MODULE SPECIFICATION

Part 1: Information			
Module Title	Environmental Engineering Research		
Module Code	UBLMSP-15-M	Level	Level 7
For implementation from	2018-19		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Architecture and the Built Environment
Department	FET Dept of Architecture & Built Environ		
Contributes towards			
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Educational Aims: The aim of this module is to provide students with an opportunity to display a high degree of autonomy through the management and production of an extended piece of individual research work at Level-M. Students will be expected to use a range of resources, including specialised and advanced sources in their chosen field of study, critically review these, evaluating contradictory information and making informed judgments on the reliability, validity and significance of this information. This research should lead to informed and substantiated conclusions on the chosen topic.

Outline Syllabus: The aim of this module is to provide students with an opportunity to display a high degree of autonomy through the management and production of an extended piece of individual research work at Level-M. Students will be expected to use a range of resources, including specialised and advanced sources in their chosen field of study, critically review these, evaluating contradictory information and making informed judgments on the reliability, validity and significance of this information. This research should lead to informed and substantiated conclusions on the chosen topic.

The areas where the students will be expected to make a contribution are:

Materials:
Sources
Waste
Lifecycle
Closed Loop thinking

Energy:
Demand Reduction
Generation and Distribution

Water:
Consumption and recycling

Labour:
Prefabrication
Robotics
Site practices

Information:
Intelligent systems
Data handling

Systems:
Optimisation.

Teaching and Learning Methods: Through individual and group tutorials the students will identify research agendas and possible research questions that students can take forward. Individual tutorials with supervisors will allow for issues and queries to be dealt with as the research and analysis is undertaken.

Scheduled learning:
Lectures, trips and workshops on this module serve to stimulate independent research by the students.

Seminars, may be led by either academic staff or students offering a precis of an article, journal or book extract for discussion.

Group Tutorials will allow work in progress to be discussed in a collegiate manner Individual Tutorials will concentrate on students offering work in progress to a member of academic staff for critique and guidance.

Independent learning :
Outside of the structured events student will research their study area and test their recommendations. Research may be paper-based or may involve physical or computer modelling.

Part 3: Assessment

In discussion with staff, students select a subject are within the four main themes (Systems, Materials, Energy, Labour, and Information) and conduct a study into present patterns of consumption within the construction and/or use of buildings. They are then required to suggest and test (physically or through reasoning) products, processes or policies that might bring about an improvement in the effectiveness and/or efficiency of the resources used. The output is a report and a presentation.

The Assessment:

Assessment is based on a presentation (Component A) and the final written research report, including supporting evidence and relevant appendices (Component B). Detailed assessment criteria will be published annually in the

module handbook but will include the following:

Clarity of definition of aims and scope of the research.

Breadth and/or depth, currency and appropriateness of academic content underpinning.

Structure, layout, clarity and accuracy of expression and overall argument.

Accuracy, completeness and consistency of citation and listing of sources, in UWE Harvard format.

Evidence of effective project planning and management, self-evaluation and learning.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Professional Practice Report - Component B		75 %	Report. The report may include, text, calculation, models and drawings.
Presentation - Component A	✓	25 %	Presentation. This controlled assessment is a presentation of the study by the student.
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Professional Practice Report - Component B		75 %	Report
Presentation - Component A	✓	25 %	Presentation

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will be able to:

	Module Learning Outcomes
MO1	Make a balanced and detailed evaluation of a range of published literature relating to a topic of environmental research, referring to current practice, limitations and an appreciation of likely new design developments.
MO2	Use analytic research methods (qualitative, quantitative and computational) to synthesise an innovative proposal.
MO3	Extract and analyse performance related data and form reasoned judgements when working with information that may be incomplete or uncertain.
MO4	Demonstrate an appreciation of the wider impact on other engineering services and construction disciplines.

Contact Hours

Contact Hours	
Independent Study Hours:	
Independent study/self-guided study	114
Total Independent Study Hours:	114
Scheduled Learning and Teaching Hours:	
Face-to-face learning	36
Total Scheduled Learning and Teaching Hours:	36
Hours to be allocated	150
Allocated Hours	150

Reading List

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

https://uwe.rl.talis.com/index.html