Technical Training in Biomechanics

Module Information

2022.01, Approved

Summary Information

Module Code	7112SPOSCI
Formal Module Title	Technical Training in Biomechanics
Owning School	Sport and Exercise Sciences
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Sport and Exercise Sciences

Learning Methods

Learning Method Type	Hours
Practical	11
Tutorial	11

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	The aim of this module is to provide technical training in laboratory techniques appropriate to sport and clinical biomechanics. The module will provide the opportunity for students to develop laboratory skills so that they are able to collect and interpret biomechanical data to benchmark standards. The appropriate use of IT in data processing, analysis and communication is paramount and will therefore be a skill developed through this module.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Establish quality control indices for biomechanical measurement.
MLO2	2	Conduct laboratory based protocols according to benchmark standards.
MLO3	3	Demonstrate expertise in validity and reliability as applied to biomechanical techniques.

Module Content

Outline Syllabus	Key themes of this module are developing the skills required to explain measurable human movements and forces using biomechanical theories and equipment. Data collection and analysis focusing on forces, motion capture, biomechanical modelling and inverse dynamics will be central to the module theme.
Module Overview	This module provides an opportunity to focus on the detailed use of biomechanical techniques. It aims to provide technical training in laboratory techniques appropriate to sport and clinical biomechanics. It enables you to develop laboratory skills so that you are able to collect and interpret biomechanical data to benchmark standards.
Additional Information	This module provides an opportunity to focus onto the detailed use of biomechanical techniques. Aspects of the advanced methodology in force and motion analysis will be visited along with Visual 3D biomechanical modelling and analysis software.This module is fundamental to the collection of high quality experimental data in biomechanics, which feeds directly into the independent research project for the MSc thesis.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Assignment 1	50	0	MLO1, MLO2, MLO3
Report	Assignment 2	35	0	MLO1, MLO2, MLO3
Presentation	Presentation	15	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Richard Foster	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings