University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Civil Engineering Honours Project						
Code: ENGG10012	SCQF Level: 10 (Scottish Credit and Qualifications Framework)	Credit Points: 40	ECTS: 20 (European Credit Transfer Scheme)			
School:	School of Computing, Engineering and Physical Sciences					
Module Co-ordinator:	Wenzhong Zhu					

Summary of Module

This module is supported by a number of scheduled introductory lectures and workshops which provide relevant background, project methodology and project support (e.g. project selection, planning and execution, requirements and assessment, information gathering, literature review and referencing, health & safety and risk assessment, ethical issues and approval process, statistical data analysis and introduction to design of experiment, etc). Optional lectures covering various specific aspects of individual project work and dissertation are also provided during the course of the module.

Individual project topics will normally arise from one of three sources.

- i. the interests of a member of staff;
- ii. a field of practical interest identified by the student him/herself;
- iii. an area of industrial relevance to the student's vocational training.

Prior to embarking on the work of the Project, each student will be issued with a 'Project Handbook' detailing the various aspects of project work, requirements and assessment.

The Project will be carried out at the University, with personal guidance being provided by a Project Supervisor and a Project Moderator. The Supervisor will provide day-to-day management, whilst the Moderator will give access to broader specialist assistance. The student will hold regular meetings with the Supervisor and/or the Moderator. Three components will combine to make up the overall assessment. These are:

- i. written project report/dissertation assessed at 60%
- ii. continuous assessment of performance assessed at 20%
- iii. oral presentation/defence assessed at 20%

This module will work to develop a number of the following key 'I am UWS' graduate attributes: Critical thinker, Analytical, Inquiring, Collaborative, Research-minded, Knowledgeable, Effective communicator, Autonomous, Problem solver, Innovative and Driven.

Module Deliv	very Method				
Face-To- Face	Blended	Fully Online	HybridC	Hybrid 0	Work-Based Learning

See Cuidene	e Note for deta		
\boxtimes			

Campus(es) for Module Delivery

The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit) (tick as appropriate)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
						Add name

Term(s) for Module Delivery								
(Provided viat	(Provided viable student numbers permit).							
Term 1	Term 1 Image: Marcolar matrix Term 2 Image: Marcolar matrix Term 3 Image: Marcolar matrix							

These appro	Learning Outcomes: (maximum of 5 statements) These should take cognisance of the SCQF level descriptors and be at the appropriate level for the module. At the end of this module the student will be able to:					
L1	Plan, organize and carry out an in-depth independent study in an appropriate design/engineering/project management area.					
L2	Apply sound engineering knowledge/design principles and prepare research/design solutions/tools to an engineering application.					
L3	Analyse critically and communicate clearly and concisely the work and findings of the individual study.					
L4	Prepare and give an oral presentation of the project and oral defence of the work.					

Employability Skills	Employability Skills and Personal Development Planning (PDP) Skills				
SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:				
Knowledge and Understanding (K and U)	 SCQF Level 10 Develop and consolidate knowledge and understanding of some more advanced aspects of civil engineering. 				

• Have an appreciation the wider aspects of civil engineering practice and design, along with critical awareness of the needs and pressures of a modern industrial society (e.g. cost, safety & risk management, sustainability, environment, professionalism and ethics, etc). Practice: Applied Knowledge and Understanding SCQF Level 10 • Define and execute a project of research, development and/or investigation and identify and implement relevant outcomes. • Possess practical engineering skills acquired through individual and group project work, through design work and in the development and use of computer software in design and analysis. • Use creativity and innovation. • Further application of the use of technical literature and other information sources. Generic Cognitive skills SCQF Level 10 • Critically review and consolidate knowledge, skills, practices and thinking in civil engineering and project management areas. • Be able to apply appropriate quantitative methods to the analysis and solution of engineering problems. • Develop critical thinking skills and professional judgements. Communication, ICT and Numeracy SCQF Level 10 Autonomy, Accountability and Working with others SCQF Level 10 • Exercising autonomy and initiative in addressing an engineering problems. • Develop critical thinking skills and professional judgements. • Develop critical thinking skills in planning self-learning and appreciation the need for continuing professional development. Pre-requisites:			1			
Knowledge and Understanding • Define and execute a project of research, development and/or investigation and identify and implement relevant outcomes. • Possess practical engineering skills acquired through individual and group project work, through design work and in the development and use of computer software in design and analysis. • Use creativity and innovation. • Further application of the use of technical literature and other information sources. Generic Cognitive skills SCQF Level 10 • Critically review and consolidate knowledge, skills, practices and thinking in civil engineering and project management areas. • Be able to apply appropriate quantitative methods to the analysis and solution of engineering problems. • Develop critical thinking skills and professional judgements. Communication, ICT and Numeracy Skills SCQF Level 10 • Make formal presentations about specialized topics to informed audiences. • Ability to apply computer software in order to solve civil engineering problems. Autonomy, Accountability and Working with others SCQF Level 10 • Exercising autonomy and initiative in addressing an engineering problem • Further develop skills in planning self-learning and appreciation the need for continuing professional development. Pre-requisites: Before undertaking this module the student should have undertaken the following: Module Code: Module Code: Module Title: <td></td> <td colspan="5">practice and design, along with critical awareness of the needs and pressures of a modern industrial society (e.g. cost, safety & risk management, sustainability, environment,</td>		practice and design, along with critical awareness of the needs and pressures of a modern industrial society (e.g. cost, safety & risk management, sustainability, environment,				
skills • Critically review and consolidate knowledge, skills, practices and thinking in civil engineering and project management areas. • Be able to apply appropriate quantitative methods to the analysis and solution of engineering problems. • Develop critical thinking skills and professional judgements. Communication, ICT and Numeracy Skills Skills SCQF Level 10 • Make formal presentations about specialized topics to informed audiences. • Ability to apply computer software in order to solve civil engineering problems. Autonomy, Accountability and Working with others SCQF Level 10 • Exercising autonomy and initiative in addressing an engineering problem • Further develop skills in planning self-learning and appreciation the need for continuing professional development. Pre-requisites: Before undertaking this module the student should have undertaken the following: Module Code: Module Title: Other: Other:	Knowledge and	 Define and execute a project of research, development and/or investigation and identify and implement relevant outcomes. Possess practical engineering skills acquired through individual and group project work, through design work and in the development and use of computer software in design and analysis. Use creativity and innovation. Further application of the use of technical literature and 				
ICT and Numeracy Skills • Make formal presentations about specialized topics to informed audiences. • Ability to apply computer software in order to solve civil engineering problems. Autonomy, Accountability and Working with others SCQF Level 10 • Exercising autonomy and initiative in addressing an engineering problem • Further develop skills in planning self-learning and appreciation the need for continuing professional development. Pre-requisites: Before undertaking this module the student should have undertaken the following: Module Code: Module Title: Other: Other:		 Critically review and consolidate knowledge, skills, practices and thinking in civil engineering and project management areas. Be able to apply appropriate quantitative methods to the analysis and solution of engineering problems. 				
Accountability and Working with others • Exercising autonomy and initiative in addressing an engineering problem • Further develop skills in planning self-learning and appreciation the need for continuing professional development. Pre-requisites: Before undertaking this module the student should have undertaken the following: Module Code: Module Title: Other: • • • • • • • • • • • • • • • • • • •	ICT and Numeracy	 Make formal presentations about specialized topics to informed audiences. Ability to apply computer software in order to solve civil 				
undertaken the following: Module Code: Module Title: Other: Image: Code: Co	Accountability and	 Exercising autonomy and initiative in addressing an engineering problem Further develop skills in planning self-learning and appreciation the need for continuing professional 				
Other:	Pre-requisites:	•				
		Module Code:	Module Title:			
Co-requisites Module Code: Module Title:		Other:				
	Co-requisites	Module Code:	Module Title:			

*Indicates that module descriptor is not published.

