

BTEC Level 3 Nationals in Sport and Exercise Science: Comparing unit content between the 2010 and 2016 qualifications

Introduction

This document is designed to help you with mapping unit content as you transition from BTEC National Level 3 (2010) qualifications to the new BTEC Level 3 Nationals (2016).

Our guidance is broken down into two sections:

Section 1: How and where can I use existing content, and what new content has been included?

Highlighting comparable content with the BTEC National (2010) and how closely this maps across to the BTEC Level 3 Nationals (2016).

Section 2: What do these changes mean for planning and teaching?

Review of key changes in language, outlining which units are externally assessed and when, and where to find further support.

Further support can also be found within the relevant specification on our website ([here](#)).

Below is an overview of how wider support also links to this document:

| Support | Purpose |
|------------------------------|---|
| Delivery Plans | Examples of how to structure and deliver different size qualifications over a one or two year period, including when to prepare learners for external assessment. |
| Authorised Assignment Briefs | Provides scenarios and teaching plans for each unit, to be used either as they are set out, or to inform your own planning. |
| Schemes of Work | Demonstrates how the unit content can be covered in the GLH while providing lesson ideas and highlighting links to other units to help you plan your teaching. |
| Sample Assessment Materials | Examples of how an externally assessed unit may be presented, with an accompanying mark scheme. These sample assessment materials have been developed to support this qualification and will be used as the benchmark to develop the assessment students will take. This covers either an exam or task. |
| Sample Marked Learner Work | Indicative examples of learner work which has been assessed accurately to national standards. |

Section 1: How and where can I use the existing (2010) content, and what new content has been included?

The tables focus on mandatory units for the BTEC Nationals in Sport and Exercise Science (2016) and highlights similar content with the BTEC Nationals in Sport and Exercise Science (2010).

| 2016 | 2010 |
|---|--|
| Unit 1: Sport and Exercise Physiology | |
| Learning Aim A: Responses of the body systems to a single sport or exercise session | |
| A1 Skeletal system A2 Muscular system A3 Respiratory system A4 Cardiovascular system A7 Energy systems | Similar content in: <ul style="list-style-type: none"> Unit 2: Learning Outcome 1: Be able to investigate the initial responses of the body to exercise |
| Learning Aim B: Fatigue and how the body recovers from exercise | |
| B1 Causes of fatigue B2 Recovery of energy systems | Similar content in: <ul style="list-style-type: none"> Unit 2: Learning Outcome 3: Know fatigue and how the body recovers from exercise |
| Learning Aim C: Adaptations of the body systems to exercise | |
| C1 Skeletal system C2 Muscular system C3 Respiratory system C4 Cardiovascular system C7 Energy systems | Similar content in: <ul style="list-style-type: none"> Unit 2: Learning Outcome 4: Know how the body adapts to long-term exercise |
| Learning Aim D: Environmental factors and sport and exercise performance | |
| D1 High Altitude D2 Responses of body systems to high altitude D3 Adaptations of the body systems to high altitude D4 Thermoregulation D5 Excessive heat D6 Extreme cold | Similar content in: <ul style="list-style-type: none"> Unit 21: Learning Outcome 1: Know how temperature and altitude affect exercise and sports performance |
| New content | |
| A5 Nervous System A6 Endocrine system B3 Recovery of musculoskeletal system B4 Overtraining C5 Nervous system C6 Endocrine system C8 Measurement of body systems and their contribution to sport and exercise performance | |

| 2016 | 2010 |
|--|---|
| Unit 2: Functional Anatomy | |
| Learning Aim B: Anatomy of the cardiovascular system | |
| B1 Location, anatomy and function of cardiovascular components B2 Function of the cardiovascular system B3 Cardiac cycle | Similar content in: <ul style="list-style-type: none"> Unit 1: Learning Outcome 3: Know the structure and function of the cardiovascular system |
| Learning Aim C: Anatomy of the respiratory system | |
| C1 Location, anatomy and function of respiratory system components C2 Function of the respiratory system | Similar content in: <ul style="list-style-type: none"> Unit 1: Learning Outcome 4: Know the structure and function of the respiratory system |
| Learning Aim D: Anatomy of the skeletal system | |
| D1 Anatomy of the bone D2 Process of bone growth and remodelling D3 Location of skeletal bones D5 Joints D6 Function of skeletal system | Similar content in: <ul style="list-style-type: none"> Unit 1: Learning Outcome 1: Know the structure and function of the skeletal system |
| Learning Aim E: Anatomy of the muscular system | |
| E1 Muscle types E2 Neuromuscular process of muscle contraction E3 Location of skeletal muscles | Similar content in: <ul style="list-style-type: none"> Unit 1: Learning Outcome 2: Know the structure and function of the muscular system |
| New content | |
| A1 Anatomical language Some parts of D1 Anatomy of the bone D4 Ligaments F1 Phases of sport and exercise movement F2 Interrelationship of the muscular and skeletal systems in movement analysis | |

