



CIMSPA PROFESSIONAL STANDARD

Strength and Conditioning Trainer

(FULL STANDARD)

EDITION: V1.0

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CIMSPA PROFESSIONAL STANDARD: Strength and Conditioning Trainer

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ABOUT THIS STANDARD

This document is a CIMSPA Professional Standard (full version).

This full version of the standard is available to CIMSPA awarding organisation, skills development, higher education and further education partners.

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1. Overview

Professional Standard: Strength and Conditioning Trainer

This Professional Standard outlines the role and scope of a Strength and Conditioning Trainer and the essential knowledge and skills that are needed to meet the requirements of the sector minimum deployment standards. It also provides guidance for the development of educational products that will be endorsed by the UK Strength and Conditioning Association (UKSCA) and CIMSPA.

This full version of this standard is available to CIMSPA awarding organisation, skills development, higher education and further education partners. It provides guidance for the development of educational products that will be endorsed by CIMSPA.

The Strength and Conditioning Trainer sits in the sport and physical activity sector however, this standard can be adopted by multiple professions as it recognises a general skillset covering movement for sports performance and encourages the physical development and wellbeing of youth and general adult populations.

Note: The use of the term “strength and conditioning” will be abbreviated throughout this document to “S&C”, the reader should understand this abbreviation as the full phrase.

The job title of “strength and conditioning trainer” and the term “participant” in this standard, are interchangeable with other professions’ terms, for example:

Profession/setting	Job title (s)/specialism	Participant
S&C in sport	<ul style="list-style-type: none">Assistant S&C coach*, junior S&C coach*	<ul style="list-style-type: none">Athlete
Fitness industry	<ul style="list-style-type: none">S&C Trainer, Personal trainer with S&C	<ul style="list-style-type: none">Client
PE and Schools	<ul style="list-style-type: none">PE teacher, S&C trainer, assistant S&C coach	<ul style="list-style-type: none">Youth, children, youth athlete
Military	<ul style="list-style-type: none">Physical Training Instructor (PTI), Exercise Rehabilitation Instructors (ERI)	<ul style="list-style-type: none">Soldier, Seaman, Airman
Medical and Rehabilitation	<ul style="list-style-type: none">Physiotherapist, sports therapist with S&C specialism	<ul style="list-style-type: none">Patient

*Strength and conditioning trainers can work independently, however the terms “assistant strength and conditioning coach” and “junior strength and conditioning coach” may be used in a professional setting where the strength and conditioning trainer is working under the supervision of an accredited strength and conditioning coach.

The agreed industry prerequisite to become a strength and conditioning trainer is to have achieved a CIMSPA and UKSCA endorsed educational product that fully meets this professional standard. Individuals who achieve this will be deemed to have met this standard and will also be eligible for UKSCA and CIMSPA membership.

This Professional Standard Strength and Conditioning Trainer can be used as follows:

1. Combined with a specialism to form an educational product: e.g. Occupation: Strength and Conditioning Trainer; Population Specialism: Working with Children.
2. Combined with an additional specialism(s) to form an education product: e.g. Occupation: Strength and Conditioning Trainer; Environment Specialism: Working in the School Environment (Out of Curriculum); Population Specialism: Working with Children.
3. As a standalone product that can be completed as continuing professional development: e.g. working with secondary-school children.

Endorsed qualification logo

Qualifications that meet the requirements of this CIMSPA Professional Standard will display this official CIMSPA endorsement logo.



2. Scope of the Strength and Conditioning Trainer

The role of the Strength and Conditioning Trainer is to coach, engage, facilitate, educate and support participants in multiple training environments, including but not limited to: weight training facilities, sports halls, health and fitness gym facilities and outdoor spaces.

- The Strength and Conditioning Trainer uses their technical knowledge to conduct assessments, consultations and health and movement screenings, providing sound demonstrations of foundation movements.
- They play a key role in participant experience and motivating participants to adhere to exercise to support long-term health and performance behaviour change.
- They know when individuals should be referred to other exercise or health professionals and ensure the welfare of participants, providing a safe and inclusive training environment.
- They plan safe and effective strength and conditioning programmes, providing ongoing supervision, monitoring and programme reviews, to ensure programmes remain scientifically underpinned, varied and progressive to participants' needs and goals.
- They provide a positive participant experience by applying acknowledged coaching principles and routinely manage their environment to engage and build rapport with participants, supporting safe and effective exercise technique.
- The Strength and Conditioning Trainer can work both independently and as part of a wider support team, which will vary with the professional setting.
- As a first point of contact, the Strength and Conditioning Trainer will provide high levels of participant care and will assist with any participant feedback, taking responsibility for the participant experience.
- The Strength and Conditioning Trainer has a responsibility to ensure they report to and communicate effectively with the appropriate person, which may vary depending on the facility they are working in and the nature of the programme they are delivering.

Working with children

Graduates of this standard will be deemed competent to work with adolescents (11+), although from a human movement perspective, they are competent to work with all ages.

Graduates of this standard and employers must ensure that those who will work with younger populations (5-11), have met the CIMSPA Working with Children Professional Standard and/or have other qualifications that bridge the gap in specialist skills and knowledge concerning the cognitive development of children.

Definitions

The UNESCO definition of 'youth' identifies an age range of 15-24 and it is important to be aware that some educational organisations follow these guidelines, with 14 and under groups classified as children.

The UKSCA position statement on Youth Resistance Training differentiates between children (girls: ≤ 11; boys ≤ 13) and adolescents (girls: 12-18; boys: 14-18), with both groups, children and adolescents, falling under the general banner of 'youth'.

