UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	MSc Project
Module Code	ENG7002-E
Academic Year	2023/4
Credits	60
School	Department of Mechanical and Energy Systems Engineering
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Online Lecture (Asynchronous)	8
Project Supervision	26
Directed Study	566

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Full Year
BDA	University of Bradford / Academic Year (Non-Standard)
BDB	University of Bradford / Full Year
BDB	University of Bradford / Academic Year (Non-Standard)

Module Aims

To further develop practical evaluation of professional engineering activity in a chosen specialisation. To extend the student's ability to plan, implement and review appropriate activities in a large and academically demanding project, so as to achieve an agreed set of objectives in a given time scale

Outline Syllabus

An advanced project study with a significant engineering content involving many, or all, of the elements following: problem specification; project planning; top-down design; design requirements analysis; implementation; design, implementation, and interpretation of engineering experimentation; sustainability; theoretical analysis and project reporting; audit of ethical, sustainability and safety issues.

Learning Outcomes	
Outcome Number	Description
01	Critically evaluate the engineering, planning, scheduling, reporting and review of a major project at an advanced level, taking responsibility for the successful completion of many interdependent activities.
02	Undertake an audit of ethical, sustainability and/or safety issues; critically evaluate ethical dilemmas in engineering; critically reflect on the wider impact of engineering design decisions and sustainable practices in production, deployment and disposal.
03	Apply advanced scientific and engineering principles to the solution of practical engineering problems.
04	Enhance your skills in data management, data presentation, applying scientific methods, data interpretation, IT skills, systematic and creative problem solving, communication of technical information, teamwork & leadership, personal management by applying them to develop the solution of an engineering problem.

Learning, Teaching and Assessment Strategy

Online seminars provide an overview of the module, definition of project aim and objectives, research methodology, structure of the project/dissertation, literature review, project scheduling, and oral/poster presentation. Direct study hours are dedicated to self-study and completion of the project. Research, experiment, development of theory, analysis, and/or simulation with verification and/or validation explored in formal tutorial/supervision sessions with project supervisor. Application and development of practical skills in laboratory session, where appropriate. Cognitive and personal skills developed as part of problem solving in engineering projects, supported by members of academic and technical staff. Oral formative feedback is provided during online seminars and online and face-to-face supervision sessions with project supervisor. The oral presentation will examine the application of practical skills to the knowledge base of the module (LO4). The formal assessment will examine the wider learning outcomes expressed in the descriptor (LO1, LO2, LO3, LO4).

It is a requirement of the Institution of Engineering and Technology (IET) that students MUST achieve a mark of at least 30% in assessment components weighted above 30% IN ADDITION to achieving a mark of at least 40% in the module overall. This requirement applies ONLY to students on IET accredited programmes, which is the BDA occurrence/version of the module.

This module satisfies the below Learning Outcomes as specified by the Accreditation of Higher Education Programmes: Fourth Edition (AHEP4) as published by the Engineering Council in-line with the UK Standard for Professional Engineering Competence (UK-SPEC). These outcomes specify five key areas of learning which partially (C) or fully (M) meet the academic requirement for CEng registration: Science and Mathematics (1), Engineering Analysis (2-4), Design and Innovation (5-6), The Engineer and Society (7-11), and Engineering Practice (12-18). Further details of these learning outcomes can be found at https://www.engc.org.uk/ahep/

M1, M2, M4, M5, M7, M16, M17, M18,

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Coursework - Written	10000 word project report based on work carried out during semester 2 and summer period.	90%
Summative	Presentation	Oral Assessment (20 mins)	10%

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.

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