



Module Specification

Clinical Applications of Medical Physics

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Part 1: Information

Module title: Clinical Applications of Medical Physics

Module code: USSJRR-45-1

Level: Level 4

For implementation from: 2024-25

UWE credit rating: 45

ECTS credit rating: 22.5

College: College of Health, Science & Society

School: CHSS School of Applied Sciences

Partner institutions: None

Field: Applied Sciences

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 module introduces apprentices to the role of Medical Physics Technology within healthcare. It covers fundamental concepts associated with the clinical applications of Medical Physics including associated equipment, relevant anatomy and physiology and relevant legislation.

Features: This module is available as CPD.

Educational aims: This introductory module aims to provide apprentices with an understanding of the role of a Medical Physics Technology HCSP (Healthcare Science Practitioner) within their specific practice environment, along the patient pathway, and within the broader healthcare context.

As an introductory module it will provide an overview and reinforcement of fundamental concepts related to medical physics technology, including the basic equipment and clinical applications across the specialisms. Additionally, the module will enable apprentices to identify and explain anatomical systems and associated physiology relevant to medical physics specialisms.

Outline syllabus: This module is designed to provide apprentices with a broad scientific knowledge to underpin their future practice, and to provide the foundations for study in medical physics technology:

- An introduction to the different roles of medical physics technologists in the hospital.
- An introduction to the the basic equipment and associated clinical applications within each medical physics specialism.
- A deepening understanding of radiation legislation and how it is applied in the hospital environment.
- An introduction to anatomical systems and associated physiology relevant to their practice.

Part 3: Teaching and learning methods

Teaching and learning methods: This module will be delivered via a blended approach of on-campus practical and skills development activities held during block release weeks, and online lectures, seminars and tutorials, held throughout the academic year.

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

MO1 Describe the role of a Medical Physics Technology HCSP within their specific practice environment, the patient pathway and within the wider context of healthcare.

MO2 Describe the basic equipment and explain the associated clinical applications within each medical physics specialism.

MO3 Discuss relevant radiation legislation and consider how it is applied in the working environment.

MO4 Identify and explain anatomical systems relevant to the medical physics specialisms, including the associated physiology.

Hours to be allocated: 450

Contact hours:

Independent study/self-guided study = 150 hours

Face-to-face learning = 60 hours

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/ussjrc-45-1.html) via the following link <https://uwe.rl.talis.com/modules/ussjrc-45-1.html>

Part 4: Assessment

Assessment strategy: The assessments within this module will allow the apprentices to demonstrate their knowledge of the role of a medical physics technologist in the hospital including relevant anatomy and physiology.

Assessment 1: Online Assignment

5 20 minutes tests where (best 4 marks will be counted, as an inclusive measure to support students with short term absence). The tests will be a mixture of online and in-class (block week). Short tests have been selected to encourage the apprentices to engage and to ensure they understand the material as it is built upon throughout the module. Apprentices will be supported to succeed in these tests via the provision of similar practice questions ahead of the tests. Formative feedback will be provided

through the practice tests.

Assessment 2: Work Based Learning Portfolio

In line with the National School of Healthcare Science (NSHCS) requirements, this will be a portfolio of content showing knowledge and practical skills directly applicable to their Work Based Learning. This will be assessment as learning for the content in the module. The evidence presented will be led by the needs of each individual workplace but will comprise the following:

- Professional competencies (As per the NSHCS requirements).
- Direct Observation of Practical Skills (DOPS)
- A Case Based Discussion

The module content will complement the professional competencies. Formative feed-forward will be given at the start of the module and through individual feedback. Formative feedback will be given periodically by the apprentices Work Place Assessors throughout the module.

Assessment tasks:

Online Assignment (First Sit)

Description: A series of 20 minute tests.

Weighting: 100 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Portfolio (First Sit)

Description: Professional competencies; DOPS; Case Based Discussion

Weighting: 0 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Online Assignment (Resit)

Description: A series of 20 minute tests.

Weighting: 100 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Portfolio (Resit)

Description: Professional competencies; DOPS; Case Based Discussion

Weighting: 0 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Healthcare Science (Radiation Physics) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2024-25

Healthcare Science (Radiotherapy Physics) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2024-25

Healthcare Science (Nuclear Medicine) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2024-25

Healthcare Science (Nuclear Medicine) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2024-25

Healthcare Science (Radiation Physics) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2024-25

Healthcare Science (Radiotherapy Physics) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2024-25