Learning and Teaching	Learning and Teaching					
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours.						
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	Student Learning Hours (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)					
Lecture/Core Content Delivery	10					
Tutorial/Synchronous Support Activity	8					
Laboratory/Practical Demonstration/Workshop	3					
Independent Study	379					
	400 Hours Total					
**Indicative Resources: (eg. Core text, journals, inter	met access)					
The following materials form essential underpinning for the module content and ultimately for the learning outcomes:						
Various handout material, including Civil Engineering Ho Various Module resource materials available in Aula VL						

Extension Resources:

Softwares, e.g. Oasys GSA (General structural analysis), by Arup

Various journals/books and databases, e.g. ICE proceedings, Construction information services, British Standard online, etc

Other materials may be provided by the project supervisor dependent on individual project title.

Please ensure the list is kept short and current. Essential resources should be included, broader resources should be kept for module handbooks / Aula VLE.

Resources should be listed in Right Harvard referencing style or agreed professional body deviation and in alphabetical order.

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements

In line with the <u>Student Attendance and Engagement Procedure</u>: Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

For the purposes of this module, academic engagement equates to the following:

Apart from the above learning activities. There are several key dates when students will be required to submit/participate: Project specification, Interim report, Progress presentation, Dissertation, Final presentation/viva.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: <u>UWS Equality, Diversity and Human Rights Code.</u>

Please ensure any specific requirements are detailed in this section. Module Coordinators should consider the accessibility of their module for groups with protected characteristics.

Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustment to assessment practice in accordance with the University's policies and regulations.

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	Engineering and Physical Sciences
Assessment Results (Pass/Fail)	Yes □No ⊠
School Assessment Board	Civil Engineering and Quality Management
Moderator	John Hughes
External Examiner	Alison Robinson

Accreditation Details	This module is accredited by the Joint Board of Moderators of part of BEng (Hons) Civil Engineering.				
Changes/Version Number	Version:?				
Number	Updates:				
	VERS1.2 - XX details updated.				
	VERS1.3 - Accreditation details added.				
	VERS1.4 - KIS changes made in Sections 9 and 10				
	VERS1.4 - KIS changes made in Sections 9 and 10 VERS1.5 - "A minimum of 40% for individual project is required to achieve a 'Pass' in this module" is inserted in Section 5. VERS1.6 - Pre-requisite & Co-requisite removed				
	VerS1.7 - 'UWS Graduate Attributes' statement added				
	V1.8 Minor additions made to the indicative resources; Module Moderator is changed from Callum Tooth to Andrzej Wrzesien				
	V1.9. Added Blended delivery to reflect likely impacts by COVID-19.				
	V1.10. Module title changed to reflect the fact that Interact has now moved to the 3rd year of study. Minor changes have been applied to the learning outcome and some of the skills developments, and the assessments to reflect the above changes and also to meet the JBM requirements for CEng Partial accreditation.				
	V1.11. Detailed EDI statement added				
	V1.12. Module Moderator is changed from Andrzej Wrzesien to John Hughes, and External Examiner updated.				

Assessment: (also refer to Assessment Outcomes Grids below)

Assessment 1 – Written Dissertation - 60%

Assessment 2 – Project Activity (continuous assessment) - 20%

Assessment 3 – Oral Presentation and Defence - 20%

(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.

(ii) An indicative schedule listing approximate times within the academic calendar

when assessment is likely to feature will be provided within the Student Module Handbook.)

Assessment Outcome Grids (See Guidance Note)

Component 1							
Assessment Type (Footnote B.)	Learning Outcome (1)	•	Learning Outcome (3)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetable d Contact Hours	
Dissertation/ Project report/ Thesis	~	\checkmark	~		60%		

Component 2										
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetable d Contact Hours				
Workbook/ Laboratory notebook/ Diary/ Training log/ Learning log		~	~		20%					

Component 3											
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)			ighting (%) of sessment Element	Timetable d Contact Hours				
Presentation				~		20%	0.5				
Combined Total for All Components						100%	0.5 hours				