



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Group Civil and Environmental Engineering Project		
Module Code	UBGMVA-30-M	Level	Level 7
For implementation from	2019-20		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Geography and Environmental Management
Department	FET Dept of Geography & Environmental Mgmt		
Module type:	Project		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Educational Aims:</b> The engineering problems will allow you to develop your skills in critical analysis and managing ambiguity. The solution will need to address stakeholder requirements and project risks. Through the design process you will have an opportunity to apply creativity, innovation and technical knowledge to produce design concepts and develop a design solution. The solution should meet current and future needs and consider both current and emerging technologies.</p> <p><b>Outline Syllabus:</b> In this module you will work in groups to produce a design solution for a selected engineering problem, which fully considers issues in connection with sustainability. The engineering problem allocated to each group will be selected to allow collaborative working across different civil engineering disciplines.</p> <p><b>Teaching and Learning Methods:</b> Throughout the project you will need to continually monitor, review and adapt your personal and group programme of work. This will require personal initiative and sharing of responsibilities within the group. The outputs of the projects are in presentation and written form, requiring you to be able to succinctly and professionally present the solution and design reasoning.</p> <p>In order to develop your designs you will need to apply research skills for information search and retrieval using industry best practice documents, standards, codes of practice and academic resources.</p>

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### Part 3: Assessment

The assessment strategy is designed to support students in their independent study, providing feedback so that each group is aware of their progress as they work towards the submission of their group report.

The assessment of the group work will follow the departmental and faculty group work procedures and guidance where appropriate.

#### Component A1: Progress presentation (20 minutes)

A mid-project group progress presentation is used to check progress and identify any issues that may affect a successful completion of the project. Each group must present their initial work and alternative design concepts/solutions in the form of a client presentation, demonstrating professionalism and the ability to communicate with both technical and non-technical audiences.

#### Component A2: Final client presentation (20 minutes)

The final client presentation will require the groups to present the final solution and provide a design defence. In defending the design solution, an element of the marking will be based on the professionalism of the group under questioning. As part of this final presentation, the groups will be asked to articulate health and safety and ethical issues associated with the project.

#### Component A3: Design report (5000 words)

The output of the project will be a 5000 word group design report which will be assessed on the holistic nature of the solution provided, and project wide considerations.

As an appendix to the report each group member must provide an individual portfolio of work and 500 word reflection on how they exercised and developed initiative and responsibility as a member of the group.

#### Component A4: Individual contribution to the design report and reflection (500 words)

Each student in a group will be required to contribute a section to this report for the area of the design they were responsible for. This will be assessed separate to the group work element of the design report along with their individual reflection in the report appendix.

The individual contribution will be assessed on the quality of the professional reporting and communication skills, technical aspects, research findings, methodology/approach and data analysis.

#### Referred assessment

The referred assessment will require the student to develop the design for a component or intervention in a larger scheme. Where the student participated in the first sit assessment, the scheme will be the original engineering problem, allowing students to take into account feedback provided from the first assessment. Where a student was not part of the first sit assessment a simulated case study will be provided.

The referred assessment will comprise of:

A 2000 word written individual report considering a design element within a larger scheme.

A 10 minute individual presentation, in the form of a client presentation, where the design is presented and defended.

First Sit Components	Final Assessment	Element weighting	Description
Report - Component A		25 %	Group design report (5000 words)
Portfolio - Component A		25 %	Individual portfolio and reflection (500 words)
Presentation - Component A		25 %	Group progress presentation (20 mins)

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Presentation - Component A	✓	25 %	Group final presentation (20 minutes)
Resit Components	<b>Final Assessment</b>	<b>Element weighting</b>	<b>Description</b>
Report - Component A	✓	50 %	Individual written report (2000 words)
Presentation - Component A		50 %	Individual presentation (10 minutes)

<b>Part 4: Teaching and Learning Methods</b>																							
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><b>Module Learning Outcomes</b></th> <th style="text-align: left;"><b>Reference</b></th> </tr> </thead> <tbody> <tr> <td>Monitor and adjust the programme of work on an on-going basis</td> <td>MO1</td> </tr> <tr> <td>Apply project and change management principles in the development of the solution</td> <td>MO2</td> </tr> <tr> <td>Identify and address environmental, economic and social (including client, stakeholder and end users) constraints and requirements</td> <td>MO3</td> </tr> <tr> <td>Identify project and commercial risks, and mitigate them by using theory or experimentation</td> <td>MO4</td> </tr> <tr> <td>Critically analyse current practice and its limitations</td> <td>MO5</td> </tr> <tr> <td>Critically analyse an unfamiliar design problem to identify pertinent data, and identify and manage ambiguity</td> <td>MO6</td> </tr> <tr> <td>Identify limitations of approaches used to develop the design solution</td> <td>MO7</td> </tr> <tr> <td>Identify and evaluate likely future developments and new and emerging technologies in the context of an engineering design problem</td> <td>MO8</td> </tr> <tr> <td>Develop an innovative design to an engineering design problem that addresses current and future needs</td> <td>MO9</td> </tr> <tr> <td>Exercise personal initiative and responsibility as a member of a group</td> <td>MO10</td> </tr> </tbody> </table>	<b>Module Learning Outcomes</b>	<b>Reference</b>	Monitor and adjust the programme of work on an on-going basis	MO1	Apply project and change management principles in the development of the solution	MO2	Identify and address environmental, economic and social (including client, stakeholder and end users) constraints and requirements	MO3	Identify project and commercial risks, and mitigate them by using theory or experimentation	MO4	Critically analyse current practice and its limitations	MO5	Critically analyse an unfamiliar design problem to identify pertinent data, and identify and manage ambiguity	MO6	Identify limitations of approaches used to develop the design solution	MO7	Identify and evaluate likely future developments and new and emerging technologies in the context of an engineering design problem	MO8	Develop an innovative design to an engineering design problem that addresses current and future needs	MO9	Exercise personal initiative and responsibility as a member of a group	MO10
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Reading  
List

*The reading list for this module can be accessed via the following link:*

### **Part 5: Contributes Towards**

This module contributes towards the following programmes of study: