



MODULE SPECIFICATION

Part 1: Information			
Module Title	Technology 6 - Smart Materials		
Module Code	UBLMXP-8-M	Level	Level 7
For implementation from	2019-20		
UWE Credit Rating	8	ECTS Credit Rating	4
Faculty	Faculty of Environment & Technology	Field	Architecture and the Built Environment
Department	FET Dept of Architecture & Built Environ		
Module type:	Project		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Overview: To critically introduce the students to the newly invented materials and technologies and their implications on architecture as seen through applied situations and case studies globally.</p> <p>Features: CSA code ARCH/TECH 2721</p> <p>Educational Aims: See Learning Outcomes.</p> <p>Outline Syllabus: The module will contribute to students' critical knowledge and understanding of:</p> <p style="text-align: center;">THE USE OF SMART MATERIALS AND TECHNOLOGY IN ARCHITECTURE</p> <p>The module will have guest lecturers and specialists introducing some of the following areas to the students:</p> <p>Introduction to the role of research and newly invented materials and technologies and their implications on architecture.</p> <p>Applications of new materials and technologies as seen through applied situations and case</p>

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studies.

Advanced technologies of conventional materials - wood, glass, steel and concrete and related technologies, physical and chemical properties, advantages and disadvantages and applications in building design.

Polymers and related technologies and their use in buildings: ETFE,PTFE,GRP etc. Physical and chemical properties, advantages and disadvantages.

Sustainable materials and technologies.

Smart materials such as nano materials, new textiles, interactive membranes and their use in buildings and the building envelope. Physical and chemical properties, advantages and disadvantages of use.

Digital materiality of architecture: new media facades.

CAD/CAM prototyping technologies.

Time based architecture: cybernetics, interactive design, tangible interfaces, wearable technologies.

Teaching and Learning Methods: See Assessment.

Part 3: Assessment

Strategy:

Being a technical module where students are required to demonstrate key analytical and problem solving skills. The coursework requires the students to critically demonstrate, throughout the academic year, that they understand how these smart materials concepts introduced in the lectures will and can be applied in practice (CW).

The coursework is used to integrate strands of critical knowledge presented as separate topics and to develop students' academic writing with particular emphasis being placed on the managing and referencing of evidence based work.

Formative Feedback will be given to drafts of the coursework and to the final coursework piece prior to submission.

First Sit Components	Final Assessment	Element weighting	Description
Written Assignment - Component A	✓	100 %	Individual written coursework submission which will cover smart materials and advanced technologies
Resit Components	Final Assessment	Element weighting	Description
Written Assignment - Component A	✓	100 %	Resubmission of Written Submission

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Part 4: Teaching and Learning Methods																																	
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:																																
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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/index.html</p>
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Part 5: Contributes Towards

This module contributes towards the following programmes of study: