

## Level 4 Diploma in Coaching Strength and Conditioning Course Modules

### 1. Introduction

In the introduction, you will learn about what to expect in the course. This will include how the modules are structured, how to navigate the BWL e-learning platform and how you will be assessed. The information covered in this section, alongside your initial discussion with a BWL assessor, should help you to fully prepare for the course.

### 2. The Strength and Conditioning Coach

This module provides aspiring strength and conditioning (S&C) coaches with insight into the world of a strength and conditioning coach.

This includes:

- What is meant by strength and conditioning?
- What is the role of a coach in a S&C environment?
- How a S&C coach can operate effectively as part of a multidisciplinary team
- The benefits of establishing a coaching philosophy
- How a coach can develop their own philosophy
- What are the knowledge and skills of an effective S&C coach?

### 3. Sport psychology

Sport psychology is multifaceted and includes many concepts related to the workings of the mind. Coaches are not expected to be sport psychologists however, having an understanding of key psychological concepts will be invaluable for coaches who will engage with different individuals in a high-performance setting.

Coaches will cover:

- The subject of stress and how it relates to anxiety and arousal
- Key psychological concepts that underpin the performance enhancement process
- How they can facilitate impactful learning environments that help an athlete optimise their experience of the training process
- Critical thinking, exploring concepts such as unconscious bias to help promote reflective practice, which can help a coach to learn, become more self-aware and ultimately improve their practice

### 4. Physiological function and biomechanics

As part of the prerequisites for this course you will have covered concepts relating to anatomy and physiology. The main objective of this module is to act as a refresher for coaches, helping to revise key physiological concepts that underpin the performance enhancement process.

This includes:

- Recapping the major systems of the body
- Reviewing biomechanical concepts
- Delving deeper into training adaptation theory
- Focusing on general adaptations to training as well as how the body responds to training in extreme environments

## **5. Skill acquisition and coaching pedagogy**

In this module you will be introduced to models of learning that help break down the learning process. You will also explore prevalent motor control theories. Together, this information provides the S&C coach with an understanding of how we develop skill as human beings.

You will explore the role a coach has in facilitating the learning process. This will include analysis of key concepts including instruction, constraints-based coaching and feedback.

By the end of this module, coaches should feel more confident in applying strategies to optimise an athlete's learning.

## **6. The needs analysis**

The needs analysis forms a fundamental part of the performance enhancement process, allowing a S&C coach to develop a plan to support an athlete achieve their sporting goals.

By the end of the module you will:

- Be able to recall the important components of a needs analysis
- Be able to conduct a detailed needs analysis for a sport of your choice
- Be able to conduct a detailed athlete analysis

## **7. Athlete testing**

Once a needs analysis has been completed, the S&C coach should have clarity on what physical qualities underpin high-performance in the athlete's chosen sport.

This will inform the types of tests that will be relevant. In this module, you will consider the importance of testing and how it can inform the training process.

You will cover a range of tests that measure an athlete's ability in areas such as:

- Strength
- Power
- Speed
- Change of direction speed
- Aerobic capacity
- Anaerobic capacity
- Flexibility

You will also be introduced to a movement screening process, which will profile an athlete's movement competency.

## 8. Athlete monitoring

Effective monitoring allows a coach to determine the readiness of an athlete from session-to-session. In this module, you will review monitoring strategies designed to track an athlete's performance capacity. This helps a coach to identify possible signs of fatigue and/or overtraining.

You will also cover a range of different tools that a coach can use with athletes, while learning the potential benefits of external and internal and monitoring tools.

## 9. Periodisation

One of the main roles of the S&C coach will be to carefully manage an athlete's training to ensure there is appropriate balance of stress and recovery. If managed correctly, the athlete will recover sufficiently from the stress imposed by training, which will create adaptations that positively affect their performance.

As an athlete becomes more experienced and is able to tolerate greater training loads, it becomes necessary to manipulate training variables with more complex periodisation and programming strategies to ensure the athlete is able to drive continued improvements in various physical qualities (also referred to as biomotors).

You will be introduced to the concept of periodisation and how it can be distinguished from programming. You will review recovery-adaptation theories which will provide you with the underpinning knowledge to design effective programmes.

You will cover the different periodisation models that coaches can adopt for sports that require athletes to peak for extended periods of time, before reviewing what the science tells us about the effectiveness of tapering strategies.

## 10. The warm-up and flexibility training

In this module you will learn how to design and implement warm-ups that help to improve athletic performance. For too long, a warm-up has been seen as something that just tags onto the 'proper' session. Poorly designed warm-ups can feel like a waste of time to athletes or at best, something they *have* to do.

It is a coach's responsibility to use their time with an athlete as effectively as possible. The warm-up offers a fantastic opportunity to increase engagement and develop an athlete's athleticism. You will discover how warm-ups can be designed to help improve an athlete's long-term performance, integrating key concepts such as activation, and how it can help to increase performance while reducing injury risk.

Finally, you will find out more about flexibility and mobility training, distinguishing the difference between each while reviewing examples of how coaches integrate flexibility and mobility exercises into an athlete's training programme.

## 11. Advanced resistance training

In this module you will learn how to construct effective resistance training programmes. This will start with the identification of popular resistance training modes, where you will learn the potential benefits and considerations for each.

Much of the module will focus on the performance of key barbell and dumbbell exercises (excluding the weightlifting derivatives which will be covered in the *Weightlifting for Sports Performance* module).

