

Module Details	
Module Title	Telemedicine for the Digital Age
Module Code	MHT7015-B
Academic Year	2020/1
Credits	20
School	Department of Biomedical and Electronics Engineering
Subject Area	Medical and Healthcare Technology
FHEQ Level	FHEQ Level 7
Pre-requisites	N/A
Co-requisites	N/A

Contact Hours	
Type	Hours
Online Lecture (Asynchronous)	24
Online Tutorials (Synchronous)	20
Laboratories	12
Laboratories	144

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1

Module Aims
1. To critically understand of telemedicine and E-Health 2. To provide students with a good working knowledge on current and emerging technologies on RFID and sensing devices, telecommunications technologies, Internet of Things (IoT) and critically evaluate their roles in telemedicine and E-Health provision. 3. To provide students with in-depth understanding on Electronic Health Records and the different standards

Outline Syllabus
1. Telemedicine and E-health including their historical development, requirements and essential elements/technologies for their provisions 2. Commonly used health sensing devices and their applications to telemedicine and E-Health provisions 3. Telecommunications (both wired and wireless) and IoT technologies including 5G communications systems, Low Power Wide Area Networking (LPWAN), Bluetooth, WIFI, Zigbee, Ethernet 4. Electronic Health Records (EHR) including issues on patient privacy and interoperability as well as different EHR standards such as HL7, CEN EN13606, etc.

Learning Outcomes	
Outcome Number	Description
01	Demonstrate a comprehensive knowledge and understanding of the principles and technologies necessary to underpin the critical awareness of current problems associated with telemedicine for digital health.
02	Ability to apply and integrate engineering and electronics information concepts relevant to telemedicine and E-Health and to evaluate them critically.
03	Knowledge and comprehensive understanding of the design process and methodologies and the ability to apply them to health care to solve complex engineering problems.
04	Awareness of the ethical conduct in telemedicine and E-Health provision such as patient information confidentiality and privacy

Learning, Teaching and Assessment Strategy
Concepts are introduced using formal lectures, tutorials, seminars and laboratories Deeper/better understanding is developed by solving practical problems in tutorials. Oral feedback is given during tutorial and laboratory sessions. The following summative assessments are included: - Report portfolio of experimental work (50%) to assess LO1, LO2, LO3 and LO4. - Report portfolio of experimental work (50%) to assess LO1, LO2, LO3 and LO4. LO1: SM1fl, SM2fl, SM3fl LO2: SM3fl, EA1fl, SM3fl, EP4fl LO3: D1fl, EA3fl LO4: ET1fl, ET2fl, ET3fl, ET6fl, EP3fl

Mode of Assessment				
Type	Method	Description	Length	Weighting
Summative	Laboratory Report	Report portfolio on one Telemedicine application (3000 words)	N/A	50%
Summative	Laboratory Report	Report Portfolio of Experimental Work (3000 words)	N/A	50%

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.

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