3. CIMSPA and UKSCA membership eligibility

Graduates of this standard will meet the requirements to be a CIMSPA Member as well as a UKSCA Trainer Member. They will:

UNDERSTAND

- How to work with a broad range of participants in strength and conditioning environments including older children, adolescents and older adults, over a period of time sufficient enough to show lifestyle and health and fitness improvements that address individuals' needs.

HAVE DEMONSTRATED

- Competence of working with at least one type of participant, individually and in small groups, in more than one environment, with and without specialist equipment.

Additional specialist standards (population, environment or technical) can be added to educational products to widen the scope of the role and enable an individual to show their expertise in additional populations, in different environments and with technical specialisms.

Examples of specialisms that may be added:

- Working with children (for children 5-11)
- Working with children 0-5 years.

Refer to the CIMSPA Professional Standards Matrix for a comprehensive overview as to how job roles relate to populations, environments and technical specialisms.

4. Summary of knowledge and skills

Strength and Conditioning Trainer

Topic	Knowledge and understanding	Skills
Consultations, assessments, training environment inductions and screening	<ul style="list-style-type: none">• How to conduct an effective participant consultation.• How to undertake a safe and effective participant health and movement screening to determine readiness to exercise, or the need to signpost or refer participants to other relevant professionals.• How to select and conduct participant assessments and reviews according to organisational procedures and the needs of the participant.• How to induct individuals and small groups in multiple training environments.	<ul style="list-style-type: none">• Assess participant's readiness to exercise and the need for signposting or referral to other relevant professionals.• Conduct safe and effective health screenings, assessments and reviews with participants.• Conduct individual and group movement screening and testing.• Provide a 'participant experience' during consultations, assessments and health and movement screening.
Maximise the participant experience	<ul style="list-style-type: none">• Understand the participant experience/journey within the training environment.• Understand the participant expectations and aspirations within the training facility environment.• How to engage with participants and build rapport in order to maximise their experience.• How to support safe and enjoyable use of the training environment.• How to build social support and inclusion within the training environment.• How to obtain feedback to support participant retention.• Understand the importance of managing the training environment and being accessible and approachable to participants.	<ul style="list-style-type: none">• Have the ability to create positive first impressions and to develop rapport with participants through excellent communication skills.• Gain and act on feedback to enhance the participant experience.• Have the ability to communicate with participants about their progress, supporting them to realise their achievements and goals.• Be approachable and accessible to participants at all times.
Exercise anatomy and physiology	<ul style="list-style-type: none">• Knowledge of anatomy and physiology including:<ul style="list-style-type: none">– Human movement/biomechanics.– The cardiorespiratory system.– Musculoskeletal system.– Digestive system.– Energy systems.– Nervous systems.• Knowledge of the life-course of the musculoskeletal system.	<ul style="list-style-type: none">• Apply knowledge of anatomy and physiology in the planning, delivery and monitoring of safe and effective exercise programmes for a range of participants.

Topic	Knowledge and understanding	Skills
Lifestyle management and participant motivation	<ul style="list-style-type: none"> • Understanding the range of factors that contribute to an individual's lifestyle such as sleep, nutrition, stress, fatigue, alcohol and levels of physical activity. • How to create a positive environment that motivates and empowers participants and promotes adherence to exercise in order to support goal achievement. • How physical activity helps in the management of common health conditions. • Understanding the process of exercise and health behaviour change. • The role of intrinsic and extrinsic motivation in exercise adherence. 	<ul style="list-style-type: none"> • Promote wellness advice and utilise opportunities to educate participants about how lifestyle choices impact upon health and wellbeing. • Create a positive, motivating and empowering environment to support adherence to exercise and goal achievement.
Prepare and plan for strength and conditioning sessions	<ul style="list-style-type: none"> • How to promote the benefits of developing all areas of strength and conditioning sessions to a range of groups including: <ul style="list-style-type: none"> – Older children and adolescents. – General population. – Older population. – Recreational and performance sport athletes. • How information gathering, health and movement screening and testing informs individualised programming for optimal results. • Youth-specific screening and how it can be applied to plan and prepare sessions for the participants. • Knowledge of testing all physical characteristics and the ability to review, progress or regress programmes. • Knowledge of programming theory based on a comprehensive analysis of the requirements for individuals and groups. • Understanding how to communicate effectively within sessions and selecting the appropriate tools for communicating between sessions. • Have the knowledge to manage multiple training environments to maximise the results of strength and conditioning sessions. 	<ul style="list-style-type: none"> • Plan a safe and effective strength and conditioning programme for a range of participants, using appropriate equipment and methods. • Utilise a range of testing methods to assess and programme for participants. • Monitor and review the effectiveness of the exercise programme to ensure it is engaging, varied and progressive to participants' needs and goals, whilst following the principles of training. • Gain consent and screen a youth participant to inform programming of objectives and exercise selection according to the youth physical development model. • Communicate to a broad range of participants using varied styles as well as a range of presentation and education methods. • Able to maintain adaptability in delivery location and equipment while remaining guided by the underpinning scientific theory.

