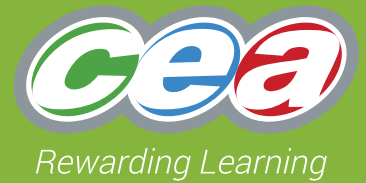


GCE



CCEA GCE Specification in
**Sports Science and
the Active Leisure
Industry**

For first teaching from September 2016
For first award of AS level in Summer 2017
For first award of A level in Summer 2018
Subject Code: 7210



Foreword

This booklet contains CCEA's Advanced Subsidiary (AS) and Advanced GCE Sports Science and the Active Leisure Industry for first teaching from September 2016.

The AS is the first part of the full Advanced GCE course. It is possible to take the AS as a stand-alone qualification. The AS units are assessed at a standard appropriate for students who have completed half of the full course.

The A2 is the second part of the full Advanced GCE course. Assessed at a standard appropriate for students who have completed the full course, the A2 units include both synoptic assessment (to assess students' overall learning throughout the course) and an element of stretch and challenge.

The full Advanced GCE award is based on students' marks from the AS (40 percent) and the A2 (60 percent). We award a grade A* to students who achieve both an A grade in the full A level qualification and at least 90 percent of the maximum uniform marks available across the A2 units.

We will notify centres in writing of any major changes to this specification. We will also publish changes on our website at www.ccea.org.uk

The version on our website is the most up-to-date version. Please note that the web version may be different from printed versions.

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QAN AS Level	601/8904/6
QAN A Level	601/8905/8
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1 Introduction

This specification sets out the content and assessment details for our Advanced Subsidiary (AS) and Advanced Level (A Level) courses in Sports Science and the Active Leisure Industry. First teaching begins from September 2016. You can view and download the latest version of this specification on our website at www.ccea.org.uk

Students can take the AS course as a final qualification or as the first half of the A Level course. They must also complete the A2 course (the second half of the A Level) if they wish to obtain a full A Level qualification. We will make the first AS awards for this specification in 2017 and the first A Level awards in 2018.

The specification builds on the broad objectives of the Northern Ireland Curriculum and *Sport Matters: the Northern Ireland Strategy for Sport and Physical Recreation 2009–2019*.

Our GCE in Sports Science and the Active Leisure Industry is an applied qualification in which students develop knowledge, understanding and skills through practical demonstration and/or in a context related to employability.

The Active Leisure Industry covers the following five subsectors: Sport and Recreation, Health and Fitness, Playwork, the Outdoors, and Caravans. However, this specification concentrates only on two subsectors: Sport and Recreation and Health and Fitness.

As with all GCEs, the guided learning hours for this specification are:

- 180 hours for the Advanced Subsidiary award; and
- 360 hours for the Advanced Level award.

1.1 Aims

This specification aims to encourage students to:

- develop and sustain an interest in sports science and the active leisure industry specific to Sport and Recreation and Health and Fitness;
- acquire knowledge and understanding of sports science and the active leisure industry specific to Sport and Recreation and Health and Fitness through practical and theoretical contexts;
- undertake practical activities which allow them to apply their knowledge, understanding and skills when exploring issues associated with the subject;
- develop skills that enable them to make an effective contribution to sports science and the active leisure industry including research, evaluation and problem-solving skills in a work-related context;
- develop knowledge about the importance of technology to sport and physical activity in the leisure industry;
- develop advanced study skills to prepare for third level education and/or employment in the active leisure industry; and
- demonstrate their understanding and application of key concepts through internal and external assessments.

1.2 Key features

The key features of the specification appear below.

- It includes four assessment units: two externally assessed and two internally assessed.
- It gives students the opportunity to develop subject knowledge, understanding and skills in relation to a work context.
- Assessment at A2 includes stretch and challenge, reflected in the use of a wide range of question types, synoptic assessment and extended writing.
- A course of study based on this specification provides a sound basis for progression to higher education.
- There will be support for centres including detailed schemes of work.

1.3 Prior attainment

There is no particular level of attainment required to study this specification. However, it builds on knowledge, understanding and skills developed through students' successful completion of GCSE Physical Education.

1.4 Classification codes and subject combinations

Every specification is assigned a national classification code that indicates the subject area to which it belongs. The classification code for this qualification is 7210.

Progression to another school/college

Should a student take two qualifications with the same classification code, schools and colleges that they apply to may take the view that they have achieved only one of the two GCEs. The same view may be taken if students take two GCE qualifications that have different classification codes but have content that overlaps significantly. Students who have any doubts about their subject combinations should check with the universities and colleges that they wish to attend before embarking on their planned study.

