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Module details for Physiological Adaptations for Performance

Module Details

SCQF Level:

09

Module Code:

SPS310

Credit Value:

20

Year:

2020/1

Term:

Term 1

School:

School of Applied Sciences

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Description

The overall purpose of this module is to develop students' understanding of the core physiological concepts that underpin performance. This will be achieved by explicitly addressing students' knowledge of biochemical, cardiovascular and neuromuscular bases for performance and training the

body for endurance, team and strength. Throughout this module, students will utilise both physiological and biomechanical equipment to allow them to explore and collect physiological data in relation to enhancing sports performance outcomes.

Aims

The aim of this Module is to provide the student with an understanding of the physiology underpinning sports performance and its adaptation to training and ergogenic aids.

Learning Outcomes

By the end of this module the student should be able to:

1. Critically evaluate the role of different physiological systems in performance

2. Analyse the physiological outcomes of training

3. Explain performance enhancement and evaluate different physiological strategies to improve performance

4. Synthesise performance testing with physiological concepts and training outcomes

Indicative Content

1 Biochemistry of performance

Students will explore the core concepts of energy production during sport and exercise, the metabolic processes and the rate limiting steps for performance and the metabolic adaptations to training.

2 Cardiovascular system and performance

Students will learn about cardiac output and blood flow regulation and cardiovascular adaptation to training.

3 Neuromuscular system and performance

Students will learn about the contractile mechanism, motor unit activation, neuromuscular fatigue and strength, power and speed performance.

4 Doping and performance

Students will develop an understanding of the role of doping in elite sport and the physiological adaptations to doping.

5 Training for performance

Students will explore different training modalities to improve endurance and anaerobic power and strength and how to plan energy specific programmes.

Teaching and Learning Work Loads

For session 2020/21 the expectation is that the teaching and learning hours stated in this descriptor will form a mix of synchronous and asynchronous student/staff activity, with the majority of this being online. The exact pattern of this activity is likely to vary from the standard face-to-face hours listed below but the overall student effort remains the same. Up-to-date information on the delivery of the module can be found on the relevant module MLS site and on your student timetable.

TEACHING AND LEARNING METHOD	HOURS
Lecture	12
Tutorial/Seminar	6
Practical Activity	21

Assessment	40
Independent	121
Total	200

Guidance notes

SCQF Level - The Scottish Credit and Qualifications Framework provides an indication of the complexity of award qualifications and associated learning and operates on an ascending numeric scale from Levels 1-12 with SCQF Level 10 equating to a Scottish undergraduate Honours degree.

Credit Value – The total value of SCQF credits for the module. 20 credits are the equivalent of 10 ECTS credits. A full-time student should normally register for 60 SCQF credits per semester.

Disclaimer

We make every effort to ensure that the information on our website is accurate but it is possible that some changes may occur prior to the academic year of entry. The modules listed in this catalogue are offered subject to availability during academic year 2020/21 , and may be subject to change for future years.

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