



MODULE SPECIFICATION

Part 1: Information			
Module Title	Construction and Environmental Materials		
Module Code	UBGM9-15-1	Level	Level 4
For implementation from	2020-21		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Geography and Environmental Management
Department	FET Dept of Geography & Environmental Mgmt		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: See Learning Outcomes</p> <p>Outline Syllabus: The module will cover the mechanical and physical properties, durability and environmental aspects of a range of construction materials, including:</p> <p>Concrete</p> <p>Masonry</p> <p>Steel (including carbon, stainless and weathering steel; high tensile steel; welding and fatigue; corrosion protection)</p> <p>Timber</p> <p>Glass</p> <p>Bitumen</p> <p>Polymers and emerging materials</p>

STUDENT AND ACADEMIC SERVICES

You will also cover the associated testing procedures and specifications.

Teaching and Learning Methods: The module will be taught through lectures, introducing the principal concepts and theories, which are then expanded on through practical laboratory sessions.

Part 3: Assessment

The assessment strategy uses a written examination to assess learning outcomes related to the application of knowledge.

The learning outcomes which require use of laboratory data, or time, or research and development of solutions are assessed in a portfolio, to allow students to explore the subject matter and develop their knowledge.

Component A - Examination. Learning outcomes 1, 2, 3

Written examination based on classical questions about construction and environmental materials.

Component B – Portfolio (2000 words). Learning outcomes 4 and 5

The portfolio comprises of a number of smaller work items that require the students to discuss and reflect on the results of laboratory work completed in the module; in the context of material properties, literature and the impact on the use of the material in civil engineering applications.

The portfolio will comprise library exercises that develop the students' ability to find, retrieve and critically appraise academic literature on selected topics.

Resit strategy

2000 word portfolio. The portfolio will comprise a similar range of tasks to the first sit.

First Sit Components	Final Assessment	Element weighting	Description
Examination (Online) - Component A	✓	50 %	Online Examination
Portfolio - Component B		50 %	Portfolio (2000 words)
Resit Components	Final Assessment	Element weighting	Description
Examination (Online) - Component A	✓	50 %	Online Examination
Portfolio - Component B		50 %	Portfolio (2000 words)

STUDENT AND ACADEMIC SERVICES

Part 4: Teaching and Learning Methods																	
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th style="text-align: left;">Module Learning Outcomes</th> <th style="text-align: left;">Reference</th> </tr> </thead> <tbody> <tr> <td>Define the mechanical and physical properties of construction materials</td> <td>MO1</td> </tr> <tr> <td>Explain how the composition and structure of construction materials and soils determine their mechanical and physical properties</td> <td>MO2</td> </tr> <tr> <td>Explain mechanisms of corrosion and factors which determine durability</td> <td>MO3</td> </tr> <tr> <td>Assess the engineering properties of construction materials through laboratory testing and data analysis</td> <td>MO4</td> </tr> <tr> <td>Carry out literature research in relation to the mechanical and physical properties of construction materials</td> <td>MO5</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Define the mechanical and physical properties of construction materials	MO1	Explain how the composition and structure of construction materials and soils determine their mechanical and physical properties	MO2	Explain mechanisms of corrosion and factors which determine durability	MO3	Assess the engineering properties of construction materials through laboratory testing and data analysis	MO4	Carry out literature research in relation to the mechanical and physical properties of construction materials	MO5				
Module Learning Outcomes	Reference																
Define the mechanical and physical properties of construction materials	MO1																
Explain how the composition and structure of construction materials and soils determine their mechanical and physical properties	MO2																
Explain mechanisms of corrosion and factors which determine durability	MO3																
Assess the engineering properties of construction materials through laboratory testing and data analysis	MO4																
Carry out literature research in relation to the mechanical and physical properties of construction materials	MO5																
Contact Hours	<table border="1"> <thead> <tr> <th colspan="2" style="text-align: left;">Independent Study Hours:</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Independent study/self-guided study</td> <td style="text-align: center;">114</td> </tr> <tr> <td style="text-align: center;">Total Independent Study Hours:</td> <td style="text-align: center;">114</td> </tr> <tr> <th colspan="2" style="text-align: left;">Scheduled Learning and Teaching Hours:</th> </tr> <tr> <td style="text-align: center;">Face-to-face learning</td> <td style="text-align: center;">36</td> </tr> <tr> <td style="text-align: center;">Total Scheduled Learning and Teaching Hours:</td> <td style="text-align: center;">36</td> </tr> <tr> <td style="text-align: center;">Hours to be allocated</td> <td style="text-align: center;">150</td> </tr> <tr> <td style="text-align: center;">Allocated Hours</td> <td style="text-align: center;">150</td> </tr> </tbody> </table>	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
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	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p>https://uwe.rl.talis.com/modules/ubgmy9-15-1.html</p>																

Part 5: Contributes Towards	
<p>This module contributes towards the following programmes of study:</p> <p>Civil and Environmental Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2019-20</p> <p>Civil and Environmental Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2019-20</p>	