2 Specification at a Glance

The table below summarises the structure of the AS and A Level courses:

Content	Assessment	Weightings	Availability
AS 1: Fitness and Training for Sport	Internal assessment Portfolio showing written evidence of training methods, fitness assessment and planning, leading and evaluating exercise sessions, and risk assessment	60% of AS 24% of A Level	Every Summer from 2017
AS 2: The Active Leisure Industry: Health, Fitness and Lifestyle	External written examination 2 hours This includes short and extended questions and stimulus response questions based on health, fitness and lifestyle. All questions are compulsory.	40% of AS 16% of A Level	Every Summer from 2017
A2 1: Event Management in the Active Leisure Industry	Internal assessment Portfolio showing written evidence of planning for an active leisure event and evaluation of outcome	36% of A Level	Every Summer from 2018

Content	Assessment	Weightings	Availability
<p>A2 2: The Application of Science to Sports Performance</p>	<p>External written examination 2 hours This includes short and extended answer questions and stimulus response questions based on anatomy and physiology, skill acquisition, principles of learning and performance. Synoptic paper All questions are compulsory.</p>	<p>24% of A Level</p>	<p>Every Summer from 2018</p>

3 Subject Content

We have divided the course into four units: two units at AS level and two units at A2. The content of each unit and the respective learning outcomes appear below. We also provide a Glossary of the key terms which occur throughout the specification (Appendix 1).

3.1 Unit AS 1: Fitness and Training for Sport

Most sports performers aspire to reach their full potential. To achieve this they must fully commit to their personal exercise programme. Fitness is vital to achieving success in sport. Sports performers take part in fitness tests to establish their baseline measures. Fitness testing is essential to develop the performer's physical fitness, as their coach or fitness instructor can identify areas for improvement and evaluate the success of the training programme.

Unit AS 1 gives students the opportunity to examine many topics involving components of fitness and the training methods used to improve them. Students carry out a range of fitness tests. They administer the tests, analyse the results and provide an individual with feedback. Students must devise a training programme, and plan, lead and review the training sessions.

This unit develops students' knowledge, understanding and skills involved in fitness and training. It is internally assessed and externally moderated through an internal assessment portfolio. The student must provide a portfolio of written evidence of their planning, recording and evaluation for Tasks 1–3. This must be supported by witness statements/documents from the teacher.

Students must complete the following tasks:

- Plan and perform a range of sport specific fitness tests for an individual under supervision (**Task 1**). These tests allow students to evaluate the performance of that individual in their chosen sport. The students must use a number of fitness tests appropriate to the components of fitness they are evaluating. When students are assessing aerobic fitness they may use **two or three** suitable tests, while they may require up to a **maximum of 10 tests** for other components or combinations of components.
- Plan, perform and evaluate a sport specific fitness programme for another individual under supervision (**Task 2**). This programme should last for a **six to eight week** period.
- Construct, lead and evaluate exercise sessions that form part of a fitness programme aimed to meet the needs of an individual (**Task 3**). Students must plan, lead and evaluate a **minimum of three sessions** in detail.

Students must recognise the need for safety at all times in fitness training and assessments. They should carry out appropriate risk assessment in relation to the sport specific activities, including first aid and emergency procedures. The students should identify common injuries in specific sports.

We suggest that you allocate **25–31 weeks** for AS 1 as follows:

- Planning: **8–10 weeks**
- Selecting/Performing: **14–16 weeks**
- Evaluating: **3–5 weeks** (approximately **1800 words**).

Content	Learning Outcomes
Components of Fitness	<p>Students should be able to:</p> <ul style="list-style-type: none"> • explain the different components of fitness: <ul style="list-style-type: none"> – aerobic endurance; – anaerobic endurance; – muscular endurance; – general strength; – speed; – flexibility; – body composition; – balance; – power; – agility; – co-ordination; – specific strength; – reaction time; and – specific endurance;
Training Methods	<ul style="list-style-type: none"> • develop a knowledge and understanding of the methods and principles of fitness training: <ul style="list-style-type: none"> – explaining the principles of planning (SMARTER, SPORT and FITT) and goal setting; – illustrating the concept of periodisation (training cycles, specificity, duration and recovery); – considering the nature of energy systems (ATP-PC, lactic acid and aerobic); and – evaluating training methods (aerobic, anaerobic, fartlek, continuous, interval, circuit, speed, weight/resistance, SAQ, core-stability and methods of stretching);
Fitness Testing	<ul style="list-style-type: none"> • examine the importance of fitness testing, correct protocol, validity and reliability; • analyse and evaluate the importance of the different components of fitness required for the individual in their chosen sport; and • select, perform and evaluate a range of recognised sport specific fitness assessment methods: <ul style="list-style-type: none"> – discussing maximal vs. sub-maximal, the use of technology, and the advantages and disadvantages of different tests; – considering and selecting tests for components of fitness (aerobic endurance, muscular endurance, muscular strength, speed, power, balance, agility, co-ordination, flexibility and reaction time); and – supervising, recording and evaluating fitness testing sessions.

