UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	Individual Research Project Civil and Structural Engineering
Module Code	CSE6012-B
Academic Year	2022/3
Credits	20
School	Department of Civil and Structural Engineering
FHEQ Level	FHEQ Level 6

Contact Hours	
Type	Hours
Lectures	4
Project Supervision	12
Supervised time in studio/workshop	24
Directed Study	160

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims

The module has 4 main aims:

1. Provide a student driven research project, utilising skills developed during all stages of academic study.

2. Further develop skills in the selection and application of appropriate engineering tools including computer aided engineering, manufacturing methods and test rigs.

3. Further develop personal skills in research, integration, application, evaluation and synthesis of knowledge through an industrial or academic research relevant project.

4. Provide a framework for the consideration of ethical and health and safety engineering practice to a professional level

Outline Syllabus

It is not possible to be prescriptive about the activities that each student should undertake as this relates to the specific investigation being undertaken. The project may take a variety of forms, and may include but not limited to:
1. Critical reference to previous work on the project topic, competing theories, processes and methodologies, economic, social and market considerations.
2. Analysis and modelling, which may involve computing.
3. System and organisation design.
4. Implementation.
5. Experimentation, verification and/or other testing and evaluation.
6. Interpretation of results and concluding remarks.
The balance of the elements above will depend on the type of project work undertaken. In particular, students undertaking this module as part of an MEng degree will produce an extended set of 'recommendations for further work' which will constitute the specification for their Stage 4 Final Year Project.

Learning Outcomes

Outcome Number	Description
01	Select and apply appropriate engineering tools, sustainability principles, research methods, data analysis techniques and time management methods for the successful completion of an academic or industrially relevant individual project
02	Apply ethical and health and safety considerations in the context of a given engineering problem
03	Develop and apply personal skills in data management, scientific analysis, IT and creative problem solving and communicate the results in oral and written form to an academic and or industrial audience

Learning, Teaching and Assessment Strategy

Students will be expected to take ownership of their project, employing independent and directed study hours to achieve their project goals. Academic support will be in the form of one to one tutorials with a designated member of academic staff. Where appropriate, workshop sessions will provide additional support for students in terms of project management, quality control, budgeting and presentation skills.
Learning methods will depend on the nature of the project being undertaken. Students may engage with advanced Computer Aided Engineering applications, research focused laboratory equipment and manufacturing technologies, with learning support provided by either their academic supervisor, research or technical staff.

Learning and teaching methods includes a combination of online lectures and face to face tutorial/supervision.

Students will prepare a project report detailing their objectives, methodologies, analysis and conclusions arising from their studies. Structure of the report will be dependent on the project undertaken and will be defined in conjunction with academic tutors.
Students will also submit a folder of work including any computer models, engineering drawings, tests data and background research to support their report.
Students will also demonstrate their knowledge in the field of the project and their communication skills via an oral presentation to an academic and or industrial audience.
Formative assessment will be provided during tutorial sessions with academic supervisors in an informal manner. Draft versions of project reports, asset folders and presentations can be submitted for academic consideration prior to formal summative submission for formative feedback.

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Presentation	Oral presentation of project findings (30Mins)	20%
Summative	Dissertation or Project Report	Project report detailing the research finding of the project (4000 words)	80%

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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