

| Module Details |                                                   |
|----------------|---------------------------------------------------|
| Module Title   | Imaging Modalities in Practice                    |
| Module Code    | RAD5005-D                                         |
| Academic Year  | 2021/2                                            |
| Credits        | 40                                                |
| School         | School of Allied Health Professions and Midwifery |
| FHEQ Level     | FHEQ Level 5                                      |

| Contact Hours                  |       |
|--------------------------------|-------|
| Type                           | Hours |
| Lectures                       | 39    |
| Online Lecture (Asynchronous)  | 12    |
| Seminars                       | 9     |
| Online Lecture (Synchronous)   | 4.5   |
| Practical Classes or Workshops | 18    |
| Interactive Learning Objects   | 19.5  |
| Independent Study              | 122.5 |
| Clinical Placement             | 175.5 |

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

| Module Aims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>This module will enable the student to develop knowledge of anatomy, physiology and pathology of the vascular, urinary, gastrointestinal, hepatobiliary, reproductive systems, skull, nervous and endocrine systems.</p> <p>In addition it will prepare the student to contribute to the efficient and effective delivery of imaging services in imaging modalities such as, computed tomography, ultrasound, magnetic resonance imaging, nuclear medicine, mammography and angiography.</p> |

## Outline Syllabus

Anatomy of body systems commensurate with the imaging modalities discussed within this module.  
Homeostasis.

Normal, variant and abnormal anatomical appearances on a range of medical images.

Physical principles and technology of computed tomography, magnetic resonance imaging, ultrasound, radionuclide imaging, positron emission tomography, dual energy X-ray absorptiometry, mammography, and angiographic equipment.

Clinical applications and techniques commonly used in computed tomography, magnetic resonance imaging, ultrasound, radionuclide imaging, positron emission tomography, dual energy X-ray absorptiometry, mammography and angiography.

Overview of pharmacology, routine and emergency use of drugs during diagnostic procedures and associated patient care.

Concepts of informed consent and professional behaviour.

Patient care before, during and after a range of common examinations performed in the imaging modalities related to the module.

The contribution and complementary nature of the imaging modalities related to the module.

## Learning Outcomes

| Outcome Number | Description                                                                                                                                             |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01             | Differentiate normal, variant and abnormal anatomy and physiology on a range of medical images.                                                         |
| 02             | Explain clearly and succinctly the physical principles underpinning the imaging modalities within the scope of this module.                             |
| 03             | Explain the basic pharmacology of a range of drugs that may be used in the performance of imaging examinations in the modalities covered by the module. |
| 04             | Appreciate the role and contribution of different imaging modalities in the care pathway of the patient.                                                |
| 05             | Prepare patients for a range of examinations routinely performed by the modalities covered by the module.                                               |
| 06             | Care for the patient during a range of examinations routinely performed by the modalities covered in the module syllabus.                               |
| 07             | Display an attitude towards practice consistent with the NHS constitution and the Society and College of Radiographers Code of Professional Conduct.    |
| 08             | Communicate effectively with patients, carers and colleagues.                                                                                           |
| 09             | Interpret and evaluate complex information from a range of sources.                                                                                     |

## Learning, Teaching and Assessment Strategy

In semester one, students will receive lectures and seminars on the principles and technology related to the different imaging modalities and techniques that are covered by the scope of this module. In semester two, students will receive lectures and seminars related to the clinical applications of the different imaging modalities and techniques that are covered by the scope of this module which will be underpinned by coverage of relevant anatomy and physiology. Within both semesters, lectures on contrast media and relevant drugs commonly used in imaging. This learning will be complemented by learning on clinical placement where students will gain practical experience on the range of imaging modalities and techniques covered in the module. Students will assist the radiographers and care for patients undergoing a range of examinations in these modalities so as to meet the standards of proficiency required by the Health and Care Professions Council Standards of Proficiency.

Integration of theory and practice will enable students to distinguish disease and trauma processes as they manifest on diagnostic images.

In semester 1 students will sit a 2 hour examination to assess achievement of learning outcomes 1.2 and 2.1. In semester 2 students will sit a 2 hour examination to assess learning outcomes 1.1, 1.3, 2.1, , and a paper based clinical portfolio and workbook to assess learning outcomes 2.2, 2.3 3.1, 3.2 and 3.3.

## Mode of Assessment

| Type      | Method              | Description                                      | Weighting |
|-----------|---------------------|--------------------------------------------------|-----------|
| Summative | Examination - MCQ   | Computerised MCQ Examination (Semester 1) (2Hrs) | 35%       |
| Summative | Examination - MCQ   | Computerised MCQ Examination (Semester 2) (2Hrs) | 35%       |
| Summative | Clinical Assessment | Portfolio of clinical practice                   | 30%       |

## 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.*