Topic	Knowledge and understanding	Skills
Delivering strength and conditioning training sessions	<ul style="list-style-type: none"> • The knowledge to competently coach strength and conditioning training sessions. • How to structure and deliver a comprehensive Raise, Activation, Mobilisation, Potentiation (RAMP) warm up and cool down. • Understand the foundation movements and their importance in all subsequent training and human movement to promote mobility, stability, postural integrity and coordination. • Safe and effective technique in resistance training using bodyweight and a range of equipment for strength based training and explosive activities. • How to deliver energy system training protocols and high intensity running-based activities including: acceleration, deceleration and change of direction. 	<ul style="list-style-type: none"> • Effectively coach all the foundation movements showing adaptability addressing common movement restrictions. • Deliver an effective warm up specific to session aims. • Implement an appropriate assessment of individual participant's energy systems and deliver an effective group energy systems session based on individual participant targets. • Deliver effective strength and explosive-based training sessions. • Deliver an effective conclusion to the session, including a cool down and exercises with mobility and flexibility objectives. • Supervise participant technique to ensure all exercises are performed safely and effectively. • Provide feedback on performance and coach suitable adaptations, regressions, progressions and corrective strategies to ensure continued success. • Reflect on the session and your own performance.
Routine maintenance and cleaning	<ul style="list-style-type: none"> • How to undertake routine maintenance and cleaning tasks of the training facility and its equipment. • How to monitor and maintain safe and high standards of hygiene in accordance with the facility's health and safety procedures. 	<ul style="list-style-type: none"> • Ability to organise own work and collaboratively work with colleagues to ensure that routine maintenance and cleaning tasks are undertaken in line with the facility's daily cleaning schedule, whilst minimising the impact to the participant experience. • Educate participants on the value of training etiquette in creating a safe, effective and positive environment.
Professional practice	<ul style="list-style-type: none"> • Recognise good practice for Strength and Conditioning Trainers in the industry through professional ethics, values and appropriate legislation such as data protection and confidentiality, supporting the health, safety and welfare of participants and others at all times to provide a safe and inclusive training environment. • How to develop oneself by maintaining a high level of industry knowledge through regular relevant professional development. • Recognise the limitations of own scope of practice and when to refer to other professionals. 	<ul style="list-style-type: none"> • Provide a high standard, participant-focused service through excellence in the training environment and application of best practice such as injury reduction, welfare, safeguarding and risk management. • Demonstrate tact and discretion when handling participant data, adhering to relevant legislation. • Work effectively alone and as part of a team with minimal supervision. • Recognise opportunities for feedback from colleagues and/or participants and use this to reflect on own practice.

5. Product development guidance

This section is aimed at organisations developing formal educational products mapping to this Professional Standard. The requirements should be considered in the development of all educational products seeking CIMSPA endorsement.

The CIMSPA Professional Development Board (PDB) has agreed any of the formal educational products listed in the table below can be developed for the role of Strength and Conditioning Trainer. Where evidence that all elements of the Professional Standard are included, CIMSPA endorsement can be sought.

Educational product	Mapping requirements	Professional Standard achieved on attainment?
Regulated vocational qualification	Fully mapped	YES
Apprenticeship programme	Fully mapped	YES
HE programme/modules	Fully mapped	YES

All formal educational products that are seeking CIMSPA endorsement must be submitted to CIMSPA and should include all elements outlined in the Professional Standard and assessed in line with the intention of the standard.

Education providers seeking CIMSPA endorsement for a product against this Professional Standard are asked to consider the following:

- a) They determine and justify the level of the product they have developed, in line with regulator guidance. To ensure parity, the level for all educational products that fully map to this Professional Standard should be the same.

The level assigned is determined by leading awarding organisations currently offering qualifications in the sector in which the role resides.

This is not a first-to-post exercise but one in which education providers are invited to submit their levelled units/full qualification for review as part of the CIMSPA endorsement process.

Once agreed by CIMSPA, all subsequent fully-mapped educational products must conform to the level set for this Professional Standard.

Level descriptors set out the generic knowledge and skills associated with the typical holder of a qualification at a given level and it should be ensured that educational products fully mapping to this Professional Standard are a 'best-fit' for the level assigned.

- b) They determine the total qualification time for the qualification/unit and outline the minimum requirements for practical assessment.

For the role of Strength and Conditioning Trainer, sufficient time between engaging a participant and final assessment needs to be allowed to show improvements in the participants lifestyle, health and fitness. The assessments should be conducted using individuals, small groups and different types of participants.

- c) They stipulate practical assessment of outcomes and learning development requirements (preparing and delivering Strength and Conditioning sessions) must be overseen by someone who has demonstrated their own subject matter expertise as an Accredited Strength and Conditioning Coach (ASCC).

Where practically possible, a practical end-point assessment is conducted with 'real participants.'

The use of peers for an end-point practical assessment is not deemed appropriate.

- d) Their quality assurance meets the appropriate regulator's guidance, including: internal and external quality assurance, staffing requirements and assessment generation and evidence.

6. Learning and development requirements (LDRs)

The LDRs outline the key areas of learning and assessment that should be contained within any educational product seeking CIMSPA endorsement against a Professional Standard. There are 8 key areas of learning and development for the job role of Strength and Conditioning Trainer, of which all areas are interconnected and mandatory. The key areas are:

1. Consultations, assessments, inductions and screening.
2. Maximising the participant experience.
3. Exercise anatomy and physiology.
4. Lifestyle management and participant motivation.
5. Prepare and plan for strength and conditioning sessions.
6. Delivering strength and conditioning training sessions.
7. Routine maintenance and cleaning.
8. Professional practice.

N.B. Examples: e.g. are given within the LDRs to provide an overview of the knowledge and skills most relevant to the role: It is not mandatory to assess learners against 100% of the examples provided, however, sufficient coverage to ensure occupational competence on achievement must be ensured. This will be reviewed as part of the CIMSPA endorsement process.