Content	Learning Outcomes
<p>Planning Fitness Programmes and Leading Exercise Sessions</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> • design a fitness programme for an individual: <ul style="list-style-type: none"> – assessing individual requirements; – considering influencing factors (age, training history, activity level, medical background, individual aims and likes/dislikes); – applying the principles of training and discussing the use of different training methods; – justifying exercise intensity (energy/HR zones, %1RM, sets/repetitions, work: recovery ratios, BORG/PRE); and – justifying safety requirements (PARQ, warm-up, cool-down, contraindicated exercise, risk assessment, technique and equipment); • act as a fitness coach/instructor to lead planned exercise sessions: <ul style="list-style-type: none"> – demonstrating organisation, time management, problem solving and analytical skills in the delivery of an exercise session; – planning and completing exercise sessions (for example circuits, exercise to music and spinning); – identifying goals, designing individual sessions, performing safety checks, considering warm-up/cool-down and examining emergency procedures; and – reviewing and discussing the delivery of the exercise sessions (communication skills, instruction methods, motivation, observation and technique); • evaluate the effectiveness of a session/programme: <ul style="list-style-type: none"> – considering different evaluation methods, identification of positive/negative aspects of the session, progression, changes to format, and revised goals;
<p>Safety and Risk Assessment</p>	<ul style="list-style-type: none"> • assess the need for safety during fitness training and assessment sessions and carry out the appropriate risk assessment including: <ul style="list-style-type: none"> – applying recognised safety procedures (PARQ, warm-up/cool-down, technique, progression and contraindicated exercises); – outlining and explaining the requirements for the selection, use and care of equipment, and choice of clothing/footwear; – considering the nature and importance of risk assessment and the knowledge of rules and regulations for safe practice; and – discussing rest and recovery, progression and burnout.

Content	Learning Outcomes
First Aid	<p>Students should be able to:</p> <ul style="list-style-type: none">• demonstrate knowledge and understanding of first aid, including injuries such as abrasions, blisters, concussion, cramp, fractures, ligament injuries, shin splints, sprains and muscle tears; and• identify the symptoms, explain the causes, and describe the most appropriate action to take as a first aider for common injuries and medical emergencies.

Content	Learning Outcomes
Lifestyle and Health (cont.)	Students should be able to: <ul style="list-style-type: none"> • demonstrate knowledge and understanding of lifestyle factors which impact on health, wellbeing and fitness; • demonstrate knowledge and understanding of legal substances (for example alcohol, nicotine, prescription drugs or caffeine) and illegal substances (for example cannabis, heroin or cocaine); • explain how some legal substances can be misused; • discuss the effects of the use and misuse of legal substances on health, wellbeing and fitness; • discuss the effects of the use of illegal substances on health, wellbeing and fitness; • discuss the social and physical effects of the following lifestyle factors on health and wellbeing: <ul style="list-style-type: none"> – weight management; – age group; – use and misuse of legal substances; and – use and misuse of illegal substances; • discuss the impact of lifestyle management on work/life/time balance, coping with stress, mental health and emotional wellbeing from an individual and an organisational point of view: <ul style="list-style-type: none"> – making recommendations for positive change; and – discussing the trend of using life coaches; • explain and analyse the social benefits of being involved in sport, clubs and other leisure organisations; • describe the effects of ageing (physical maturation and decline in physical capability with age); • examine methods to prevent hypokinetic disease (CHD, obesity, type II diabetes, osteoporosis, blood pressure, cholesterol and stress); and • examine how the ability to set physical challenges through goal setting improves mental health and motivation.

Content	Learning Outcomes
Lifestyle and Health (cont.)	<p>Students should be able to:</p> <ul style="list-style-type: none"> • demonstrate the ability to carry out detailed lifestyle analysis of at least two different lifestyles; • analyse and evaluate these lifestyles, making realistic recommendations to improve health, including an evaluation of the different types of research methods necessary when undertaking lifestyle analysis;
Nutrition for Health and Exercise	<ul style="list-style-type: none"> • demonstrate knowledge and understanding of the importance of nutrition in a healthy lifestyle: <ul style="list-style-type: none"> – identify valuable sources of nutrients and explain the function of each nutrient; – explain the importance of a balanced diet and hydration; – discussing the importance of weight management, energy intake vs. expenditure, BMI, body composition and prevention of obesity; and – explaining and assessing the association between diet and health, the nutritional value of food and the quality of food preparation and food handling; • explain the need for changes to nutrition/hydration strategies for health and exercise: <ul style="list-style-type: none"> – explaining, examining and justifying ways to lose/gain weight for health/fitness; and – explaining and justifying the requirements/strategies for different activities (for example strength training, endurance events, climate and altitude);
Enhancing Fitness	<ul style="list-style-type: none"> • analyse different components of fitness: <ul style="list-style-type: none"> – aerobic endurance; – anaerobic endurance; – muscular endurance; – strength; – speed; – flexibility; – body composition; – skill fitness; – balance; – power; – agility; – co-ordination; and – reaction time.

Content	Learning Outcomes
<p>Enhancing Fitness (cont.)</p> <p>The Need for Safety in the Active Leisure Industry</p> <p>Barriers to Participation</p> <p>Health of the Nation and Comparisons Made to other European Countries</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> • discuss methods used to improve specific components of fitness; • examine the importance of the correct technique, progression, rest and recovery; • explain and consider the importance of PARQ, warm-up/cool-down, and the avoidance of contraindicated exercises; • explain the need for careful use of equipment, and correct lifting and lowering technique; • discuss the importance of correct clothing, footwear, equipment, facilities, and knowledge of rules and regulations for safe practice; • discuss the importance of risk assessment in relation to safe practice in the active leisure industry; • explain and assess factors which can act as barriers to participating in sport and physical activity considering socio-economic groups, disability, ethnic groups, gender, age, ability, stereotyping and the importance of equal opportunity for all; • analyse how lifestyle factors affect the life expectancy of the individual and the impact on society as a whole; • describe and analyse the ways in which various government initiatives impact on the health of the nation in relation to GP priorities/referrals, 5 a-day, the smoking ban, healthy schools, alcohol, weight management or current initiatives; and • evaluate the current health of the nation, making comparisons to other European Countries and evaluating government priorities/initiatives in different European countries to promote and manage healthy lifestyles.

