

## UKSCA Competency Document

### Use of this document:

On the following pages are tables that outline the outcomes that you must be able to demonstrate, in relation to the competencies expected of a strength and conditioning practitioner with performance-oriented athletes. The source of evidence details how the assessors will be expecting you to demonstrate these outcomes.

### Section A - Underpinning Scientific Knowledge

| A1.0 The normal physiological functions of the human body during / in response to different training: |  |                      |
|---|--|----------------------|
|   | Outcome  | Source of evidence   |
| A1.1  | Identify metabolic demands<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Identify predominant metabolic pathway for energy supply</li> <li>▪ Aerobic</li> <li>▪ Anaerobic – lactate</li> <li>▪ Anaerobic glycolytic</li> <li>▪ ATP-CP system</li> </ul>  | Multiple choice exam |
| A1.2  | Demonstrate knowledge of the cardio-vascular and respiratory system and its responses to different training stimuli<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Acute responses to exercise intensity:</li> <li>▪ Cardiac output, rate of breathing, blood flow redistribution in response to exercise</li> <li>▪ Long-term cardiovascular responses to different training programmes:</li> </ul>                | Multiple choice exam |
| A1.3  | Identify neuro-muscular responses to training stimuli<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Structure &amp; Role of the motor unit</li> <li>▪ Motor unit recruitment &amp; relationship with load intensity / effort</li> <li>▪ Neural adaptations to training</li> <li>▪ Muscle fibre structural responses to training programmes</li> <li>▪ Connective tissue responses to mechanical loading</li> </ul> | Multiple choice exam |
| A1.4  | Identify skeletal structure responses to training stimuli<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Different types, structures and roles of bone</li> <li>▪ Adaptation of bone to mechanical loading</li> </ul>   | Multiple choice exam |
| A1.5  | Demonstrate knowledge of the influence of the environment upon training and performance response<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Influence of altitude, ambient heat / cold, humidity &amp; travel upon physiological response and skill response</li> </ul>   | Multiple choice exam |
| A1.6  | Apply the above knowledge in a context that is appropriate for both a sport and the individual(s) concerned.   | Case study           |

**Section A continued - Underpinning Scientific Knowledge**

| A2.0 Applied functional human anatomy and movement |  |                      |
|--|--|----------------------|
|  | Outcome  | Source of evidence   |
| A2.1   | Undertake kinesiological analysis of joint involvement and action within specific movements<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Identify major joint structures (nature, type, planes &amp; ranges of motion) involved in identified activities</li> <li>▪ Nature of joint action (extension, flexion, abduction, adduction, rotation, joint-specific description, e.g. pronation / supination)</li> <li>▪ Demonstrate the relationship between sports actions and training movements</li> </ul> | Multiple choice exam |
| A2.2   | Analysis of muscular involvement and actions within specific movements<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Identify prime movers and synergistic muscles involved in the movement</li> <li>▪ Identify recruitment patterns of muscles in a particular action</li> <li>▪ Identify muscular actions involved in the activity: Eccentric, concentric, isometric</li> </ul>  | Multiple choice exam |
| A2.3   | Demonstrate knowledge of proprioceptive and neural control mechanisms<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Identify knowledge of structure &amp; role of the neuro-muscular system in controlling human movement</li> </ul>   | Multiple choice exam |
| A2.4   | Apply the above knowledge in a context that is appropriate for both a sport and the individual(s) concerned.   | Case study           |
| A3.0 The principles of training and adaptation     |  |                      |
|  | Outcome  | Source of evidence   |
| A3.1   | Demonstrate the knowledge of planning variables<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Identify role of the overcompensation process in planning training sequences</li> <li>▪ Identify factors involved in the coaching process</li> </ul>   | Multiple choice exam |
| A3.2   | Knowledge of valid & reliable testing & monitoring procedures<br><u><b>Indicative knowledge:</b></u> <ul style="list-style-type: none"> <li>▪ Use of monitoring athletes training responses through training records or sports-specific fitness tests</li> </ul>   | Multiple choice exam |
| A3.3   | Apply the above knowledge in a context that is appropriate for both a sport and the individual(s) concerned.   | Case study           |