1. Consultations, assessments, inductions and screening

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K1.1	Participant consultation process	<ul style="list-style-type: none">• Understand the consultation process specific to strength and conditioning programme planning and own professional role boundaries including:<ul style="list-style-type: none">- The significance of the consultation as part of the participant experience/participant journey.- Importance of educating participant about their own role, responsibilities and limitations in providing assistance (scope of practice).- The importance of communicating with other professionals and the wider support team: e.g. S&C coach, sports coach, parent or guardian.- The full range of activities/services/classes available to participants and how to provide further information about them.- The different demographics, fitness levels and goals of participants' and how best to cater for their differing needs.- Relevance of data protection and participant confidentiality.- An organisation's participant charter/service promise and the importance of striving to exceed it.- Related products, systems and technology that help to enhance the participant experience: e.g. class booking apps.
K1.2	Health screening and risk stratification	<ul style="list-style-type: none">• Know evidence-based pre-exercise health screening methods:<ul style="list-style-type: none">- PAR-Q, PAR-Q+, organisation/employer devised methods or a health commitment statement.- Informed consent.- Physical assessments including exercises to assess movement skill, strength-based ability and cardiovascular fitness.- Youth maturation monitoring.• Understand risk stratification models and when to signpost or refer a participant to other specialist exercise professionals and/or medical professionals including:<ul style="list-style-type: none">- How to risk stratify participants.- Have a clear understanding of the absolute contraindications to exercise and factors that indicate that a participant is at low, medium or high risk of an adverse event occurring during exercise or the propensity for risk.- Have knowledge of the recognised tools: e.g. the Irwin and Morgan traffic light system, other national and/or international evidence-based tools and national and locally agreed protocols, referral and care pathways.- Relevant health history, current health status, particularly in relation to risk factors for heart disease.- The identification of past and present injuries, disabilities and medical conditions that would necessitate medical clearance or referral to an appropriate medical professional or other clinician or medically supervised exercise programme.• Know when to refer, signpost or take action and what action to take in each circumstance: e.g., low, medium or high risk.

K1.3	Participant assessment and review process	<ul style="list-style-type: none"> • Know a range of health and fitness assessments relevant to the training environment and participant including: <ul style="list-style-type: none"> - Use of lifestyle questionnaires to gather relevant information: e.g. the participants previous and current levels of activity and their exercise likes and dislikes. - Selecting assessments appropriate to the participant and assessment conditions/expectations of the organisation. - Range of assessments relevant to the participant including: <ul style="list-style-type: none"> ○ Resting heart rate. ○ Blood pressure. ○ Maximal and sub-maximal cardio-respiratory fitness. ○ Muscular strength and endurance. ○ Youth maturation stage. ○ Body Mass Index (BMI). ○ Waist circumference. ○ Progress photographs (if desired). ○ Contraindications and limitations for testing. • Know how to monitor and review participant progress including: <ul style="list-style-type: none"> - The importance of building-in re-assessments/reviews to support participant progress, motivation and adherence. - How to review a strength and conditioning programme in consultation with the participant, based on results, goals, individual needs and changing circumstances.
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K1.4	Participant induction process	<ul style="list-style-type: none"> • Know how to induct participants in the training environment: <ul style="list-style-type: none"> - Policies/procedures in and around the gym/facility relevant to own role. - Facility walk-through/show-round: e.g. gym floor, cardiovascular machines and resistance equipment (machine and free weights). - How to adapt inductions for individuals and small groups (maximum of 5) to maintain effectiveness.
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Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S1.1	Conduct consultations, assessments and training environment inductions	<ul style="list-style-type: none"> • Assess a participant's readiness to exercise and the need for signposting or referral to other relevant professionals. • Conduct safe and effective consultations, health assessments, training environment inductions and reviews with participants. • Adapt inductions for individuals and small groups (maximum of 5) to maintain effectiveness. • Provide a 'participant experience' during consultations, health assessments and inductions including: <ul style="list-style-type: none"> - Engage and build rapport with participants with varying needs. - Show empathy. - Give positive, motivating, timely and relevant feedback to participants. - Be accountable and take responsibility for participants. - Use effective communication methods to ascertain a participant's needs and enhance the participant experience. - Signpost participants to other areas of the facility if they show an interest in other activities or services provided by the organisation.

2. Maximise the participant experience

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K2.1	Participant needs	<ul style="list-style-type: none"> • Understand the local demographics of their organisation's participants and how this affects the products and services offer. • Understand participant expectations and aspirations within the training environment. • Know how to build social support and inclusion within the training environment. • Know how to obtain feedback to support exercise adherence.
K2.2	Participant service	<ul style="list-style-type: none"> • Understand their organisation's products and offering. • Understand a typical participant journey in a training environment. • Understand how to present themselves in a professional and approachable manner, in line with organisational standards. • Understand the importance of participant retention and how to influence this.
K2.3	Participant engagement	<ul style="list-style-type: none"> • Understand different methods to engage with participants including: <ul style="list-style-type: none"> - Face-to-face. - Telephone. - Written: e.g. letters, email and posters. - Social media. - Digital technology. • Know different types of conflict and how to manage them. • Know different methods to build rapport in order to maximise the participant experience. • Know how to support safe and enjoyable use of the training environment. • Understand the importance of being accessible and approachable to participants.
K2.4	Participant communication	<ul style="list-style-type: none"> • Understand different communication techniques and how to use them including: <ul style="list-style-type: none"> - Observation, non-verbal techniques, body language, open and closed questioning and active listening. - How to adapt communication methods to meet the needs of participants from differing backgrounds, cultures and experience etc.
K2.5	Participant feedback	<ul style="list-style-type: none"> • Understand different methods to obtain participant feedback and channels of recording and reporting in line with organisational procedures. • Understand the feedback cycle and the impact of their role on the participant experience.
Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S2.1	Participant data	<ul style="list-style-type: none"> • Interpret participant data in order to understand the different types of participants and their needs.
S2.2	Participant engagement	<ul style="list-style-type: none"> • Demonstrate participant engagement: e.g. deliver an informative tour, deal with participant enquiries and offer an end-to-end service.

Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S2.3	Participant service	<ul style="list-style-type: none"> • Demonstrate exemplary participant service to include: problem solving, discretion, influencing, teamwork, suitable language use.
S2.4	Develop rapport with participants	<ul style="list-style-type: none"> • Develop rapport with participants in a friendly and approachable manner whilst respecting equality and diversity.
S2.5	Professional demeanour	<ul style="list-style-type: none"> • Demonstrate a professional demeanour: e.g. uniform and personal attributes and positive first impressions.
S2.6	Communication	<ul style="list-style-type: none"> • Demonstrate communication methods appropriate to the participant.

3. Exercise anatomy and physiology

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K3.1	Structure and function of the circulatory system	<ul style="list-style-type: none">• Know the structure and function of the circulatory system including:<ul style="list-style-type: none">- Function of the heart.- How blood moves through the four chambers of the heart.- Systemic and pulmonary circulation.- Structure and functions of blood vessels.- Systolic and diastolic blood pressure.- Blood pressure classifications.
K3.2	Structure and function of the respiratory system	<ul style="list-style-type: none">• Know the structure and function of the respiratory system including:<ul style="list-style-type: none">- Structure and function of the lungs.- Main muscles involved in breathing.- Passage of air through the respiratory tract.- Process of gaseous exchange of oxygen and carbon dioxide in the body (to cover internal and external respiration).
K3.3	Structure and function of the skeleton	<ul style="list-style-type: none">• Know the structure and function of the skeleton including:<ul style="list-style-type: none">- Functions of the skeleton.- Structures of the axial skeleton.- Structures of the appendicular skeleton.- Classification of bones.- Structure of long bones.- Stages of bone growth.- Posture, in terms of:<ul style="list-style-type: none">o Curves of the spine.o Neutral spine alignment.o Movement potential of the spine.o Postural deviations of the spine.
K3.4	Joints	<ul style="list-style-type: none">• Know joints in the body including:<ul style="list-style-type: none">- Classification of joints.- Structure of synovial joints.- Types of synovial joints and their range of motion.- Joint movement potential and joint actions.
K3.5	Muscular system	<ul style="list-style-type: none">• Know the muscular system including:<ul style="list-style-type: none">- Types, characteristics and functions of muscle tissue.- Structure of skeletal muscle.- Name and location of the anterior skeletal muscles.- Name and location of the posterior skeletal muscles.- Structure and function of the pelvic floor muscles.- Types of muscle action.- Joint actions brought about by specific muscle group contractions.- Skeletal muscle fibre types and their characteristics.
K3.6	Life-course of the musculoskeletal system	<ul style="list-style-type: none">• Know the life-course of the musculoskeletal system, including bone, to cover:<ul style="list-style-type: none">- Children and adolescents.- Antenatal and postnatal period.- Older adults (50 plus).

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K3.7	Energy systems	<ul style="list-style-type: none"> • Know the different energy systems including: <ul style="list-style-type: none"> - How carbohydrates, fats and proteins are used in the production of energy/adenosine triphosphate. - Use of the three energy systems during aerobic and anaerobic exercise: e.g. according to different type, duration and intensity of exercise. - Anabolism, catabolism and excess post-exercise oxygen consumption (EPOC). - By-products of the three energy systems and their significance in muscle fatigue. - Effect of endurance training/advanced training methods on the use of fuel for exercise.
K3.8	Nervous system	<ul style="list-style-type: none"> • Know the nervous system including: <ul style="list-style-type: none"> - Roles and functions of the nervous system. - Principles of muscle contraction. - The 'all or none' law/motor unit recruitment. - How exercise can enhance neuromuscular connections and improve motor fitness.
K3.9	Digestive system	<ul style="list-style-type: none"> • Know the structure and function of the digestive system including: <ul style="list-style-type: none"> - Functions of each section of the alimentary canal including: <ul style="list-style-type: none"> ○ Mouth. ○ Oesophagus. ○ Stomach. ○ Small intestine. ○ Large intestine. - How fats, proteins and carbohydrates are digested and absorbed and the main enzymes involved. - Role of dietary fibre in the maintenance of gut function. - Role of the liver and pancreas in assisting digestion. - Timescales for digestion. - Importance of fluid.
K3.10	Anatomical planes of movement	<ul style="list-style-type: none"> • Know the classification of anatomical planes of movement including: <ul style="list-style-type: none"> - Frontal. - Coronal. - Sagittal. - Transverse.
K3.11	Anatomical terms of location	<ul style="list-style-type: none"> • Know the classification of anatomical terms of location including: <ul style="list-style-type: none"> - Superior and inferior. - Anterior and posterior. - Medial and lateral. - Proximal and distal. - Superficial and deep.
K3.12	Applied biomechanics and kinesiology	<ul style="list-style-type: none"> • Know the effect of exercise variables on biomechanics and kinesiology.

Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S3.1	Application of exercise anatomy and physiology	<ul style="list-style-type: none">• Apply knowledge of anatomy and physiology in the planning of safe and effective exercise programmes for a range of participants including:<ul style="list-style-type: none">- Aerobic and anaerobic systems.- Muscle balance.- Heart rate response to exercise.- Long and short term physiological adaptations to exercise.- Energy demands of different activities.- Tailoring exercise to individual needs and goals

4. Lifestyle management and participant motivation

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K4.1	Lifestyle and health promotion	<ul style="list-style-type: none"> Understand components of a healthy lifestyle and factors that affect health and wellbeing. Understand the UK physical activity guidelines for different ages and the dose-response relationship. Know the nationally-recognised healthy eating recommendations. Know how to seek evidence-based/reputable health and wellbeing advice. Understand the benefits of physical activity and exercise to health and wellbeing. Understand the importance of sleep and the impact of poor sleep quality. Know how to tailor advice on the components of a healthy lifestyle according to the individual participant. Know how to communicate the health-related benefits of exercise to participants. Know how technological advancements can be used to support the participant experience to increase physical activity levels, motivation and focus: e.g. wearable technology, pedometers, smartphone apps.
K4.2	Risk reduction and management of common health conditions	<ul style="list-style-type: none"> Understand the prevalence and health implications of the UK population. Know professional role and scope of practice in relation to other relevant specialists when offering health and wellbeing advice and guidance. Know how physical activity and exercise can help to reduce the risk and manage common health and chronic conditions including: <ul style="list-style-type: none"> Coronary heart disease. Stroke. Type 2 diabetes. Cancer. Obesity. Mental health problems. Musculoskeletal conditions. Know the range of relevant exercise or health professionals that participants can be signposted/referred on to when they are beyond own scope of practice.
K4.3	Behaviour change and exercise adherence	<ul style="list-style-type: none"> Understand the stages of change and the Trans-Theoretical Model of behaviour change. Understand the role of intrinsic and extrinsic motivation in exercise adherence. Know a range of techniques/approaches that can motivate adherence to exercise.
Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S4.1	Motivation	<ul style="list-style-type: none"> Create a positive and motivating environment that encourages the participant to fully engage and adhere to the training programme. Support the participant to recognise and develop their intrinsic and extrinsic motivation to exercise.

Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S4.2	Goal setting	<ul style="list-style-type: none"> • Set SMART goals linked to a participant's individual needs, wants and motivators. • Monitor targets, review and evaluate progress and adapt accordingly.
S4.3	Health promotion	<ul style="list-style-type: none"> • Offer credible advice and guidance appropriate to own level of expertise to promote positive healthy lifestyle choices. • Be an ambassador for the sector leading by example and displaying positive health behaviours.

5. Prepare and plan for strength and conditioning sessions

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K5.1	The role of the professional strength and conditioning trainer and how to promote the benefits of strength and conditioning	<ul style="list-style-type: none">• Identify and understand the roles of UK and international professional bodies in strength and conditioning and UK sport national governing bodies (NGBs).• Understand the environments in which a strength and conditioning trainer can work.• Understand national recommended guidelines for physical activity and health for different ages: e.g. guidelines from the UK chief medical officer (CMO).• Understand guidelines and 'position statements' from relevant governing and/or professional bodies.• Outline principles, values and ethical codes of practice laid out by professional bodies and/or governing bodies.• Identify credible information sources and research methods and the importance of evidence-based practice.• Understand current 'best practice' in training young people, specifically for youth sport.

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K5.2	Develop a strength and conditioning programme	<ul style="list-style-type: none"> • Understand the components of fitness (health and skill related). • Understand the principles and variables of fitness/training e.g. FITT principles (Frequency, Intensity, Time, Type) including: <ul style="list-style-type: none"> - Adaptation, modification and progression for each component. - Implications of specificity. - Progressive overload. - Reversibility. - Adaptability. - Individuality. - Recovery time. • Understand the differences between programming exercise for physical and general health benefits, and sports performance. • Know how to incorporate safe and effective warm ups and cool downs. • Understand the range of available equipment and how to select the most appropriate exercise and exercise modes to meet the participant's needs and goals. • Understand the effect of speed of movement on posture, alignment and intensity. • Understand different learning styles, goals, needs, likes and dislikes and how these should to be reflected in planning. • Develop alternative activities, exercises or participation options for the overall programme. • Plan for the provision of adaptations, progressions and regressions for each exercise included in the programme. • Set and adapt meaningful goals linked to a participant's individual needs, wants and motivators. • Understand the best use of different forms of external resistance for strength and explosive training. • Understand the importance of developing muscular equilibrium when planning and designing training programmes, especially in the weight room. • Know how to programme exercise to develop metabolic fitness, resistance training, and explosive training outcomes. • Know how to minimise any risks relevant to the programme. • Be able to set realistic timings and sequences for sessions.
K5.3	Monitor and review strength and conditioning exercise programmes	<ul style="list-style-type: none"> • Understand how to monitor and review safe and effective S&C programmes including: <ul style="list-style-type: none"> - Reasons for temporary deferral of exercise. - Importance of verbal screening and how to conduct it. - Benefits and limitations of different methods of monitoring. - Methods of evaluating how well strength and conditioning programmes are meeting participant needs. - When to proactively engage with participants and when not to.

Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S5.1	Plan strength and conditioning programmes	<ul style="list-style-type: none"> • Apply knowledge to the planning of safe and effective S&C programmes for a range of participants including individuals and groups within scope of practice, using appropriate equipment and methods.
S5.2	Monitor and review strength and conditioning programmes	<ul style="list-style-type: none"> • Monitor and review the effectiveness of the S&C programme. • Carry out regular programme review meetings with participants to ascertain how well the exercise programme met participant needs and progression towards goals and any improvements that can be made to the programme plan, etc. • Evaluate and reflect on planned programmes to ensure the physical and psychological needs of the individual are being met. • Manage the training environment demonstrating ability to effectively interact and support different participants: e.g. use of effective communication skills, rapport building, technique advice and correction. • Appraise own performance in relation to the session. • Appraise participants' performance in relation to the session. • Assess the appropriateness of the session content in relation to the user group and environment. • Propose changes and adaptations to the session based on the appraisal of own performance, participant performance and appropriateness of session content.

6. Delivering a strength and conditioning session

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K6.1	Coaching a range of strength and conditioning methods	<ul style="list-style-type: none"> • Know a range of S&C training methods including: <ul style="list-style-type: none"> - Effective RAMP warm up protocol. - Foundation movements to promote mobility, stability, postural integrity and coordination. - Strength based training and explosive activities. - Energy system training protocols. - High intensity running-based activities.
K6.2	RAMP warm up	<ul style="list-style-type: none"> • Know how to deliver an effective warm up that contributes to enhancing the specific training session objectives.
K6.3	Foundation movements training	<ul style="list-style-type: none"> • Know safe and effective technique for a range of foundation movements to cover: <ul style="list-style-type: none"> - Squat. - Lunge, including multi-planar. - Hinge. - Jump, including bilateral and unilateral variations. - Quadrupedal. - Push. - Pull. - Rotation. - Running.
K6.4	Resisted movements for strength based and explosive training	<ul style="list-style-type: none"> • Know safe and effective technique for a range of exercises to cover: <ul style="list-style-type: none"> - Bodyweight exercise including suspension training. - Medicine balls. - Barbells: lifting and spotting technique. - Dumbbells: lifting and spotting technique. - Other resistance training equipment such as kettlebells and sandbags. - Supplementary equipment: e.g. the use of mats for trunk strength exercises.
K6.5	Energy system training protocols	<ul style="list-style-type: none"> • Know safe and effective technique for a range of exercises to address individual participant's needs in an individual or group setting, to cover: <ul style="list-style-type: none"> - Sub-maximal and maximal running-based assessment protocols to include appropriate indoor options. - Sub-maximal and maximal equipment-based assessment protocols. - Sub-maximal and maximal running-based training sessions to include appropriate indoor options. - Sub-maximal and maximal equipment-based training sessions.
K6.6	High intensity running based activities	<ul style="list-style-type: none"> • Know safe and effective technique for a range of exercises to cover: <ul style="list-style-type: none"> - Acceleration. - Deceleration. - Change of direction.

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K6.7	Coaching strength and conditioning sessions	<ul style="list-style-type: none"> • Know how to observe, monitor and correct participants to maintain safety and effectiveness of exercise at all times, covering: <ul style="list-style-type: none"> - How to deliver an effective warm up for a range of activities. - How to approach participants in a friendly, non-threatening manner. - How to work with participants to effectively improve exercise technique. - How to adapt, regress, progress and apply corrective strategies as required. - How to modify and adapt exercises for a range of individual needs e.g., offering alternatives that regress or progress an exercise. - Alternative activities/exercise options. - Awareness of health and safety considerations - How to position and reposition yourself during training sessions to be able to effectively observe participants and respond to their needs. - How to monitor the safety and intensity of exercise. - How to provide feedback and coaching cues which are timely, clear and motivational.
K6.8	Use of equipment in strength and conditioning training sessions	<ul style="list-style-type: none"> • Know how to safely use selected equipment available in the training environment, covering: <ul style="list-style-type: none"> - Awareness of general health and safety considerations. - Referral to manufacturer guidelines and/or other instructions if unfamiliar with the normal use, maintenance and servicing of equipment. - Consideration of individual participant abilities in equipment selection and setup. - How wearable technology can be used to support safe and effective strength and conditioning exercises and training sessions.

Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S6.1	Coaching strength and conditioning sessions	<ul style="list-style-type: none"> • Observe, monitor and engage with participants to ensure safety and effectiveness by: <ul style="list-style-type: none"> - Utilising explanations and demonstrations that are technically correct, safe and appropriate to the individual participant. - Observing participants' movement, correcting exercise technique to ensure safe and effective alignment, execution and use of equipment. - Providing participant-specific coaching cues, feedback, encouragement and reinforcement in a friendly, professional manner. - Offering adaptations and alternatives that meet a participant's individual needs whilst improving performance: e.g. progression, regression, corrective strategies and alternative exercises as required. - Adopting appropriate positions to observe participants and respond to their needs. - Monitoring the safety and intensity of exercise. - Manipulating FITT (Frequency, Intensity, Time and Type) principles to ensure progression according to individual needs. - Demonstrate effective coaching methods to cater for different learning styles, tailoring coaching styles and communication methods to individual's needs. - Ensure participants understand how to continue their programme of exercise without direct supervision.

Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S6.2	Exercise demonstrations	<ul style="list-style-type: none">• Demonstrate safe and effective technique to cover all selected exercises covering:<ul style="list-style-type: none">- RAMP warm up.- Foundation movements.- Strength based training and explosive activities.- Energy system protocols.- High intensity running based activities.- Cool down.