3.3 Unit A2 1: Event Management in the Active Leisure Industry

This unit introduces students to the Leisure Industry, which is one of the fastest growing industries in the UK and Europe. Students gain an understanding of the diverse nature of the industry and how the sports sector plays an important role in relation to employment, health, fitness and entertainment.

It is designed to develop students' higher level skills through greater depth, complexity, and application of knowledge and understanding. It is internally assessed and externally moderated through an internal assessment portfolio. Although the activity is a group event, each student must produce their own internal assessment portfolio. We advise a group size of 4–8 students.

This unit provides students with the opportunity to organise and run an active leisure event. The student works as a group member to plan, carry out and critically evaluate a project that is relevant to the active leisure industry. The choice of event must be sufficiently demanding to meet the assessment criteria outlined and allow each student to contribute significantly to the planning, organisation, running and evaluation of the event. This unit helps students prepare for employment in the active leisure industry by giving them the opportunity to develop the essential workplace business skills.

Unit A2 1 requires each student to produce a portfolio of an active leisure event which will include written evidence of the following:

- **Task 1: Researching and planning an active leisure event**

Students must provide:

- a brief **introduction** to the key components of the leisure industry;
- relevant **research and analysis** when assessing the feasibility and management of an active leisure event to be presented to the group; and
- a **plan** of the active leisure event which the student completes as part of the group.

- **Task 2: Working as part of a group to organise an active leisure event**

The student must provide a **detailed record of their individual contribution** to the running of the active leisure event.

- **Task 3: Reviewing and evaluating an active leisure event**

Students must provide an **evaluation of their own and the group's performance** before, during and after the event, including recommendations for improvement.

We suggest that you allocate **25–31 weeks** for A2 1 as follows:

- researching and planning (**Task 1**): **10–12 weeks**;
- working as part of a group to organise an active leisure event (**Task 2**): **12–14 weeks**; and
- reviewing and evaluating an active leisure event (**Task 3**): **3–5 weeks** (approximately **1800 words**).

Content	Learning Outcomes
<p>Introduction to the Key Components of the Leisure Industry</p> <p>Choice of Active Leisure Event Linked to Key Components of Leisure ‘Sport’</p> <p>Feasibility of the Event</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> • demonstrate knowledge of the leisure industry including: <ul style="list-style-type: none"> – sport; – entertainment; – recreation; – the arts and heritage; – hospitality; and – tourism; • select a relevant active leisure event (such as lifestyle and health or fitness and exercise); • explain and justify how the event is relevant to the active leisure industry; • outline and examine the roles of individuals in the organisation of the event: <ul style="list-style-type: none"> – co-ordinator, chairperson, secretary, finance officer, publicity officer, marketing officer, steward and specialist coach/trainers; • outline and examine the responsibilities of individuals in the organisation of the event: <ul style="list-style-type: none"> – logistics, equipment, health and safety, communication, marketing, publicity and raising finances; • describe the structure and function of the group/team in the planning and organisation of the event; • explain the importance of teamwork and problem solving in the planning and organisation of the event; • outline and justify the aims and objectives of the event: <ul style="list-style-type: none"> – SMARTER targets; and – short-term and long-term goals achievable by the group; and • identify customers, their needs and how these will be met: <ul style="list-style-type: none"> – internal and/or external customers.

Content	Learning Outcomes
<p>Feasibility of the Event (cont.)</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> • describe how the event will be marketed to their customers through: <ul style="list-style-type: none"> – purpose (informing customers of date, time, venue and cost); – theme (health, fitness, charity and fundraising); – methods (leaflets, advertisements, posters, television and radio scripts and flyers); and – impact (benefits, constraints, effects and repeat business); • explain the financial aspects of the event: <ul style="list-style-type: none"> – budgeting; – funding; and – accounts; • select the physical resources needed to run the event: <ul style="list-style-type: none"> – venue; – equipment; – staffing; – facilities; – access for all; – software; and – administration; • describe and assess target setting for individual team members: <ul style="list-style-type: none"> – identifying SMARTER targets; – identifying deadlines; – recording all evidence; and – assessing individuals’ contributions; • calculate the event timescale to specific deadlines; • demonstrate competent organisational and administrative skills relating to their specific role in running the event; and • carry out appropriate risk assessment/PARQ in the organisation and running of the event in the areas of: <ul style="list-style-type: none"> – health and safety implications; – first aid; – security; – insurance; – data protection; – child protection; and – informed consent.

