

Summary Information

Module Code	4503ICBTBE
Formal Module Title	Biophysics and Instrumentation
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	15
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
International College of Business and Technology

Learning Methods

Learning Method Type	Hours
Lecture	45
Practical	9
Tutorial	15

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
APR-PAR	PAR	April	12 Weeks

JAN-PAR	PAR	January	12 Weeks
SEP_NS-PAR	PAR	September (Non-standard start date)	12 Weeks

Aims and Outcomes

Aims	To enable learners to develop knowledge and understanding of the principles underlying a wide range of modern instrumental and associated techniques; selection of technique appropriate to required analysis, preparation and calibration of instrument; quantitative analytical techniques; risk assessment and health and safety at work.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Practice and report upon a range of experimental techniques which can be applied in the qualitative and quantitative analysis of biological molecules.
MLO2	2	Explain the basics of Radiotherapy.
MLO3	3	Examine UV, Lasers and Fibre Optics, and their application in medicine.
MLO4	4	Describe Ultrasonic Technology and Bio-effects.

Module Content

Outline Syllabus	Chromatographic techniques for qualitative and quantitative analyses Centrifugation Spectrophotometry DNA extraction and Gel electrophoresis Blotting Techniques Atomic physics X-ray radiology UV, Lasers and Fibre Optics, uses in Medicine Nuclear Magnetic Resonance in Medicine Ultrasonic in Medicine
Module Overview	
Additional Information	Learners will need access to appropriate laboratory, library and IT facilities and tutorials.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Formal Written Exam	70	2	MLO2, MLO3, MLO4
Practice	Practical	30	0	MLO1

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Karl Jones	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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