**Section B - Strength and conditioning skills working with performance-oriented athlete(s)**

The strength and conditioning coach should possess and demonstrate the following skills and abilities that are transferable and not limited to, the performance-oriented environment.

|      | <b>Outcome</b>  | <b>Source(s) of evidence</b>                     |
|------|---|--|
| B1.1 | Implement a sports specific periodised programme  | Case study                                       |
| B2.1 | Demonstrate the coaching and/or technical knowledge of the following techniques (applied in a sport specific manner): <ol style="list-style-type: none"> <li>1) Weight lifting               <ul style="list-style-type: none"> <li>▪ Full Back Squat (high bar position)</li> <li>▪ Clean and jerk OR Snatch</li> </ul> </li> <li>2) Plyometric technique</li> <li>3) Speed and agility</li> </ol> | Practical assessment                             |
| B2.2 | Demonstrate the coaching and/or technical knowledge of the following techniques (applied in a sport specific manner): <ol style="list-style-type: none"> <li>1) Weight lifting               <ul style="list-style-type: none"> <li>▪ Bench Press</li> <li>▪ Bent-over row</li> </ul> </li> </ol>   | Multiple choice exam and/or pre-learning         |
| B2.3 | Demonstrate the coaching and/or technical knowledge of the following techniques (applied in a sport specific manner): <ol style="list-style-type: none"> <li>4) Aerobic and anaerobic endurance</li> <li>5) Flexibility</li> </ol>  | Case study presentation and multiple choice exam |
| B3.1 | Demonstrate the implementation of monitoring procedures to evaluate progress  | Case study                                       |

**Section C - Professional and general competencies in strength and conditioning**

The strength and conditioning coach should have the ability to demonstrate an applied knowledge of ethical practice in strength and conditioning.

| <b>C1.0 Design and plan sessions/programme</b>  |   |                              |
|---|---|------------------------------|
|   | <b>Outcome</b>  | <b>Source(s) of evidence</b> |
| C1.1  | Undertake appropriate needs analysis to determine athlete needs for training programme design   | Case study                   |
| C1.2  | Identify appropriate tasks and activities that progressively link to enable performance improvement   | Case study                   |
| C1.3  | Design training sessions for athletic performance enhancement in different populations  | Case study                   |
| C1.4  | Plan realistic timings, sequences, intensity and duration of the activities in conjunction with the athletes competitive schedule and / or technical / tactical programme | Case study                   |
| C1.5  | Evaluate the effectiveness of the training programme  | Case study                   |
| <b>C2.0 Delivery of coaching sessions</b>       |   |                              |
|   | <b>Outcome</b>  | <b>Source(s) of evidence</b> |
| C2.1  | Deliver warm-up activities appropriate to the session and the athlete(s)  | Practical assessment         |
| C2.2  | Demonstrate delivery of safe, effective and appropriate training methods  | Practical assessment         |
| <b>C3.0 Communicate effectively with others</b> |   |                              |
|   | <b>Outcome</b>  | <b>Source(s) of evidence</b> |
| C3.1  | Demonstrate effective communication with athletes   | Practical assessment         |
| C3.2  | Demonstrate effective communication with other members of the athlete support team  | Letters of support           |
| C3.3  | Demonstrate confidentiality of data elicited in relation to athlete(s) and their athletic performance (in accordance with current data protection legislation).           | Multiple choice exam         |

**Section C continued - Professional and general competencies in strength and conditioning**

| <b>C4.0 Apply the principles of health and safety to your environment</b> |   |   |
|---|---|---|
|   | <b>Outcome</b>  | <b>Source(s) of evidence</b>  |
| C4.1  | Demonstrate knowledge of risk assessment and the identification of emergency procedures | Health & safety information<br>Submission of copy of NOP (one venue only) |
| C4.2  | Demonstrate knowledge of first aid and associated procedures                            | Recognised first aid certification<br>(min. 4 hour course)                |