Content	Learning Outcomes
<p>Feasibility of the Event (cont.)</p> <p>Teamwork</p> <p>The Event</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> • explain appropriate contingency plans: <ul style="list-style-type: none"> – changes in weather and resources; and – incidents; • analyse how the event will be reviewed and critically evaluated through: <ul style="list-style-type: none"> – feedback from teachers, peers, participants, clients, external coaches and leaders; and – the use of a range of methods such as questionnaires, evaluation sheets, notes, audio/visual and witness statements; • outline and assess the roles and responsibilities of each team member in carrying out the event: <ul style="list-style-type: none"> – explaining how each individual member of the team fulfils the role identified, referring to problem solving and teamwork; – explaining the importance of effective communication within the team (informal/formal meetings, agendas, minutes and discussions); and – considering and discussing team building and interaction; • complete and assess the tasks they have been allocated; • demonstrate how to support other team members while the event is being planned and carried out; • identify issues and make appropriate decisions to address these issues; • agree to deadlines; and • know when to seek help and advice from others.

Content	Learning Outcomes
Evaluating the Event	<p>Students should be able to:</p> <ul style="list-style-type: none"> • assess if the group has met its aims, objectives and targets by: <ul style="list-style-type: none"> – commenting on meeting key deadlines; – analysing the effectiveness of planning on performance; – evaluating the success of the event; – evaluating what did/did not go well for each individual; – evaluating how the team performed as a whole; – evaluating how working as part of a team hindered or helped the individual (providing helpful feedback on how others performed, received and responded to feedback on their own performance); and – making recommendations for improvement; and • evaluate their own performance before, during and after the event, including recommendations for improvement.

Content	Learning Outcomes
Skeletal System	<p>Students should be able to:</p> <ul style="list-style-type: none"> • describe the structure of the heart and the transport of blood in the vascular system; • explain and evaluate heart rate, blood pressure, stroke volume and cardiac output and the effect exercise has on these; • explain and evaluate the process of the cardiac cycle at rest and during exercise; • examine and justify vasoconstriction and vasodilation; • compare a trained and untrained heart and the effects they have on exercise; • describe the structure and discuss the function of the human skeleton; • explain the structure of synovial joints (ball and socket, hinge, pivot, saddle, gliding and condyloid); • explain and analyse the joint actions of sporting movements to include examples of the following: <ul style="list-style-type: none"> – flexion/extension; – plantar flexion/dorsiflexion; – adduction/abduction; – circumduction and rotation; – pronation/supination; – eversion/inversion; and – elevation/depression;
Muscular System	<ul style="list-style-type: none"> • describe and justify the structure and function of the muscular system and the muscles needed for sporting movements; • describe the structure of muscles: muscle fibres (slow twitch/type 1, fast twitch/type 11a and 11b); • discuss and interpret the effect muscle composition has on choice of sporting activity; and • explain and discuss how a performer can vary the strength of a muscle contraction by focusing on the role of motor units in spatial summation, wave summation and a tetanic contraction; all or nothing law.

Content	Learning Outcomes
<p>Muscular System (cont.)</p> <p>Effects of Exercise</p> <p>Ethics in Sports Performance</p> <p>Skill Acquisition</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> • explore types of muscular contraction (concentric, eccentric, isometric and isotonic) and examples of activities using each form of contraction; • recognise how exercise benefits the respiratory and cardiovascular systems and skeletal and muscular systems; • explain and discuss the difference in a short-term response and a long-term adaptation by studying the following systems: <ul style="list-style-type: none"> – cardiovascular system responses: heart rate, blood flow, stroke volume, cardiac output and vasoconstriction vasodilation; – cardiovascular system adaptations: heart size, stroke volume, capillarisation, cardiac output, VO₂ and bradycardia; – respiratory system responses: rate/depth of breathing and gas exchange; – respiratory system adaptations: respiratory muscles; – skeletal system responses: mobilisation of joints; – skeletal system adaptations: bone strength, tendons and connective tissue; – muscular system responses: metabolic changes and fibre recruitment; and – muscular system adaptations (hypertrophy and force production); • demonstrate knowledge and understanding of the following scientific developments which can impact on sports performance: <ul style="list-style-type: none"> – drug taking (use of legal and illegal drugs); and – technology (sports clothing and equipment); • discuss the implications of these developments on sports performance; • review the strategies taken by sports governing bodies to counter illegal drug use in sporting performance; • develop knowledge and understanding of skilled performance through observing live or recorded performances; and • define and consider skill (cognitive, perceptual, motor and psychomotor), ability and learning.

Content	Learning Outcomes
Skill Acquisition (cont.) Understanding Learning and Performance	<p>Students should be able to:</p> <ul style="list-style-type: none">• classify, describe and analyse motor skills using the skill continuum:<ul style="list-style-type: none">– open/closed;– discrete/serial/continuous;– gross/fine; and– self-paced/externally paced; • identify, apply and discuss the characteristics of the three stages of learning (cognitive, associative and autonomous) through observing and/or participating in a variety of new and familiar activities; • explore, analyse and evaluate the factors that facilitate learning:<ul style="list-style-type: none">– motivation: intrinsic, extrinsic, tangible and intangible; and– transfer of learning: positive, negative, bilateral, retroactive and zero transfer; • analyse various teaching styles: command, reciprocal, discovery and problem solving; and • discuss and interpret learning plateaus.

4 Scheme of Assessment

4.1 Assessment opportunities

For the availability of assessment units, see Section 2 of this specification.

It is possible to resit individual AS and A2 assessment units once only. The best result for each assessment unit counts towards the AS and A Level qualifications. Results for individual assessment units remain available to count towards an AS or A Level qualification until we withdraw the specification.