After you reviewed the technical demands of common resistance training exercises, the rest of the module will focus on how these can be incorporated into a S&C programme. This starts with an understanding of the key principles of training that should underpin any resistance training programme. You will then delve into the acute training variables that can be manipulated to elicit specific adaptations.

Finally, you will learn more about advanced resistance training methods which can further enhance athletic performance and discover how resistance training programmes can be integrated into a wider athletic programme that focuses on the development of multiple qualities simultaneously.

## 12. Weightlifting for sports performance

In this module you will learn about the benefits of integrating weightlifting derivatives into a S&C programme to enhance sports performance.

You will access the British Weight Lifting Technical Model, which provides coaches with a tool to objectively and effectively analyse weightlifting technique.

After you have reviewed the technical demands of traditional weightlifting movements and their derivatives, you will learn how they can be programmed to drive specific adaptations (e.g., increasing strength and/or power). You will also be able to access examples of programmes for sports that integrate weightlifting derivatives.

Finally, you will learn more about how coaches can positively influence athletes in their performance of the lifts by using effective instruction, constraints and feedback.

## 13. Plyometric training

To understand why plyometric training can be useful for athletes, it is important to understand the mechanisms that underpin an athlete's ability to run faster and/or jump higher. This will include a review of tendon properties and the stretch-shortening cycle.

The final section of this module focuses on how to integrate plyometric training into an athlete's programme. This includes covering training models that provide coaches with a rational framework for progressing the difficulty of exercises, while taking into consideration the needs of the athlete.

Coaches will also learn more about how to modulate intensity and volume to enhance performance and mitigate the risk of injury.

#### **14. Speed, agility and change of direction**

In this module you will learn about the qualities that underpin sprint, change of direction and agility performance.

The first section of this module focuses on defining key concepts, including: speed, change of direction, agility, attacking agility and multidirectional speed (MDS).

Coaches will then be introduced to the biomechanical underpinnings of MDS actions before reviewing acceleration and sprinting technical models. From here, coaches will discover how they can coach and programme for speed development by utilising a variety of training methods.

The final section of this module focuses on the technical underpinning of change of direction and agility. Coaches will then be introduced to a variety of drills that can be incorporated into an athlete's training, before reviewing an example of an evidence-based training programme to enhance change of direction and agility performance.

#### **15. Endurance for sport performance**

In this module you will learn about the physiological factors that affect endurance. You will also be introduced to key concepts that relate to endurance performance.

As a coach, you will need to become familiar with the adaptations that can be elicited with different methods of training. Adaptations specific to endurance training are covered in this module alongside an overview of key training variables that will influence a coach in their programming.

Finally, you will cover the benefits of endurance training for athletes across several sports while reviewing examples of sport-specific programmes that can be used.

#### **16. Long term athletic development**

Children are not simply 'mini-adults.'

In this module you will be introduced to areas that underpin long-term athletic development, including growth and maturation, programming and periodisation.

Children will grow at different rates. During this module coaches will be introduced to methods that help determine a child's maturation status. Coaches will then be able to use this information to determine what is appropriate, based on principles outlined in the *Youth Physical Development Model*.

The information in this module will help coaches to improve the movement quality and fitness levels of all young people. Although there is a focus on the development of physical qualities to enhance sports performance, the importance of improving the fitness of young people to enhance their quality of life should also be a priority. A S&C coach can play an important role in helping young people develop a positive relationship to physical training; a relationship that could help them for the rest of their lives.

## 17. Recovery

Adequate recovery is required for athletes to manage fatigue and improve their physical performance. After training and/or competition, an athlete's performance can be impaired for up to hours or days.

Performance can be impaired due to:

- Damage to muscle tissues
- Depletion of energy substrates (ATP, PCr and stored glycogen)
- Neuromuscular fatigue
- Psychological fatigue (e.g., feelings of tiredness which may affect cognitive function and emotional resilience)

In this module, coaches will explore the recovery methods available to athletes, highlighting the evidence-based strategies that should be prioritised for each athlete. This includes delving into sleep, nutritional and stress management strategies.

## 18. Safety, Policy and Legislation in Coaching Practice

The first section of this module will introduce health and safety and the responsibilities for both an employer and employee.

Coaches will then cover the types of hazards and risks that may present in a S&C environment, focusing largely on gym-based activity. The coach will learn how to respond to different emergencies and be able to identify when third parties such as the emergency services will be able to support.

In the second section of this module the coach will be introduced to key legal and organisational responsibilities associated with the fitness industry. This includes an understanding of the importance of relevant policies and procedures.

Coaches will also learn more about safeguarding and how it can impact the S&C coach in their role, as well as the importance of promoting equality and diversity in society. Finally, coaches will review the insurance requirements of a fitness professional.

## 19. Strength & conditioning coach case study

As part of this course coaches are required to complete a case study. This case study allows you to provide a body of evidence to meet the qualification specification requirements and achieve the *Level 4 Diploma in Strength and Conditioning* qualification.

The case study is divided into separate sections and has been designed in a manner that will replicate the typical journey a coach will undertake when working with an athlete. The case study assessment will consist of the following:

- Induction
- Needs analysis
- Athlete testing
- Goal setting

- Annual plan and 12-week training programme
- Athlete monitoring
- Athlete review
- Coach reflection

## **20. Strength and conditioning coach practical assessment**

As part of this course coaches are required to complete a practical assessment. This allows you to provide a body of evidence to meet the qualification specification requirements and achieve the *Level 4 Diploma in Strength and Conditioning* qualification. This section can be completed by video submission or in person.