MODULE SPECIFICATION

Part 1: Information			
Module Title	Building Science		
Module Code	UBLMSS-30-1	Level	Level 4
For implementation from	2019-20		
UWE Credit Rating	30	ECTS Credit Rating	15
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	None		
Module Entry requirements	None		

Part 2: Description

Educational Aims: See Learning Outcomes.

In addition to those listed in Learning Outcomes, the educational experience may explore, develop, and practise but not formally discretely assess the following:

The use of ICT in recording, analysing and presenting data.

Outline Syllabus: Materials:

Timber
Bricks and Masonry
Iron and Steel
Non-Ferrous Materials
Concrete
Glass
Polymers
Finishes
Emerging Materials

Building Science:

Comfort and Health
Climate and Weather
Steady State Heat Flow
Ventilation
Condensation
Noise, Room Acoustics
Natural Lighting
Artificial Lighting
Solar Geometry
Heat gains

Teaching and Learning Methods: The two strands of this module, Materials and Building Science, run throughout the year, each contributing to the understanding of the other.

One set of tutorials reinforce module content through, Q and A, worked examples and discussion. A separate set, focuses on the mathematical and analytic techniques required to fully understand and describe properties of materials and environments.

Laboratories and Demonstrations provide tangible evidence for, and explanation of, topics covered in the lecture course and develops the skills of observation, data collection, analysis and presentation.

Part 3: Assessment

Lab Report (Materials) 1600 words 25%

Technical Report (Building Science) 1600 words 25%

Examination 2 hours 50%

The Technical report is used integrate the strands of knowledge presented as separated topics and to introduce students to formal academic writing.

The lab report is used to consolidate the understanding of physical parameters and to introduce the objective description of physical properties and events. The lab report is also used to test the students use of ICT. Three reports are to be submitted with one being assessed.

The examination is used to concentrate students' attention on assimilating the factual content and the calculation procedures contained within the module.

Online tests, early in the first semester, will be used to provide formative feedback in mathematics skills in order to allow students to identify their needs, if any, for additional revision or catch-up study.

Formative Feedback will be give to extracts from the Lab report and Technical Report.

The Technical Report will be timetabled for the end of the first semester, The Lab report and exam will be timetabled for the end of the second semester.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Report - Component B		25 %	Technical report (building science) 1600 words
Report - Component B		25 %	Lab report (materials) 1600 words
Examination - Component A	✓	50 %	Examination (2 hours)

Resit Components	Final Assessment	Element weighting	Description
Report - Component B		25 %	Technical report (building science) 1600words
Report - Component B		25 %	Lab report (materials) 1600 words
Examination - Component A	✓	50 %	

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Identify a range of common and emerging construction materials and discuss their properties.	MO1
Explain how each material can be analysed and evaluated using established scientific processes	MO2
Identify and summarise the legislative constraints affecting material selection, environmental design and energy efficiency.	MO3
Identify the different parameters of a building's materials and internal environment that contribute towards human health and comfort.	MO4
Explain the scientific principles underlying heat, humidity, light, sound, air quality and ventilation; and how each of these is influenced by different building materials.	MO5
Describe the role of energy systems in providing healthy and comfortable environments.	MO6
Calculate the rates of energy flows in simple interactions between buildings, their environment.	MO7
Produce text and graphical material to describe the measurement of physical parameters.	MO8

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	228
Total Independent Study Hours:	228
Scheduled Learning and Teaching Hours:	
Face-to-face learning	72
Total Scheduled Learning and Teaching Hours:	72
Hours to be allocated	300
Allocated Hours	300

Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/modules/ublmss-30-1.html

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Quantity Surveying and Commercial Management [Sep][SW][Frenchay][4yrs] BSc (Hons) 2019-20

Building Surveying [Sep][FT][Frenchay][3yrs] BSc (Hons) 2019-20

Building Surveying [Sep][PT][Frenchay][5yrs] BSc (Hons) 2019-20

Building Surveying [Sep][SW][Frenchay][4yrs] BSc (Hons) 2019-20

Building Surveying {Apprenticeship} [Sep][PT][Frenchay][5yrs] BSc (Hons) 2019-20

Construction Project Management [May][FT][AustonSingapore][3yrs] BSc (Hons) 2019-20

Construction Project Management [May][PT][AustonSingapore][5yrs] BSc (Hons) 2019-20

Construction Project Management [Feb][PT][AustonSingapore][5yrs] BSc (Hons) 2019-20

Construction Project Management [Feb][FT][AustonSingapore][3yrs] BSc (Hons) 2019-20

Construction Project Management [Sep][FT][AustonSingapore][3yrs] BSc (Hons) 2019-20

Construction Project Management [Sep][PT][AustonSingapore][5yrs] BSc (Hons) 2019-20

Construction Project Management [Sep][PT][Frenchay][5yrs] BSc (Hons) 2019-20

Construction Project Management [Sep][FT][Frenchay][3yrs] BSc (Hons) 2019-20

Construction Project Management [Sep][SW][Frenchay][4yrs] BSc (Hons) 2019-20

Quantity Surveying and Commercial Management [Sep][FT][Frenchay][3yrs] BSc (Hons) 2019-20

Quantity Surveying and Commercial Management [Sep][PT][Frenchay][5yrs] BSc (Hons) 2019-20

Quantity Surveying and Commercial Management {Apprenticeship} [Sep][PT][Frenchay][5yrs] BSc (Hons) 2019-20

Quantity Surveying and Commercial Management {Apprenticeship} [Sep][SW][Frenchay][4yrs] BSc (Hons) 2019-20

Building Surveying {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2018-19

Building Surveying {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2018-19

Quantity Surveying and Commercial Management {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2018-19

Quantity Surveying and Commercial Management {Foundation}[Sep][SW][Frenchay][5yrs] BSc (Hons) 2018-19