4.2 Assessment objectives

Below are the assessment objectives for this specification. Candidates must:

- demonstrate knowledge and understanding of sports science and the active leisure industry (AO1);
- apply knowledge, understanding and skills through different contexts appropriate to sports science and the active leisure industry (AO2); and
- analyse and evaluate evidence to make reasoned and valid judgments about issues in sports science and the active leisure industry (AO3).

4.3 Assessment objective weightings

The table below sets out the assessment objective weightings for each assessment unit and the overall A Level qualification.

AO Weightings					
	AO1	AO2	AO3	AS	A level
AS1	6%	13%	5%	24%	24%
AS2	4%	7%	5%	16%	16%
A21	6%	18%	12%		36%
A22	5%	9%	10%		24%
Total	21%	47%	32%	40%	100%

4.4 Quality of written communication

In AS and A Level Sports Science and the Active Leisure Industry, candidates must demonstrate their quality of written communication (QWC). In particular, they must:

- ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear;
- select and use a form and style of writing appropriate to their purpose and to complex subject matter; and
- organise information clearly and coherently, using specialist vocabulary where appropriate.

Examiners and teachers assess the quality of candidates' written communication in their responses to questions and tasks that require extended writing.

4.5 Synoptic assessment at A2

The A2 assessment unit includes elements of synoptic assessment, which encourages the development of the understanding of the subject as a whole. In GCE Sports Science and the Active Leisure Industry, synoptic assessment allows candidates to demonstrate essential knowledge, understanding and skills so that they can:

- draw together the knowledge, understanding and skills learned in different parts of the A Level course;
- sustain their own lines of enquiry and record and observe from primary sources;
- bring together and make connections between the areas of knowledge and the range of skills described and learned throughout the course;
- interpret and evaluate concepts, issues, ideas, and the relevance of research;
- communicate with reasoned arguments supported by evidence; and
- use appropriate language and terminology in context.

4.6 Stretch and challenge at A2

The A2 assessment units provide opportunities for stretch and challenge by incorporating:

- a wide range of question types to address different skills, for example open-ended questions;
- a number of high demand evaluative tasks; and
- questions that require learners to show connections between sections of the specification.

4.7 Reporting and grading

We report the results of individual assessment units on a uniform mark scale that reflects the assessment weighting of each unit.

We award AS qualifications on a five grade scale from A to E, with A being the highest. We award A Level qualifications on a six grade scale from A* to E, with A* being the highest. We determine the AS and A Level grades awarded by aggregating the uniform marks obtained on individual assessment units. To be awarded an A*, candidates need to achieve a grade A on their full A Level qualification and an A* on the aggregate of their A2 units. If candidates fail to attain a grade E, we report their results as unclassified (U).

The grades we award match the grade descriptions in Section 5 of this specification.

5 Grade Descriptions

Grade descriptions are provided to give a general indication of the standards of achievement likely to have been shown by candidates awarded particular grades. The descriptions must be interpreted in relation to the content in the specification; they are not designed to define that content. The grade awarded depends in practice upon the extent to which the candidate has met the assessment objectives overall. Shortcomings in some aspects of candidates' performance in the assessment may be balanced by better performances in others.

AS Grade Descriptions

Grade	Description
<p>AS</p> <p>Grade A</p>	<p>For AO1, candidates characteristically:</p> <ul style="list-style-type: none"> • demonstrate, with few omissions, a depth of knowledge of sports science and the active leisure industry; • demonstrate a depth of understanding of the functions of sports science and the active leisure industry; and • use a range of technical language and terminology accurately. <p>For AO2, candidates characteristically:</p> <ul style="list-style-type: none"> • select accurate and relevant material; • apply knowledge, understanding and skills accurately and independently to a range of work-related situations based on the sports science and the active leisure industry; and • express complex ideas clearly and fluently, with sentences and paragraphs following on from each other smoothly and logically. <p>For AO3, candidates characteristically:</p> <ul style="list-style-type: none"> • evaluate evidence to draw valid conclusions; • make reasoned judgments about relevant work-related issues; • identify the strengths and weaknesses of an issue and construct a coherent and well-organised argument supported by examples and/or sources of evidence; • use accurate and fluent expression; and • have few, if any, errors of grammar, punctuation and spelling.

Grade	Description
<p>AS</p> <p>Grade E</p>	<p>For AO1, candidates characteristically:</p> <ul style="list-style-type: none"> • demonstrate basic knowledge of sports science and the active leisure industry (there may be significant omissions); • show a basic understanding of the purpose of sports science and the active leisure industry; and • show limited accurate use of technical language and terminology. <p>For AO2, candidates characteristically:</p> <ul style="list-style-type: none"> • select limited but relevant material; • show basic understanding and skills based on work-related issues in sports science and the active leisure industry; • express simple ideas clearly but may express complex ideas ineffectively; and • use language and expression which lacks precision. <p>For AO3, candidates characteristically:</p> <ul style="list-style-type: none"> • demonstrate minimal organisation and/or limited coherence; • offer mainly descriptive answers with little argument, justification or evaluation; • use obscurely presented arguments; and • make some mistakes in grammar, punctuation and spelling.

