

CAMBRIDGE NATIONAL LEVEL 2 SPORTS SCIENCE

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CAMBRIDGE NATIONAL L2 SPORTS SCIENCE

Students studying the Sports Science course in Key Stage 4 have three lessons a week.

Lessons are delivered both practically and in theory & Computer rooms.

We cover 4 units for this Level 2 course - RO41, RO42, RO43 & RO46.

There are 4 learning objectives (LO) for each unit.

Exam Board: OCR

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SPORTS SCIENCE RO41 UNIT

UNIT RO41: Reducing the risk of sports injuries

Assessment:

1 hour written exam paper.

60 marks.

Set & Assessed by OCR

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SPORTS SCIENCE RO41 UNIT

There are four learning objectives covered in this unit:

LO1: Understand different factors which influence the risk of injury.

LO2: Understand how appropriate warm up and cool down routines can help prevent injury

LO3: Know how to respond to injuries in a sporting context

LO4: Know how to respond to common medical conditions

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SPORTS SCIENCE RO41 UNIT

LO1: Understand different factors which influence the risk of injury.

Content:

- extrinsic factors which can influence the risk of injury - types of activity, coaching/ supervision, environmental factors, equipment, safety hazards.
- intrinsic factors which can influence the risk of injury - physical preparation, individual variables, psychological factors, posture and causes of poor posture & sports injuries related to posture

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SPORTS SCIENCE RO41 UNIT

LO2: Understand how appropriate warm up and cool down routines can help prevent injury.

Content:

- Physical benefits of warm ups & cool downs
- Psychological benefits of warm ups & cool downs
- Key components of a warm up & cool downs

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SPORTS SCIENCE RO41 UNIT

LO3: Know how to respond to injuries in a sporting context

- Acute and chronic injuries
- Types, causes and treatments of common sports injuries
- How to respond to injuries and medical conditions in a sporting context
- Emergency action plans

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SPORTS SCIENCE RO41 UNIT

LO4: Know how to respond to common medical conditions

- The symptoms of common medical conditions
- How to respond to common medical conditions

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SPORTS SCIENCE RO42 UNIT

UNIT RO42: Applying Principles of Training

Assessment:

Centre assessed tasks.

Moderated by OCR.

60 marks.

Assignment based unit where students draft work, respond to feedback and complete final pieces within structured timelines (shared at the start of each unit).

Students complete an assignment for each LO covered.

Each LO builds on the previous LO

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SPORTS SCIENCE RO42 UNIT

There are four learning objectives covered in this unit:

LO1: Know the principles of training in a sporting context

LO2: Know how training methods target different fitness components.

LO3: Be able to conduct fitness tests.

LO4: Be able to develop fitness training programmes.

Students assess fitness levels, set training targets, devise and perform a 6 week training programme and evaluate their performance.

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SPORTS SCIENCE RO42 UNIT

LO1: Know the principles of training in a sporting context

- Principles of training in a sporting context - Progressions, Specificity, Reversibility, Moderation,

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SPORTS SCIENCE RO42 UNIT

LO2: Know how training methods target different fitness components.

- Aerobic & Anaerobic exercise
- Components of fitness
- Specific training methods for each component of fitness

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SPORTS SCIENCE RO42 UNIT

LO3: Be able to conduct fitness tests.

- Conducting fitness tests - protocols, guidelines, reliability, validity, test sequences.
- Maximal & sub maximal tests
- Interpreting data against normative data, targets

SPORTS SCIENCE RO42 UNIT

LO4: Be able to develop fitness training programmes.

- Design a 6 week training programme
- Undertake the 6 week programme collecting data.
- Evaluating the effectiveness of the training programme with reference to data collection and normative data

SPORTS SCIENCE RO43 UNIT

UNIT RO43: The body's response to physical activity

Assessment:

Centre assessed tasks.

Moderated by OCR.

60 marks.

Assignment based unit where students draft work, respond to feedback and complete final pieces within structured timelines (shared at the start of each unit).

Students complete an assignment for each LO covered.

Each LO builds on the previous LO

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SPORTS SCIENCE RO43 UNIT

There are four learning objectives covered in this unit:

LO1: Know the key components of the musculoskeletal and cardiorespiratory systems, their functions and roles

LO2: Understand the importance of the musculo-skeletal and cardio-respiratory systems in health & fitness

LO3: Be able to assess the short-term effects of physical activity on the musculoskeletal and cardiorespiratory systems

LO4: Be able to assess the long-term effects of physical activity on the musculoskeletal and cardiorespiratory systems

Students complete assignments for each LO

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SPORTS SCIENCE RO43 UNIT

LO1: Know the key components of the musculoskeletal and cardiorespiratory systems, their functions and roles.

