

Summary Information

Module Code	5503SPOPID
Formal Module Title	Biomechanical Principles
Owning School	Sport and Exercise Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Dominic Doran	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
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Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Portobello Institute

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	4
Workshop	17

Module Offering(s)

Offering Code	Location	Start Month	Duration
JAN-PAR	PAR	January	12 Weeks

Aims and Outcomes

Aims	The aim of this module is to develop the understanding of biomechanical principles and key measurement techniques for use in sport and exercise contexts.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Analyse, interpret and report biomechanical data related to sports skills
MLO2	Evaluate biomechanical principles in a sports and exercise context in terms of forces, motion and muscle actions

Module Content

Outline Syllabus
Force analysis, including practical laboratory work and data analysis Motion analysis, including practical laboratory work and data analysis 3D Kinematics, including practical laboratory work and data analysis Combining motion and forces Muscle activity and contraction, including practical laboratory work and data analysis Acceleration and inertial sensors

Module Overview

Additional Information

This module continues to build biomechanical knowledge by addressing fundamental principles on forces, motion and muscle action. You will learn the theoretical concepts behind key biomechanical analysis techniques before applying this knowledge in practical laboratory sessions and coursework. The theoretical insights and practical experiences will be complemented with online worksheets and data analysis tasks. You will also be introduced to more advanced biomechanical methodologies and research areas in biomechanics.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Report	Biomechanics Lab Report	50	0	MLO1
Exam	Biomechanics Short Answer Exam	50	2	MLO2