A2 Grade Descriptions

Grade	Description
<p>A2</p> <p>Grade A</p>	<p>For AO1, candidates characteristically:</p> <ul style="list-style-type: none"> • demonstrate an in-depth knowledge of sports science and the active leisure industry; • show an in-depth understanding of the functions of sports science and the active leisure industry; • demonstrate a range of work-related skills in a variety of situations effectively; • use a range of technical language and terminology accurately; and • explain appropriate examples and sources competently. <p>For AO2, candidates characteristically:</p> <ul style="list-style-type: none"> • select relevant, up-to-date research and analytical techniques and use a wide range of sources; • accurately and independently apply knowledge, understanding and skills to a wide range of work-related situations and relate these to different contexts as appropriate; • use appropriate specialist vocabulary to convey their meaning in writing; and • perform at this level in relation to connections between different elements of this course in the synoptic assessment. <p>For AO3, candidates characteristically:</p> <ul style="list-style-type: none"> • evaluate a range of evidence to draw and justify valid conclusions; • make well-reasoned judgments about relevant work-related issues; • demonstrate an informed viewpoint and evidence of own thinking within the context of understanding different arguments and views; • use proficient, fluent and accurate language; and • show competent analysis of the nature of connections between elements of this course in the synoptic assessment.

Grade	Description
<p>A2</p> <p>Grade E</p>	<p>For AO1, candidates characteristically:</p> <ul style="list-style-type: none"> • demonstrate basic knowledge of sports science and the active leisure industry (there may be significant omissions); • show a basic understanding of the purpose of sports science and the active leisure industry; and • show limited accurate use of technical language and terminology. <p>For AO2, candidates characteristically:</p> <ul style="list-style-type: none"> • select limited but relevant material; • undertake research into work-related issues using given techniques; • deploy limited knowledge, some of which is accurate; • show basic understanding and skills based on work-related issues in sports science and the active leisure industry; • show basic understanding of key ideas, making occasional reference to examples and sources; • show a limited but accurate and consistent use of technical terms; and • perform at this level in different elements of the course and in the synoptic assessment. <p>For AO3, candidates characteristically:</p> <ul style="list-style-type: none"> • demonstrate minimal organisation and/or limited coherence; • evaluate evidence to draw basic conclusions about work-related issues; • identify strengths and weaknesses of the evidence, with little convincing argument or justification; • use language and expression lacking precision; and • show limited analysis of the nature of connections between elements of this course in the synoptic assessment.

6 Guidance on Internal Assessment

There are **two** internal assessments in this specification, one at AS level and one at A2:

- Unit AS 1: Fitness and Training for Sport; and
- Unit A2 1: Event Management in the Active Leisure Industry.

Each internal assessment will have an applied focus.

6.1 Setting of tasks

We will provide centres with details of the internal assessment tasks and guidance on how to complete and submit them. Teachers must ensure that the specific tasks they set allow candidates to produce evidence to demonstrate all the unit requirements. For A2 1 Internal Assessment, to ensure differentiation of outcome, individuals are allocated roles and responsibilities. In the setting of the A2 1 Internal Assessment, the teacher must ensure there is equality of access to all tasks and to all marks, regardless of a candidate's specific role in the organisation of an event.

The internal assessment tasks provide opportunities for centres to contextualise the tasks to better suit their specific circumstances. This includes the availability of and access to resources.

6.2 Supervision of candidates

Candidates should work independently when completing their internal assessment. Teachers should, however, provide advice and guidance on any problems they encounter and supervise candidates' work to monitor their progress. Centres should deliver this specification in a sensitive, supportive, and safe environment. This should be in line with their child protection, health and safety, and other relevant policies.

6.3 Assessment conditions

Candidates must complete their internal assessment in conditions that combine classroom and independent study activities. These conditions must ensure that the internal assessment remains reliable and fair.

6.4 Marking and internal standardisation

Teachers should use their professional judgement to select and apply the criteria in each mark band appropriately and fairly to candidates' work. They should award the appropriate mark within any range on a 'best fit' basis, making allowance for balancing strengths and weaknesses within each response.

Centres with more than one teaching group must carry out internal standardisation of the internal assessment tasks before submitting them to us. This is to ensure, as far as possible, that each teacher has applied the assessment criteria consistently when marking assessments.

As a result of internal standardisation, it may be necessary to adjust an individual teacher's marking. This is to bring assessments into line with those of other teachers in the centre and to match the standards established at the agreement trial. Where adjustment is necessary, the total/final mark recorded on the Candidate Record Sheet should be amended.

6.5 Moderation

Centres must submit their marks and samples to us by May in any year. We may adjust centres' marking. This is to bring the assessment of the candidates' work into line with our agreed standards. We issue full instructions well in advance of submission on:

- the details of moderation procedures;
- the nature of sampling; and
- the dates by which marks and samples must be submitted to us.

Teachers and centre staff may contact us at any stage if they require advice, assistance or support regarding any aspect of internal assessment. We provide moderators who can support groups of centres or contact individual centres to discuss issues arising from the internal assessments.

7 Links

7.1 Support

We provide the following resources to support this specification:

- a subject microsite within our website; and
- specimen assessment materials.

