of candidates filmed in each activity should be from across the ability range: ideally two high-scoring candidates including the top ranked candidate, two mid-scoring candidates and one low-scoring candidate.

Further guidance and information can be found in the *Coursework Guidelines Booklet* and the *Coursework Handbook*.

Filmed evidence

Centres assessing physical activities as part of the Cambridge IGCSE (9–1) Physical Education syllabus must provide filmed evidence of their candidates' performances in **all** activites.

The filmed evidence is used by the external Moderator as evidence to check on the standard of assessment. It is therefore important that Centres take great care in producing and checking that the filmed evidence shows accurately the performance levels achieved by candidates. Centres could potentially disadvantage their candidates by producing filmed evidence which is either of low quality or fails to provide the right level of evidence to justify the marks awarded.

The filming should allow the following to be seen:

- candidate identifiers at all times
- the execution of skills
- the outcome, e.g. the result of a Tennis serve, the performance of a routine in Dance or Gymnastics, the finish of an Outdoor Adventurous Activity
- the interaction in conditioned team situations, e.g. marking in Netball.

Further guidance on the production of high-quality filmed evidence can be found in the *Coursework Guidelines Booklet* and the *Coursework Handbook*. For information, dates and method of submission of the coursework and sample, please refer to the *Cambridge Handbook* and Samples Database, **www.cie.org.uk/samples**

Submission of coursework

External moderation of internal assessment is carried out by Cambridge.

- Centres must submit the internally assessed **marks** of **all** candidates to Cambridge.
- Centres must also submit the internally assessed **work** (filmed evidence and documentation) of a **sample** of candidates to Cambridge.

For deadlines and methods for submitting internally assessed marks and work, teachers must refer to the *Cambridge Handbook*.

Documentation

The following documents should accompany the filmed evidence:

- MS1 (or equivalent)
- Coursework Assessment Summary Form
- Centre Order of Merit sheets for each activity showing all candidates' marks in **rank order**, with boys and girls in separate lists. The sample of candidates shown in the filmed evidence should be identified clearly on the Centre Order of Merit sheets using identifiers, such as Red 2. The marks of all candidates from the Centre offering a particular activity should be listed on the Order of Merit sheets. The candidate identification in the filmed evidence should match the identification on the Order of Merit sheets.

  Order of Merit sheets, and the instructions for completing them, may be downloaded from **www.cie.org.uk/samples**. The database will ask you for the syllabus code (i.e. 0995) and your Centre number, after which it will take you to the correct forms.
- other supporting evidence for activities, e.g. Hill Walking log books, Orienteering competition results, printouts, etc.

Submission of filmed evidence

- Each activity should be between 10 and 15 minutes' duration.
- Select **five** candidates (or all candidates if you have fewer than five) from each submitted activity. Select candidates from across the ability range.
- Identify candidates by large numbered bibs or card numbers pinned back and front.

7. Other information

Equality and inclusion

Cambridge International Examinations has taken great care in the preparation of this syllabus and assessment materials to avoid bias of any kind. To comply with the UK Equality Act (2010), Cambridge has designed this qualification with the aim of avoiding direct and indirect discrimination.

The standard assessment arrangements may present unnecessary barriers for candidates with disabilities or learning difficulties. Arrangements can be put in place for these candidates to enable them to access the assessments and receive recognition of their attainment. Access arrangements will not be agreed if they give candidates an unfair advantage over others or if they compromise the standards being assessed.

Candidates who are unable to access the assessment of any component may be eligible to receive an award based on the parts of the assessment they have taken.

Information on access arrangements is found in the *Cambridge Handbook* which can be downloaded from **www.cie.org.uk/examsofficers**

Language

This syllabus and the associated assessment materials are available in English only.

Grading and reporting

Cambridge IGCSE (9–1) results are shown by one of the grades 1, 2, 3, 4, 5, 6, 7, 8 or 9 indicating the standard achieved, 9 being the highest and 1 the lowest. 'Ungraded' indicates that the candidate's performance fell short of the standard required for grade 1. 'Ungraded' will be reported on the statement of results but not on the certificate. The letters Q (result pending), X (no result) and Y (to be issued) may also appear on the statement of results but not on the certificate.

Entry option codes

To maintain the security of our examinations, we produce question papers for different areas of the world, known as 'administrative zones'. Where the component entry option code has two digits, the first digit is the component number given in the syllabus. The second digit is the location code, specific to an administrative zone. Information about entry option codes can be found in the *Cambridge Guide to Making Entries*.

‘While studying Cambridge IGCSE and Cambridge International A Levels, students broaden their horizons through a global perspective and develop a lasting passion for learning.’

Zhai Xiaoning, Deputy Principal, The High School Affiliated to Renmin University of China

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