

## MPHY103 Physiology and Biomechanics of Sports and Exercise

ECTS Value: 4 ECTS  
Self-Study Hours: 48

Contact Hours: 20  
Assessment Hours: 32

### Overall Objectives and Outcomes

This module aims to provide physical education teachers with an in-depth look at advanced exercise physiology and biomechanics, and their relation to performance, recovery and injury prevention.

By the end of this module, the learner will be able to:

#### Competences:

- a) critically appraise original research papers and formulate recommendations on this basis;
- b) systematically comprehend advanced aspects of sports physiology and core aspects of biomechanics;
- c) autonomously develop methodology based in research and current guidelines.

#### Knowledge:

- a) comprehend core principles and provide practical examples of biomechanics;
- b) appreciate advanced exercise physiology and implications of current research.

#### Skills:

- a) identify and access relevant research articles and formulate evidence based recommendations;
- b) demonstrate a firm understanding of advanced principles of exercise physiology;
- c) recognise how core concepts of biomechanics can translate into physical education and aid injury prevention and performance strategies

### Assessment Methods

This module will be assessed through: Assignment.

### Suggested Readings

#### Core Reading List:

- 1) McArdle Exercise Physiology: Nutrition, Energy, and Human Performance (International Edition), ISBN 10 - 1451193831
- 2) Fundamental Biomechanics of Sport and Exercise Science (3<sup>rd</sup> Edition), ISBN 10 – 0415815088
- 3) British Journal of Sport Medicine

## Supplementary Reading List:

- 1) ACSM's Advanced Exercise Physiology (2<sup>nd</sup> Edition) ISBN 10 – 0781797802
- 2) Richards: The Comprehensive Textbook of Clinical Biomechanics (2<sup>nd</sup> Edition), ISBN 10 – 0702054895