Module Specification

Magnetic Resonance Imaging Technology

Version: 2023-24, v3.0, 19 Oct 2023

Contents

Part 1: Information

Module title: Magnetic Resonance Imaging Technology

Module code: UZYY4Q-15-M

Level: Level 7

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Health, Science & Society

School: CHSS School of Health and Social Wellbeing

Partner institutions: None

Field: Allied Health Professions

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This distance learning module - MRI Technology is intended to serve as an introduction to the physical principles of MRI and is suitable for study by those new to MRI, or those with more experience who wish to further their knowledge. The aim is to produce healthcare practitioners with sound academic knowledge who are considerate of patient care and safety in the MRI department, whatever their professional background. The physical principles are covered from a basic to

intermediate level. The module may be studied as part of an award pathway, but is equally suited to being taken as a stand-alone module.

Features: Module Entry Requirements: Radiography professional qualification or relevant clinical Magnetic Resonance Imaging (MRI) experience

Educational aims: This distance learning module aims to enhance your practice by increasing your knowledge of the physical principles and safety issues of MRI. This module covers the safety aspects of MR scanning, so producing competent and proficient professionals This will enable you to apply this knowledge clinically in a safe and appropriate manner that offers a quality service to patients.

Outline syllabus: The syllabus will include:

Physical principles: resonance and relaxation
Physical principles: Gradient fields
Physical principles: Pulse sequences
Physical principles: Parameter selection
Physical principles: Artefacts recognition and remedy
Physical principles: Instrumentation and advancing technology
MRI safety
Patient Experience

The module will be delivered online via a Virtual Learning Environment (VLE). The teaching and learning strategy will embrace a series of vodcasts and enquiry-based learning activities presented via the VLE.

Part 3: Teaching and learning methods

Teaching and learning methods: Learning and Teaching Strategy
A variety of learning and teaching methods are employed on the module both during the attended online session and in the form of e-learning when you will be expected to engage with activities outside of formal teaching time. To include keynote lectures, presented as recordings or vodcasts facilitation by subject area experts, essential

reading, assessment preparation. Additional student support will be available via, e-mail and Teams.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Demonstrate a systematic understanding of the core physical principles of Magnetic Resonance Imaging (MRI) and the general relationships between anatomy, pathology and image appearances

MO2 Demonstrate an in depth understanding of MRI safety, legislation and guidelines and how to apply these appropriately in a clinical setting

MO3 Critically evaluate the technical quality of MR images to determine errors and determine remedial action

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 141 hours

Face-to-face learning = 9 hours

Total = 150

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://rl.talis.com/3/uwe/lists/F64E3D84-35F7-8AA5-77E0-D404DD5914A1.html?lang=en&login=1

Part 4: Assessment

Assessment strategy: There are two assessment tasks: an exam and a 1500 word written assignment.

Rationale: The assessment will be themed around the learning outcomes and draw from lecture/ vodcast content and material from independent study. Grades will reflect academic performance. The exam assesses understanding of physical principles, image appearances, and applications. The written assignment focuses on a work-based project centered around MRI Safety and Quality Assurance processes.

Formative assessments will include online quizzes and polls for real-time feedback, as well as peer review of assignment drafts. Students have opportunities to undertake a mock exam and submit a draft written assignment for constructive feedback.

Assessment tasks:

Written Assignment (First Sit)
Description: A work based project based around MRI safety and Quality Assurance (1500 words)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Examination (Online) (First Sit)
Description: Online Exam (1 hour)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO3

Written Assignment (Resit)
Description: A work based project based around MRI safety and Quality Assurance (1500 words)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Examination (Online) (Resit)
Description: Online Exam (1 hour)
Weighting: 50 %
Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study: