

Module Details	
Module Title	Renal Technology
Module Code	MHT6014-B
Academic Year	2022/3
Credits	20
School	Department of Biomedical and Electronics Engineering
FHEQ Level	FHEQ Level 6

Contact Hours	
Type	Hours
Lectures	30
Tutorials	12
Directed Study	158

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year

Module Aims
To bring together multidisciplinary aspects of prior learning to evaluate renal technology in terms of biology, mechanics, technology and healthcare

Outline Syllabus
Renal anatomy, physiology and pathology (part 1 & 2), principles of dialysis (part 1 & 2), dialysis technology (part 1 & 2), vascular access and anticoagulation, infection control, treatment of water for dialysis, biochemistry and nutrition, maintenance and monitoring of water treatment and distributions systems, peritoneal dialysis and transplantation, vascular access monitoring and complications, dialysis adequacy, biofeedback and treatment individualisation, renal replacement therapy in intensive care, the patients view. Professional conduct, safety and legal requirements; clinical and commercial context; service, equipment and risk management; environmental concerns and green dialysis.

Learning Outcomes	
Outcome Number	Description
01	Explain the principles of kidney biology and its pathology; renal replacement therapy; infection control in the dialysis unit; water treatment for renal therapy.
02	Critically evaluate healthcare technologies and services for renal dialysis systems; dialysis adequacy, complications and feedback.
03	Exercise significant judgement in the context of integrated and multidisciplinary healthcare technology.
04	Apply scientific method; solve problems systematically.

Learning, Teaching and Assessment Strategy
Knowledge disseminated and concepts explored in lectures, with learning supported by tutorial problems and tutor-lead classroom discussion. Formative assessment and oral feedback given in tutorials. The formal examination assesses all of the learning outcomes expressed in the descriptor, while the coursework allows skills to be demonstrated more fully. PSRB Requirements SM1, SM2, SM3, EA1, EA2, EA3, EA4, D1, D2, ET1, ET2, ET3, ET4, ET5, ET6, EP1, EP2, EP4, EP5, EP6, EP7

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Examination - Closed Book	Closed book exam (2 Hrs)	50%
Summative	Coursework - Written	Coursework assignment (1500 words)	30%
Summative	Classroom test	In-class group based assessed tasks	20%

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.