7. Routine maintenance and cleaning

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K7.1	Cleaning substances	<ul style="list-style-type: none"> Understand the principle uses and suitability of a range of cleaning substances relevant to the training environment: e.g. anti-bacterial spray.
K7.2	Cleaning equipment	<ul style="list-style-type: none"> Understand the principle uses and suitability of a range of cleaning equipment: e.g. mop, paper towels etc.
K7.3	Safe systems of work	<ul style="list-style-type: none"> Understand standard operating procedures with regards to routine maintenance and cleaning, adhering to: <ul style="list-style-type: none"> Manufacturer's guidelines. Control of substances hazardous to health (COSHH). Manual handling techniques. Electrical safety and security. Safe storage of equipment.
K7.4	Personal safety	<ul style="list-style-type: none"> Know personal protective equipment, risk assessments and emergency action plans.
K7.5	Hazards	<ul style="list-style-type: none"> Know how to identify hazards relating to: activity areas and gym, people and physical risks. Understand risk assessments and reporting procedures.
K7.6	Cleaning schedules	<ul style="list-style-type: none"> Know the cleaning routines and organisational standards relevant to the training environment. Know how to maintain the safety of themselves and others.
K7.7	Waste management	<ul style="list-style-type: none"> Know the different types of waste: e.g. hazardous and non-hazardous and how to dispose of it, in line with the organisation's environmental policy.
Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S7.1	Preparing to clean	<ul style="list-style-type: none"> Plan and prepare own cleaning activities through the interpretation of the organisation's daily cleaning schedule.
S7.2	Cleaning activities	<ul style="list-style-type: none"> Demonstrate suitable use of appropriate cleaning substances and equipment in line with the organisations safe systems of work, cleaning schedules and organisational standards, whilst maintaining the safety of themselves and others.
S7.3	Hazards	<ul style="list-style-type: none"> Demonstrate appropriate action to deal with identified hazards to include appropriate use of signage and reporting procedures.
S7.4	Communication	<ul style="list-style-type: none"> Demonstrate effective communication to participants and colleagues whilst cleaning to ensure a positive participant experience.

8. Professional practice

Ref	Knowledge and understanding:	A Strength and Conditioning Trainer must:
K8.1	Conduct and ethics	<ul style="list-style-type: none"> • Know how to conduct themselves and portray a professional image. • Know roles and responsibilities of self and others involved in the programme including the participant and other staff/professionals. • Know relevant industry codes of professional conduct/ethics related to own role including safeguarding of young and vulnerable adults, anti-doping and boundaries of professional relationships.
K8.2	National guidelines, legislation and organisational procedures	<ul style="list-style-type: none"> • Know current national guidelines, legislation and organisational procedures relevant to own role including: <ul style="list-style-type: none"> – Data protection, participant confidentiality, conflict of interest. – Health and safety at work, disclosure and barring service (DBS), safeguarding children and vulnerable adults, equality and diversity, personal liability insurance. – Control of substances hazardous to health, reporting of injuries, diseases and dangerous occurrences regulations, electricity at work regulations and first aid regulations. – Individual organisational policies and procedures in relation to own role and responsibilities, normal operating procedures (NOPs), organisation emergency action plans (EAPs), importance of risk assessment and how to conduct it. • Understand storage plans and how to create one. • Understand the health and safety implications of assembly, dismantling, hygiene and storage of equipment. • Know about manufacturer's guidelines and where to locate them. • Understand manual handling requirements in relation to own role. • Know how to carry out risk assessments.
K8.3	Professional development	<ul style="list-style-type: none"> • Understand how to keep knowledge and skills up to date: <ul style="list-style-type: none"> – How to access relevant industry-recognised CPD. – The importance of accessing regular relevant CPD activities. – Keeping up to date with industry trends. • Know how to work within the boundaries of own professional knowledge and competence based on qualifications and experience: e.g. to programme exercise for children and young people, it is necessary to possess a qualification mapping to the relevant CIMSPA Professional Standard(s). • Understand how to complete self-reflection/evaluation to aid personal development. • Know relevant legislation/policy and guidelines relating to CPD.
K8.4	Business acumen	<ul style="list-style-type: none"> • Know how to financially plan: e.g. profit and loss, tax, national insurance, liability insurance and music license fees. • Understand organisation's/own product offer and how to support secondary spends where appropriate. • Know the importance of digital media and how to develop a digital plan. • Understand social media/digital profiles and their impact. • Know how to set up a professional social media/digital profile.

Ref	Skills:	A Strength and Conditioning Trainer must be able to:
S8.1	Work alone and as part of a team with minimal supervision	<ul style="list-style-type: none"> • Demonstrate the ability to work alone and as part of a team with minimal supervision showing that you can: <ul style="list-style-type: none"> – Communicate effectively with participants and the wider support team. – Demonstrate skills and abilities such as: <ul style="list-style-type: none"> ○ Adaptability. ○ Confidence. ○ Team working. ○ Problem solving. ○ Conscientiousness. ○ Efficient time management. ○ Ability to plan and prepare own work. ○ Ability to identify areas for development. ○ Ability to follow instructions.
S8.2	Responsibility and professional duty of care to participants	<ul style="list-style-type: none"> • Ensure participant safety and wellbeing at all times including: <ul style="list-style-type: none"> – Compliance with relevant legal and organisational responsibilities: e.g. <ul style="list-style-type: none"> ○ Health and safety at work. ○ Equality and diversity. ○ Safeguarding. ○ Data protection. ○ Hazard identification. ○ Safe working practices. ○ Ethics and professional conduct.

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