We intend to expand our range of support to include the following:

- past papers and mark schemes;
- Chief Examiner's reports;
- Principal Moderator's reports;
- schemes of work;
- centre support visits;
- support days for teachers;
- portfolio clinics;
- agreement trials;
- a resource list; and
- exemplification of standards.

7.2 Curriculum objectives

This specification addresses and builds upon the broad curriculum objectives for Northern Ireland. In particular, it enables students to understand, relate to and explore:

- moral, ethical, social, economic, cultural and legislative (including equality and disability discrimination) issues by providing opportunities, for example, to consider current moral issues in relation to aspects of health and cultural influences as they undertake comparative studies with the UK and Europe;
- sustainable development and health and safety as a key consideration through engaging in practical activities, for example advising, planning and evaluating sessions, and drawing up risk assessments (students should be guided in accordance with the recommendations in *Safe Practice in Physical Education and School Sport* (afPE)); and
- skills agenda and employability by providing varied opportunities to research and participate in different roles within the leisure industry.

7.3 Skills development

This specification provides opportunities for students to develop the following key skills:

- application of number (for example recording data when devising, monitoring and evaluating a fitness programme, using heart rate and recovery rate data, and aspects of event management such as finance);
- communication (for example the quality and appropriateness of their written communication in all aspects of the AS and A2 specification);
- improving own learning and performance (for example researching, planning and evaluating their work in both AS and A2 units);
- information and communication technology (for example using heart rate monitors and video analysis);
- problem solving (for example recommending improvements to health for an individual, devising and monitoring fitness plans, dealing with issues as they arise in event management); and
- working with others (for example the AS and A2 units which provide many opportunities for students to work with others).

7.4 Examination entries

Entry codes for this subject and details on how to make entries are available on our Qualifications Administration Handbook microsite, which you can access at www.ccea.org.uk

Alternatively, you can telephone our Examination Entries, Results and Certification team using the contact details provided in this section.

7.5 Equality and inclusion

We have considered the requirements of equality legislation in developing this specification.

GCE qualifications often require the assessment of a broad range of competences. This is because they are general qualifications and, as such, prepare students for a wide range of occupations and higher level courses.

During the development process, an external equality panel reviewed the specification to identify any potential barriers to equality and inclusion. Where appropriate, we have considered measures to support access and mitigate barriers.

Reasonable adjustments are made for students with disabilities in order to reduce barriers to accessing assessments. For this reason, very few students will have a complete barrier to any part of the assessment.

However, some students with disabilities affecting physical movement or working with a group may find some elements of assessment difficult. Students with a disability may have difficulty accessing every part of all the available roles in event management for the internal assessment. For this reason, students can have assistants to help them to hold, carry or use equipment (if and when necessary) during the internal assessment.

It is important to note that where access arrangements are permitted, they must not be used in any way that undermines the integrity of the assessment. You can find information on reasonable adjustments in the Joint Council for Qualifications' document *Access Arrangements and Reasonable Adjustments: General and Vocational Qualifications*, available at www.jcq.org.uk

7.6 Contact details

The following list provides contact details for relevant staff members and departments:

- Specification Support Officer: Arlene Ashfield
(telephone: (028) 9026 1200, extension 2291, email: aashfield@ccea.org.uk)
- Officer with Responsibility: Peter Davidson
(telephone: (028) 9026 1200, extension 2993, email: pdavidson@ccea.org.uk)
- Examination Entries, Results and Certification
(telephone: (028) 9026 1262, email: entriesandresults@ccea.org.uk)
- Examiner Recruitment
(telephone: (028) 9026 1243, email: appointments@ccea.org.uk)
- Distribution
(telephone: (028) 9026 1242, email: cceadistribution@ccea.org.uk)
- Support Events Administration
(telephone: (028) 9026 1401, email: events@ccea.org.uk)
- Information Section (including Freedom of Information requests)
(telephone: (028) 9026 1200, email: info@ccea.org.uk)
- Business Assurance (Complaints and Appeals Manager: Marisa Getgood)
(telephone: (028) 9026 1244, email: complaints@ccea.org.uk)
- Moderation
(telephone: (028) 9026 1200, extension 2236, email: moderationteam@ccea.org.uk)

Appendix 1

Glossary of Key Terms

Terms and abbreviations used in the Sports Science and the Active Industry specification.

ATP-PC	Adenosine Triphosphate Phosphocreatine (Energy System)
BMI	Body Mass Index
BORG	Borg Scale is a simple method of rating perceived exertion and can be used to gauge an athlete's level of intensity in training and competition.
CHD	Coronary Heart Disease
FITT	Frequency, Intensity, Time, Type
HR zones	Heart Rate Zones
PARQ	Physical Activity Readiness Questionnaire
PRE	Progressive Resistive Exercise
RM	A repetition maximum or RM is the most weight you can lift for a defined number of exercise movements.
SAQ	Speed, Agility, Quickness
SMARTER	Specific, Measurable, Achievable, Realistic, Time Bound, Exciting, Recorded
SPORT	Specificity, Progression, Overload, Reversibility, Tedium
VO ₂	Volume of Oxygen Consumption/Volume of Oxygen Uptake

