

Module specification

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Module Code	ENG5D7
Module Title	Industrial Project
Level	5
Credit value	20
Faculty	FACE
HECoS Code	100209
Cost Code	GAME
Pre-requisite module	N/A

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
FdEng Industrial Engineering (Mechanical)	Core
FdEng Industrial Engineering (Electrical)	
BEng (Hons) Mechanical Engineering with Manufacture	
BEng (Hons) Electrical Engineering with Manufacture	

Breakdown of module hours

Learning and teaching hours	9 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	27 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	36 hrs
Placement hours	0 hrs
Guided independent study hours	164 hrs
Module duration (Total hours)	200 hrs

Module aims

This module prioritises experiential learning through extensive laboratory engagement supported by concise theoretical delivery. Students enhance their technical proficiency and analytical reasoning by carrying out investigations, recording data, and interpreting outcomes. The emphasis on active exploration prepares learners for independent and specialised study at the next level.

This module aims to provide students with the opportunity to undertake a work-based project situated within their professional practice. The project enables students to apply and reflect upon the academic principles and practices developed through their university studies. The project scope is defined collaboratively by the student, employer, and academic supervisor, and is expected to align with both the programme of study and the industrial context in which the student is employed.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Plan, develop and implement the appropriate stages of a project to solve a broadly defined problem, co-devised within an industrial setting (AHEP-4 F5, F15).
2	Apply appropriate theoretical and practical methods to the analysis of a broadly defined engineering problem and the development of a solution to that problem, including risks involved, the understanding of engineering ethics, cognisance of the environment and sustainability (AHEP-4 F7, F9).
3	Deliver a technical report and presentation on the project using various methods both verbal and visual as appropriate to the audience (AHEP-4 F17).

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment 1: Portfolio

The project is assessed through a technical report and a 10-minute presentation, delivered in an appropriate format agreed with the supervisor, which together present the outcomes of the work-based project.

All projects include a clearly defined project brief, an element of research, critical discussion, and a conclusion. Additional content is determined by the nature and scope of the project as agreed between the student, employer, and academic supervisor.

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1-3	Portfolio	5000	100	N/A

Derogations

Credits shall be awarded by an Assessment Board for those modules in which a pass mark 40% has been achieved, with a minimum mark of 30% in each assessment element.

Learning and Teaching Strategies

Teaching and learning prioritise experiential engagement, with students spending significant time applying theoretical ideas in practical settings. Activities focus on experimentation, data interpretation, and the development of technical proficiency. Asynchronous and synchronous online learning provide flexibility and reinforce classroom content. Tutorials guide learners in evaluating their performance and developing professional behaviours.

Welsh Elements

This module will be delivered through the medium of English; however, students have the option to submit their assessments in the medium of Welsh. While this module is not currently offered fully through Welsh, Welsh language support and guidance are available, and some learning materials or tutorial discussions may incorporate Welsh elements where appropriate. To further promote bilingual learning, all students have the opportunity to take the 20-credit *Welsh for STEM* short course, designed to develop confidence and subject-specific language skills in both English and Welsh.

Indicative Syllabus Outline

Project Identification and Negotiation: Identification and negotiation of a suitable work-based project in collaboration with the employer, workplace mentor, and module leader, ensuring alignment with industrial needs and academic requirements.

Project Proposal and Brief Development: Development of a structured project proposal and project brief, including the application of SMART analysis to define project aims, objectives, scope, and constraints.

Critical Literature Review: Completion of a critical review of relevant academic and industrial literature to contextualise the project, identify best practice, and inform methodological choices within an industry setting.

Project Development and Implementation: Application of appropriate theoretical and practical engineering methods to project development and implementation, addressing risk, ethical considerations, environmental impact, and sustainability where applicable.

Technical Report Preparation: Production of a structured technical report that documents project definition, analysis, development, outcomes, and conclusions using appropriate academic and professional conventions.

Technical Presentation Delivery: Delivery of a technical presentation using suitable verbal and visual communication methods, tailored to the intended audience and effectively conveying project outcomes and engineering judgement.

Indicative Bibliography

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads:

G. Horine, *Project Management: Absolute Beginners Guide*. 5th ed. Indianapolis: QuePublishing, 2022.

Other indicative reading:

Plus, various others to be signposted on Moodle.

Administrative Information

For office use only	
Initial approval date	June 2026
With effect from date	September 2026
Date and details of revision	
Version number	1