



MODULE SPECIFICATION

Part 1: Information			
Module Title	Structural Integrity		
Module Code	UBLMGL-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		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	Introduction to Façade Systems 2018-19		
Module Entry requirements	None		

Part 2: Description
<p>Overview: Co-requisites: Students must have already completed or be currently enrolled in UBLLYS-15-M Introduction to Façade Systems. This requirement is compulsory for FT and PT students. Advisory for CPD students who only intend to take an individual module.</p> <p>Educational Aims: This unit looks at the fundamentals of structural design and analysis, and the role it plays in façade design.</p> <p>Outline Syllabus: This unit includes the following lectures and tutorials:</p> <p>Introduction to design criteria including; loads acting on the façade, limit states, deflection and stress limits.</p> <p>Structural systems, load paths and the response of the façade to loads.</p> <p>The effect of jointing methods and composite sections will be considered.</p> <p>Movement accommodation is a fundamental requirement of façade design. If movement is restrained, components may fail due to the stresses induced. What movement accommodation is required? How do different materials behave? How is the differential movement between the façade and the building structure accommodated?</p>

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In addition to lectures there are also tutorials going through various calculation exercises.

Teaching and Learning Methods: The module is delivered by way of five study days for face to face teaching. Recorded lectures and the use of email discussion groups of virtual learning environments (VLEs) and other technology-aided means are also employed.

The module will be delivered by means of a series of lectures, seminars and tutorials.

Lectures and seminars will be used to enable students to support their own independent learning by exploring deeper issues pertaining to Façade Engineering and receiving formative feedback. Occasional speakers will be used to provide up to date material and context to the applications of the subject area.

A series of tutorials are designed to provide knowledge and practical skills relevant to façade engineering.

Directed reading examining the key principles and relevant criteria relating to a number of topics of importance to Façade Engineering.

Part 3: Assessment

A series of structural analysis primers are provided that the students are expected to study before the module. These primers will form the basis of an online exam (using Dewis or similar).

The Letter is based on a real world practical activity which a professional Façade Engineer would need to undertake, modelled around realistic case studies.

The second assessment is a series of structural calculations designed to test and reinforce the taught material using real world examples.

There are formative individual and group working exercises within the timetabled contact hours. In particular there are tutorials on structural analysis for which examples are given beforehand and the students expected to participate.

First Sit Components	Final Assessment	Element weighting	Description
Written Assignment - Component B		37.5 %	Letter
Set Exercise - Component B	✓	37.5 %	Structural calculations
Examination - Component A		25 %	Online exam
Resit Components	Final Assessment	Element weighting	Description
Written Assignment - Component B		37.5 %	Letter
Set Exercise - Component B	✓	37.5 %	Structural calculations
Examination - Component A		25 %	Online exam

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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>Conceptualise facades that are structurally efficient</td> <td>MO1</td> </tr> <tr> <td>Specify the structural performance of façades</td> <td>MO2</td> </tr> <tr> <td>Critically identify the essential structural behaviour of façades</td> <td>MO3</td> </tr> <tr> <td>Recognize the methods of demonstrating structural integrity</td> <td>MO4</td> </tr> <tr> <td>Demonstrate an in depth knowledge of how a façade may be designed to accommodate movement both in the supporting structure and its own movement in response to changes in environmental conditions</td> <td>MO5</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Conceptualise facades that are structurally efficient	MO1	Specify the structural performance of façades	MO2	Critically identify the essential structural behaviour of façades	MO3	Recognize the methods of demonstrating structural integrity	MO4	Demonstrate an in depth knowledge of how a façade may be designed to accommodate movement both in the supporting structure and its own movement in response to changes in environmental conditions	MO5				
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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/ublmgl-15-m.html</p>																

Part 5: Contributes Towards	
<p>This module contributes towards the following programmes of study:</p> <p>Façade Engineering [Sep][PT][Frenchay][2yrs] MSc 2018-19</p> <p>Façade Engineering [Sep][FT][Frenchay][1yr] MSc 2018-19</p>	