



Module Specification

Fundamental Applications of Magnetic Resonance Imaging

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Contents

Module Specification	1
Part 1: Information	2
Part 2: Description	2
Part 3: Teaching and learning methods	4
Part 4: Assessment.....	5
Part 5: Contributes towards	7

Part 1: Information

Module title: Fundamental Applications of Magnetic Resonance Imaging

Module code: UZYY4P-30-M

Level: Level 7

For implementation from: 2023-24

UWE credit rating: 30

ECTS credit rating: 15

Faculty: Faculty of Health & Applied Sciences

Department: HAS 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: Yes

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This distance learning, practice-based module aims to provide students with the necessary knowledge to support and develop their clinical practice in Magnetic Resonance Imaging (MRI). This will enable students to apply this knowledge in a safe and appropriate manner that offers a quality service to patients.

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

Educational aims: See learning outcomes.

Outline syllabus: Clinical Protocols

Examination design considerations

Rationale for the use, adaptation and development of MR acquisition protocols in diagnostic and radiotherapy

MRI units including:

Head, neck, neurology & ear, nose and throat (ENT)

Cancer staging

Angiography

Trauma

Orthopaedics

Respiratory

Radiotherapy planning (including stereotactic frames)

Cardiac imaging (fundamental knowledge)

MR Colonography

MR Mammography

MR Urography

Management and Organization

Consideration for organization and management of MRI service provision

Ethical and legal issues relating to MRI practice

Patient Care

Evaluate patient care, preparation and quality enhancement to service delivery

Recognize the scanning requirements of specialist patient groups including anaesthetized, sedated and paediatric patients

Appraise the use of contrast agents, both IV and oral, within MRI relating to risk/benefit issues and dealing with adverse reactions.

Part 3: Teaching and learning methods

Teaching and learning methods: Contact hours will be achieved via blended learning education.

Scheduled Learning: This will be equivalent to 32 hours and will include:

4 contact days which will consist of lectures and small group work.
Scheduled tutor support. Typically via Skype, email or by telephone

Independent Learning;

To include keynote lectures, but not be limited to, asynchronous delivery of lecture material through narrated presentations, notes and other guided reading, VLE discussion board fora with specific objectives, workplace tasks, and other study tasks deemed appropriate to the development of student knowledge. Independent learning will include hours engaged with essential reading, case study preparation, assignment preparation and completion etc. These sessions constitute an average time per level.

Formative feedback on allocated study tasks will be provided:

Placement learning. Students on this module will be working in the field of MRI. There will be competency based tasks to complete locally as per the clinical portfolio component. This will be assessed with on-site Mentors

Work based appraisal completion.

Contact with the module leader for discussion of module related issues will be facilitated by e-mail, telephone conversations and discussion boards.

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

MO1 Critically evaluate MRI protocols for various anatomical regions

MO2 Demonstrate a critical knowledge of the legal, ethical and organisational aspects of current practice in MRI

MO3 Critically evaluate contemporary research concerning MR technology in order to inform practice, and implement new approaches where appropriate

MO4 Critically evaluate the contribution that MRI makes to diagnostic tests/procedures or radiotherapy practice, in the context of differential diagnosis

MO5 Safely perform a comprehensive range of MRI procedures, demonstrating an ability to adapt effectively to new or unusual situations

MO6 Justify the contribution and the role of MRI to the overall management of patients

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 220 hours

Placement = 48 hours

Face-to-face learning = 32 hours

Total = 300

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/uzyy4p-30-m.html) via the following link <https://uwe.rl.talis.com/modules/uzyy4p-30-m.html>

Part 4: Assessment

Assessment strategy: Assessment Task 1 - Clinical Portfolio of Evidence

This practice based assessment requires the production of a clinical portfolio of evidence. This portfolio will contain the following:

Record of clinical experience

Clinical assessments of patient examinations

Rationale: An opportunity for the student to demonstrate clinical competence. The portfolio is assessed in practice and marked as pass / fail as students need to meet a minimum requirement to practice safely at this level. The academic team will oversee and moderate the marking of the portfolio. There is opportunity for students to receive formative feedback on progression from mentors during clinical practice.

Assessment Task 2 – 2500 word Written Assignment

2500-word case study

Rationale: an opportunity for the student to demonstrate a critical understanding and appreciation of the role of an MRI Advanced practitioner and operator. Students will have the opportunity for formative feedback.

Assessment tasks:

Portfolio (First Sit)

Description: Clinical portfolio of evidence

Pass/Fail

Weighting:

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO5, MO6

Case Study (First Sit)

Description: Case study 2500 words

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4, MO6

Portfolio (Resit)

Description: Clinical portfolio of evidence

Pass/Fail

Weighting:

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO5, MO6

Case Study (Resit)

Description: Case study 2500 words

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4, MO6

Part 5: Contributes towards

This module contributes towards the following programmes of study: