



Module Specification

Nuclear Apprenticeship Project

Version: 2022-23, v3.0, 31 May 2022

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Part 1: Information

Module title: Nuclear Apprenticeship Project

Module code: UFMFXL-40-3

Level: Level 6

For implementation from: 2022-23

UWE credit rating: 40

ECTS credit rating: 20

Faculty: Faculty of Environment & Technology

Department: FET Dept of Engineering Design & Mathematics

Partner institutions: None

Delivery locations: Defence Academy (MOD)

Field: Engineering, Design and Mathematics

Module type: Project

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: The 40 credit project module forms an essential element of the degree apprenticeship standard for the Nuclear Scientist / Engineer.

Features: Not applicable

Educational aims: This module provides an opportunity for students to undertake individual, self-directed work, in an area of their choice related to their award, and to further their other engineering-based knowledge and project management skills.

Outline syllabus: It is expected that students will develop a range of skills as their project activities develop, from specialist technical skills through to transferable skills. These will include the ability to:

Project manage their activities, from project selection, aims and objectives, through to identifying and discussing its outcomes and their dissemination.

Build awareness of health and safety issues relating to their project and any wider implications, ensuring a suitable risk assessment process is successfully undertaken.

Understand and assess the project's ethical, economic, legal, social and environmental issues.

Review appropriate background material and related academic literature. National codes of practice and policy should also be considered, as relevant.

Develop research methodology to relate their background research to the project application.

Utilise this methodology to analyse and evaluate the project and its process.

Enhance their written and verbal communication skills to ensure all involved in the project are able to perform as expected. These skills will also be required in the dissemination of the project outcomes.

Verify the results achieved and derive explanations for any deviations from expectation.

Discuss the activities undertaken and develop conclusions about the work done and

its implications.

Identify recommendations for further activity.

Part 3: Teaching and learning methods

Teaching and learning methods: Learning is predominantly through independent, self-directed study, with the support of a project supervisor and the module leader.

The project may encompass any aspect of engineering applied to the nuclear field and will arise from a student's industrial work in consultation with their manager.

The nature of the project will be dependent on the topic being investigated.

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

MO1 Identify the main issues to be examined and the problems to be solved in the execution of an engineering-discipline-related technical project.

MO2 Undertake management of technical projects and select appropriate knowledge sources to guide project execution and fulfil the project aims.

MO3 Complete technical work, undertake design and specification of critical components so as to enable experiments to be undertaken with success

MO4 Analyse and evaluate experimental and other data arising, to complete a critical appraisal of the technical work undertaken for the project and the overall management of the investigation

MO5 Make clear, well-argued and supported recommendations for further work and development based on the outcomes of the project

MO6 Effectively communicate in written format: technical understanding, implementation of methodology, analytical ability, and identification of recommendations resulting from the research investigation

Hours to be allocated: 400

Contact hours:

Independent study/self-guided study = 365 hours

Face-to-face learning = 35 hours

Total = 400

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

Part 4: Assessment

Assessment strategy: The assessment of the project will consist of three elements; an interim report, a final project report and a presentation/oral examination.

A1 Interim Report

This document will:

Record the formal requirements of the project

Consider the ethical, economic, legal, social and environmental implications of the project

Identify the project management requirements, such as resources and risk considerations

Contain a project schedule, including relevant Literature Review /Background Research plan.

The aim of this element is to ensure the project is planned properly, has started and is progressing as expected, with the potential to achieve a suitable outcome for the module. Achieving Learning Outcomes 1 and 2.

A2 Project Report/dissertation

The report will:

Record the project and the related processes
Contain relevant background supporting evidence
Include a clear methodology, and suitable analysis and evaluation
Provide clear conclusions and recommendations for further work based on the project's outcomes

The aim of this element is to ensure the project is technically competent, properly managed and executed.

Students are expected to use the dissertation to explain their project and its processes, and are marked on the dissertation – not the project itself. Achieving Learning Outcomes 2 - 6.

A3 Presentation and oral examination

This module is delivered as part of the level 6 degree apprenticeship standard Nuclear Engineer which requires the 40 credit project to contain a 30 minute presentation and oral examination as part of the assessment.

Guidelines will be provided to aid project assessment, and will cover all aspects of the project investigation and management as described.

Marking Criteria: Marking criteria will be published, focusing on two key aspects, the management of the project and the demonstration of technical competence.

The resit assessment profile is the same as the first sit.

Assessment components:

Written Assignment - Component A (First Sit)

Description: Interim Report

Weighting: 20 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

Report - Component A (First Sit)

Description: Report

Weighting: 60 %

Final assessment: No

Group work: No

Learning outcomes tested: MO2, MO3, MO4, MO5, MO6

Presentation - Component A (First Sit)

Description: Presentation and individual questioning (30 mins)

Weighting: 20 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO5, MO6

Report - Component A (Resit)

Description: Report

Weighting: 80 %

Final assessment: No

Group work: No

Learning outcomes tested:

Presentation - Component A (Resit)

Description: Presentation and individual questioning

Weighting: 20 %

Final assessment: Yes

Group work: No

Learning outcomes tested:

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Electronic Engineering (Nuclear) {Apprenticeship-UCW} {Top-Up}

[Sep][FT][MOD][2yrs] BEng (Hons) 2021-22

Electronic Engineering (Nuclear) {Top-Up} [Sep][PT][MOD][2yrs] - Not Running

BEng (Hons) 2021-22

Electrical, Electronic and Control Engineering with Nuclear {Apprenticeship-UCS}

[Sep][FT][UCS][4yrs] BEng (Hons) 2019-20

Mechanical Engineering with Nuclear {Apprenticeship-UCS} [Sep][FT][UCS][4yrs]

BEng (Hons) 2019-20

Electrical, Electronic and Control Engineering with Nuclear {Apprenticeship-UCS}

[Sep][FT][UCS][5yrs] BEng (Hons) 2018-19

Mechanical Engineering with Nuclear {Apprenticeship-UCS} [Sep][FT][UCS][5yrs]

BEng (Hons) 2018-19