- Key components of the musculoskeletal system and its function - muscles, bones, joints & joint action, connective tissue, functions of the systems
- Key components of the cardio-respiratory system & its function - heart, respiratory system, blood, blood vessels, functions of the cardiorespiratory system
- The role of the musculoskeletal system in producing movement - types of movement, functions of connective tissue, muscular contractions
- The role of the cardiorespiratory system during physical activity - heart rate, blood pressure, vascular shunt mechanism, breathing mechanism, internal respiration, aerobic & anaerobic respiration

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SPORTS SCIENCE RO43 UNIT

LO2: Understand the importance of the musculo-skeletal and cardio-respiratory systems in health & fitness

- Benefits of the cardiorespiratory system in everyday life.
- Benefits of muscular strength and flexibility
- Benefits of muscular endurance

SPORTS SCIENCE RO43 UNIT

LO3: Be able to assess the short-term effects of physical activity on the musculoskeletal and cardiorespiratory systems

- Different short term effects of exercise on the musculoskeletal and cardiorespiratory systems.
- Ways to measure and record the short term effects of exercise on the musculoskeletal and cardiorespiratory systems.

SPORTS SCIENCE RO43 UNIT

LO4: Be able to assess the long-term effects of physical activity on the musculoskeletal and cardiorespiratory systems

- Long term effects of exercise on the musculoskeletal and cardiorespiratory systems
- Ways to measure and record the long term effects of exercise on the musculoskeletal and cardiorespiratory systems

SPORTS SCIENCE RO46 UNIT

UNIT RO46: Technology In Sport

Assessment:

Centre assessed tasks.

Moderated by OCR.

60 marks.

Assignment based unit where students draft work, respond to feedback and complete final pieces within structured timelines (shared at the start of each unit).

Students complete an assignment for each LO covered.

Each LO builds on the previous LO

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SPORTS SCIENCE RO46 UNIT

There are four learning objectives covered in this unit:

LO1: Know how technology is used in Sport

LO2: Understand the positive effects of sports technology

LO3: Understand the negative effects of sports technology

LO4: Be able to evaluate the impact of technology in sport.

Students complete assignments for each LO.

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SPORTS SCIENCE RO46 UNIT

LO1: Know how technology is used in Sport

- How technology is used to enhance performance
- How technology is used to enhance game play
- How technology is used to enhance sportsmanship

SPORTS SCIENCE RO46 UNIT

LO2: Understand the positive effects of sports technology

- The positive effects of sports technology - in performance, game play and spectatorship
- Other positive effects associated with the use of technology in sport

SPORTS SCIENCE RO46 UNIT

LO3: Understand the negative effects of sports technology

- The negative effects of sports technology - in performance, game play and spectatorship
- Other negative effects associated with the use of technology in sport

SPORTS SCIENCE RO46 UNIT

LO4: Be able to evaluate the impact of technology in sport.

- Factors affecting the use of technology in sport
- The impact technology has in sport - both positive and negative views.

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FURTHER INFORMATION

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Exam Board: OCR www.ocr.org.uk

Specification:

<https://www.ocr.org.uk/qualifications/cambridge-nationals/sport-science-level-1-2-j802-j812/>

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RESOURCES

Useful Text book that supports the course:

(Students are not expected to purchase the textbook)



Cambridge National Level 1/2 Sport Science Student eTextbook

Author: Ross Howitt, Mike Murray

ISBN: 9781510455832

Publisher: Hodder Education

Date: 23 05 2019

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USEFUL WEBSITES:

RO41:

<https://www.slideshare.net/garylintern/injuries-associated-with-sports-participation?related=1>

<https://www.slideshare.net/garylintern/injuries-associated-with-sports-participation?related=1>

<https://www.sportsinjuryclinic.net/>

<https://www.brianmac.co.uk/warmup.htm>

<https://www.nhs.uk/live-well/exercise/common-posture-mistakes-and-fixes/>

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USEFUL WEBSITES:

RO42:

<http://www.shape.com/fitness/workouts/15-next-big-fitness-trends/>

<http://www.topendsports.com/testing/guide-conduct.htm>

<http://www.bringithomepersonaltraining.com/components-of-physical-fitness/>

<http://www.brianmac.co.uk/conditon.htm>

<https://www.nerdfitness.com/blog/how-to-build-your-own-workout-routine/>

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USEFUL WEBSITES:

RO43:

<https://www.bbc.co.uk/bitesize/guides>

<https://www.innerbody.com/image/musfov.html>

<https://www.youtube.com/watch?v=rMcg9YzNSEs>

<https://www.youtube.com/watch?v=f-FF7Qigd3U>

<http://www.pelinks4u.org/articles/TA1Health1009.pdf>

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USEFUL WEBSITES:

RO46:

<https://www.bbc.co.uk/bitesize/guides/zw4gk7h/revision/4>

<https://www.youtube.com/watch?v=ZaallEANc0I>

<https://www.youtube.com/watch?v=JA5ptKSd9QA>

<https://sites.google.com/hwbcymru.net/stjosephsgcsepe/unit-3/technology-in-sport>

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