Module Specification

Professional Skills for Engineers

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Contents

Part 1: Information

Module title: Professional Skills for Engineers

Module code: UFMEAS-15-1

Level: Level 4

For implementation from: 2025-26

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Arts, Technology and Environment

School: CATE School of Engineering

Partner institutions: None

Field: Engineering, Design and Mathematics

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 module provides a broad comprehension of the competencies and social responsibilities required in order to be a professional engineer in the workplace. The module will develop the engineering habits of mind of: problem-finding, creative problem-solving, visualising, systems thinking, improving, and adapting.

Successful completion of this module will establish students ready for future learning

in their degrees, ahead of being student professionals in their chosen careers. This enables students to work towards achieving the UWE graduate attributes of being Self-Reliant and Connected, Ready and Able, Enterprising, Globally Responsible and Future-Facing. Students will also begin working towards Engineering Competencies for the UK SPEC EngTech Matrix.

Features: Not applicable

Educational aims: The aim of the module is to promote the development of student engineers on their journey to becoming graduate engineers. The module therefore plays an important role in satisfying the professional awareness and development requirements of engineering awards.

Outline syllabus: This module provides a broad comprehension of the competencies and social responsibilities required in order to be a professional engineer in the workplace. It will cover:

Diversity
Sustainability
Security (including Cyber Security)
Teamwork
Professionalism

Part 3: Teaching and learning methods

Teaching and learning methods: This module will combine lectures, class-based interactive workshops, technical workshops, and experience with the local community. The module includes time spent in simulated workplace environments (such as laboratories or workshops) in order to demonstrate technical and safe conduct in the workplace as well as professional conduct with peers.

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

MO1 Identify and successfully communicate ethics, environmental issues and sustainability considerations in engineering context.

MO2 Engage in identifying and reflecting on your own personal strengths, developmental needs and responsibilities in an academic and professional context to enable group work in an engineering context.

MO3 Function effectively as an engineering professional, and as a member or 'leader' of a team.

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

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/92C75E7E-8A1D-BDCB-1723-0B5FEFF2AACE.html?lti1p3LaunchId=lti1p3_launch_67b88f541be848.86457724&lti1p3LinkType=deep_link&login=1

Part 4: Assessment

Assessment strategy: The assessments will enable students to demonstrate their understanding of the engineering habits of mind, while reflecting on becoming socially responsible engineers in appropriate professional formats.

Formative feedback takes place during the module and considers the development of the student's engineering habits of mind and reflective thinking. An individual log book is maintained over the whole module as a 'container' for academic outputs at regular intervals, as evidence of professional work in progress, and to track and reflect on professional and personal development.

Formative feedback will consist of:
Discussion between peers within class workshops
Discussing between peers within the project groups
Project week feedback from professionals within the community contexts

The module will be assessed as follows:

Professional Portfolio of activities including:

Project Week presentations and Group Poster
Evidence of Library skills
Evidence of Professional skills
Reflection on Ethics and student learning and professional development

The resit strategy has the same profile as the first sit assessment.

Assessment tasks:

Portfolio (First Sit)
Description: Professional Portfolio
Weighting: 100 %
Final assessment: Yes
Group work: Yes
Learning outcomes tested: MO1, MO2, MO3

Portfolio (Resit)
Description: Professional Portfolio
Weighting: 100 %
Final assessment: Yes
Group work: Yes
Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Robotics [Frenchay] BEng (Hons) 2025-26

Electrical and Electronic Engineering [Frenchay] BEng (Hons) 2025-26

Electrical and Electronic Engineering [Frenchay] BEng (Hons) 2025-26

Electrical and Electronic Engineering {Foundation} [Frenchay] BEng (Hons) 2024-25

Robotics {Foundation} [Frenchay] BEng (Hons) 2024-25