

Module Details	
Module Title:	Clinical Instrumentation and Imaging
Module Code:	MHT4004-B
Academic Year:	2019-20
Credit Rating:	20
School:	Department of Biomedical and Electronics Engineering
Subject Area:	Medical and Healthcare Technology
FHEQ Level:	FHEQ Level 4
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	Hours
Lectures	24
Seminar	6
Practical classes and workshops	6
Tutorials	12
Directed Study	152

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims
To understand the function and operating principles of clinical instrumentation and the fundamental principles of healthcare equipment management.

Outline Syllabus
Diagnostic clinical instrumentation and therapeutic medical devices. Clinical imaging systems and image processing.

Clinical equipment management - quality systems, reliability, adverse incidents.

Medical instrumentation life-cycle - acquisition, acceptance, maintenance & repair, decontamination, decommissioning & disposal.

Learning Outcomes

1	Explain the function and operating principles of a range of clinical instrumentation and imaging
2	Explain the principles and methodology of clinical equipment management for each stage of the equipment management life-cycle
3	Identify appropriate instrumentation and imaging to meet a range of clinical needs
4	Demonstrate good infection control awareness
5	Demonstrate logical thought processes
6	Communicate complex ideas in simple terms

Learning, Teaching and Assessment Strategy

Core content will be delivered through key lectures and directed reading, providing students with the opportunity to acquire the information to enhance their knowledge and understanding of subject LO 1,2,3,4. This will be complemented by group discussions and tutorials to allow students to apply this learning to specific issues.

Discipline skills will be developed in open-ended problem solving, tackled by working in small groups supported by members of academic staff LO 1,2,3,4,5,6.

Directed study provides students with the opportunity to undertake guided reading and to develop their own portfolio of learning to enhance transferable skills and knowledge LO 1,2,3,4.

The VLE will be used to provide access to online resources, lecture notes and external links to websites of interest.

Assessment 1: Coursework will involve investigation of, and reporting on, the function and operating principles of specified clinical instruments LO 1,2,5,6.

Assessment 2: Closed book examination in a long answer format will assess the wider module outcomes LO 1,2,3,4,5,6.

Mode of Assessment

Type	Method	Description	Length	Weighting
Formative	Examination - open book or seen paper	Past exam paper to be completed prior to assessment and review during tutorial session	2 hours	%
Summative	Examination - closed book	Long answer exam	2 hours	70%

Summative	Coursework	Investigative Report	-2000 words	30%
-----------	------------	----------------------	-------------	-----

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>.

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.