

Liverpool John Moores University

Title: BIOMECHANICAL FOUNDATIONS
Status: Definitive
Code: **4103SPOSCI** (123199)
Version Start Date: 01-08-2021

Owning School/Faculty: Sport and Exercise Sciences
Teaching School/Faculty: Sport and Exercise Sciences

Team	Leader
Richard Foster	Y
Thomas O'Brien	
Mark Robinson	
Dominic Doran	

Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 40
Total Learning Hours: 200 **Private Study:** 160

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	24
Practical	4
Workshop	11

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Test	Anat test	Online anatomy exam covering human anatomical structure and function	50	
Exam	MCQ Exam	Biomechanics multiple choice questions	50	1

Aims

The aim of this module is to introduce the basic principles of human anatomical

structure and biomechanics and to illustrate applications of these principles in sport, exercise and health. The module also aims to provide an introduction to experimental methods in biomechanics and to develop skills in data handling.

Learning Outcomes

After completing the module the student should be able to:

- 1 Describe human anatomical structure and function and apply these concepts to sport, exercise and health
- 2 Apply concepts and techniques of biomechanics to sport and exercise

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Online anatomy test	1
Biomechanics MCQ Exam	2

Outline Syllabus

Anatomical terminology
Tissue organisation and structure
Skeletal Muscle structure and function
Functional anatomy of the musculoskeletal system
Linear motion
Angular motion
2D video analysis
Forces (Newton's Laws)
Jump analysis
Applications in biomechanical contexts

Learning Activities

You are expected to attend time-tabled lectures and engage with practical sessions and online worksheets.

You are also encouraged to utilise the available directed learning/private study time and resources made available via the virtual learning platforms. Students should also complete the required and recommended reading to widen their knowledge, understanding and their ability to apply module material.

Notes

Your knowledge of and understanding of structural and functional anatomy will be developed along with the mechanical principles that govern human movement. This

will be evaluated by the completion of the relevant assessment tasks. You will be expected to engage with interactive resources that facilitate self directed exploration of the human body, functional movement and anatomical principles.