| 2016 | 2010 |
|---|---|
| Unit 3: Applied Sport and Exercise Psychology | |
| Learning Aim A: Motivation for sports and exercise | |
| A1 Types of motivation A2 Theories of motivation A3 Motivational environment and its influence on sports performers | Similar content in: <ul style="list-style-type: none"> Unit 3: Learning Outcome 1: Know the effects of personality, motivation and aggression on sports performance |

| Learning Aim B: Competitive pressure in sport | |
|---|---|
| B1 Theories of arousal-performance relationship B2 Stress and anxiety on sports performance B4 Aggression as a response to competitive pressure | Similar content in: <ul style="list-style-type: none"> Unit 3: Learning Outcome 2: Know the impact of arousal, stress and anxiety on sports performance Unit 3: Learning Outcome 1: Know the effects of personality, motivation and aggression on sports performance |
| Learning Aim E: Group dynamics in sport | |
| E1 Group processes E2 Cohesion E3 Leadership | Similar content in: <ul style="list-style-type: none"> Unit 3: Learning Outcome 3: Know the psychology of group dynamics in sports environments |
| Learning Aim F: Psychological interventions for sports performance and exercise | |
| F3 Goal setting F4 Imagery in sport and exercise F6 Arousal control techniques in sport and exercise | Similar content in: <ul style="list-style-type: none"> Unit 20: Learning Outcome 3: Know the use of imagery and mental rehearsal in sport and exercise Unit 20: Learning Outcome 4: Know the techniques used to control arousal in sport and exercise |
| New content | |
| A4 Signs and effects of over-motivation B3 Consequences of stress and anxiety C1 Self-confidence and sport and exercise performance C2 Self-efficacy in sport and exercise performance C3 Self-esteem and its impact on sport and exercise performance D1 Growth mindset versus fixed mindset D2 Resilience in sport D3 Perfectionism F1 Aims of psychological interventions F2 Performance profiling F5 Self-talk in sports and exercise | |

| 2016 | 2010 |
|---|---|
| Unit 4: Field and Laboratory-based Fitness Testing | |
| Learning Aim A: Examine the preparation required prior to sport and exercise field- and laboratory-based testing | |
| A3 Validity and reliability of testing protocols when conducting sport and exercise assessments | Similar content in: <ul style="list-style-type: none"> Unit 8: Learning Outcome 1: Know a range of laboratory-based and field-based fitness tests |

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| Learning Aim B: Undertake anthropometry and somatotype testing procedures in sport | |
| B1 Anthropometric assessment methods applied within the sport and exercise laboratory | Similar content in: <ul style="list-style-type: none"> Unit 8: Learning Outcome 3: Be able to administer appropriate fitness tests |
| New content | |
| A1 Health and safety in a sport and exercise laboratory A2 Ethical considerations when conducting sport and exercise testing B2 Somatotype profiling applied within the sport and exercise laboratory C1 Applied laboratory and experimental testing C2 Experimental data collection methods used within the sport and exercise laboratory C3 Data handling and evaluation of outcomes when conducting laboratory experimentation D1 Scientific application of experimental protocols in sport and exercise science D2 Performance profiling through research design | |

| 2016 | 2010 |
|---|--|
| Unit 5: Applied Research Methods in Sport and Exercise Science | |
| Learning Aim A: Understand the importance of research in sporting environments | |
| A1 Introduction to research and the different types of research | Similar content in: <ul style="list-style-type: none"> Unit 4: Learning Outcome 1: Know key issues in research methods for the sport and exercise sciences |
| Learning Aim B: Examine key issues that impact on the effectiveness and quality of research in the sport and exercise sciences | |
| B1 Validity, reliability, accuracy and precision in research | Similar content in: <ul style="list-style-type: none"> Unit 4: Learning Outcome 1: Know key issues in research methods for the sport and exercise sciences |
| B2 Ethical issues | <ul style="list-style-type: none"> Unit 4: Learning Outcome 2: Know data collection techniques for the sport and exercise sciences |
| Learning Aim C: Examine the three main approaches to research in the sport and exercise sciences | |
| C1 Quantitative research C2 Qualitative research C3 Mixed-methods research | Similar content in: <ul style="list-style-type: none"> Unit 4: Learning Outcome 1: Know key issues in research methods for the sport and exercise sciences |

Learning Aim D: Apply appropriate research methods to a selected sport and exercise sciences-based research problem

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| D1 Quantitative research designs D4 D5 D6 | <p>Similar content in:</p> <ul style="list-style-type: none"> Unit 4: Learning Outcome 4: Know quantitative data analysis techniques for the sport and exercise sciences Unit 3: Learning Outcome 3: Know qualitative data analysis techniques for the sport and exercise sciences |
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New content

A2 The importance of research for individuals involved in sport and exercise science
A3 The importance of using research to inform work with clients
D2 Quantitative data collection methods
D3 Quantitative data analysis methods
D7 Mixed-research designs
D8 Mixed-research data collection
D9 Mixed-research data analysis

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| 2016 | 2010 |
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Unit 6: Coaching for Performance and Fitness

Learning Aim A: Investigate coaching for performance and fitness

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| A1 Skills and knowledge for coaching for performance and fitness A4 Methods of supporting the development of performance and fitness | <p>Similar content in:</p> <ul style="list-style-type: none"> Unit 16: Learning Outcome 1: Know the roles, responsibilities and skills of sports coaches Unit 16: Learning Outcome 2: Know the techniques used by coaches to improve the performance of athletes |
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Learning Aim C: Demonstrate effective planning of coaching to develop performance and fitness

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| C1 Planning considerations | <p>Similar content in:</p> <ul style="list-style-type: none"> Unit 16: Learning Outcome 3: Be able to plan a sports coaching session |
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Learning Aim D: Explore the impact of coaching for performance and fitness

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| D1 Delivering coaching for performance and fitness D2 Reflection on session and planned series D3 Coaching development based on reflection | <p>Similar content in:</p> <ul style="list-style-type: none"> Unit 16: Learning Outcome 4: Be able to deliver and review a sports coaching session |
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New content

A2 Qualities for coaching for performance and fitness
A3 Best practice for a coach for performance and fitness
A5 Technology and sports professionals

- B1 Practices to develop skills and techniques for performance
- B2 Practices to develop tactics for performance
- B3 Adaptation of practices to promote development of performance and fitness
- B4 Measures of performance and fitness
- C2 Planning for an individual session for performance and fitness
- C3 Planning for an overall series of sessions for performance and fitness

| 2016 | 2010 |
|---|---|
| Unit 13: Nutrition for Sport and Exercise Performance | |
| Learning Aim A: Principles of nutrition and hydration | |
| A1 Basic nutritional principles A2 Macronutrients A3 Micronutrients A4 Fibre A5 Fluid intake | Similar content in: <ul style="list-style-type: none"> • Unit 12: Learning Outcome 1: Know the concepts of nutrition and digestion • Unit 12: Learning Outcome 3: Know the relationship between hydration and sports performance |
| Learning Aim B: Factors affecting digestion and absorption of nutrients and fluids | |
| B1 Basic principles of digestion | Similar content in: <ul style="list-style-type: none"> • Unit 12: Learning Outcome 1: Know the concepts of nutrition and digestion |
| Learning Aim C: Nutritional intake for health and wellbeing | |
| C1 Balanced diet for health and wellbeing | Similar content in: <ul style="list-style-type: none"> • Unit 12: Learning Outcome 4: Be able to plan a diet appropriate for a selected sports activity |
| Learning Aim D: Nutritional strategies for sports performance | |
| D1 Nutritional strategies based on the demands of different sports D2 Supplements to support nutritional strategies | Similar content in: <ul style="list-style-type: none"> • Unit 12: Learning Outcome 4: Be able to plan a diet appropriate for a selected sports activity |
| New content | |
| B2 Hormonal control of blood sugar and water balance B3 Control of glycogen synthesis C2 Benefits of a balanced diet C3 Eating disorders | |

Section 2: What do these changes mean for planning and teaching?

What are the key changes that I need to be aware of?

Different language used for delivery

You can find a glossary of key terms and command verbs for both internally and externally assessed units below:

Internally assessed: appendix 2 within the specifications, found [here](#)

Externally assessed: [here](#)

Examples of where the key terms have changed are below:

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|---|--|
| 2016 unit 4: Field & Laboratory-based Fitness Testing | 2010 unit 8: Fitness Testing for Sport & Exercise |
| Pass criteria requires learners to 'explain' testing procedures and 'perform' and 'conduct' tests and finally 'create' a sports performer profile following testing | Pass criteria mainly requires 'describe' Pass criteria also requires learners to 'prepare', 'administer' and 'give feedback' on the process of fitness testing for two contrasting individuals. |
| 2016 unit 5: Applied Research Methods in Sport & Exercise Science | 2010 unit 4: Research Methods for Sport & Exercise Sciences |
| Pass criteria requires learners to 'explain' | Pass criteria requires learners to 'outline' types/ techniques/classification of data. Pass criteria also requires learners to 'identify' and 'describe' research techniques |

How should I plan delivery of these units to reflect the changes in assessment?

More guidance on delivery models can be found within BTEC Nationals Delivery Guide and Delivery Plans.

These documents are available within the course materials section for Sport and Exercise Science (accessible [here](#)).