

Module Details	
Module Title:	Telemedicine for the Digital Health Age
Module Code:	MHT5010-B
Academic Year:	2019-20
Credit Rating:	20
School:	Department of Biomedical and Electronics Engineering
Subject Area:	Engineering
FHEQ Level:	FHEQ Level 5
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	Hours
Lectures	24
Tutorials	24
Directed Study	152

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year (Sept - May)

Module Aims
The module aims to provide students with a good working knowledge related to Telemedicine and digital health care management. It also addresses the strategic, technical and operational issues of a wide range of telemedicine services for a variety of situations.

Outline Syllabus
Telemedicine, Telehealth and Telecare; A telehealth taxonomy; Healthcare technology, Types of Telemedicine, Telemedicine applications, Telemedicine Infrastructure; Benefits and Limitations of Telemedicine; Ethical and Legal Aspects of Telemedicine; Challenges to utilise mobile based health care monitoring systems; Communication networks and services;

Patient monitoring, wearable and touchless sensor technologies, RFID in healthcare; Communications and Powering the Implantable Medical Devices; Telehealth Collaboration Tools; Scope, Benefits and Limitations of Telemedicine; Medical peripherals: Coupling peripheral devices with collaboration tools; EHR-Enabled Clinical Software; Secure messaging, store and forward capability; Telehealth data and Cloud-based services; Telemedicine Service Providers and Applications; Case Studies.

Learning Outcomes

1	Demonstrate good knowledge and understanding of scientific principles and methodology necessary to underpin the telemedicine for digital health
2	Ability to apply and integrate knowledge and understanding of other engineering disciplines to support healthcare technologies
3	Exercise significant judgement in the context of integrated and multidisciplinary healthcare technology
4	Apply a critical approach to solve complex engineering problems.

Learning, Teaching and Assessment Strategy

Concepts are introduced using formal lectures, tutorials, laboratory practical and seminars. Deeper/better understanding is developed during tutorials by solving practical problems. Oral feedback is given during tutorial and laboratory sessions.

The following summative assessments are included: - Classroom test in Semester 1 (15%) to assess LO1, LO2, LO4 - Report portfolio of experimental work (15%) in Semester 2 to assess LO1, LO2 and LO3. - A written closed book exam (70%) by the end of semester 2 to assess LO1, LO2, LO3 and LO4.

LO1: SM1p, SM2p, SM3p
 LO2: SM3p, EA1p, SM3p, EP4p
 LO3: D1p, EA3p, D4p, D6p
 LO4: EA4p, EP3p

Mode of Assessment

Type	Method	Description	Length	Weighting
Summative	Laboratory Report	Report portfolio of experimental work	0-2500 words	15%
Summative	Examination - closed book	Examination-closed book	2 hours	70%
Referral	Examination - closed book	Written exam	2 hours	100%
Summative	Classroom test	Classroom test	1 hour	15%

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.