



MODULE SPECIFICATION

Part 1: Information			
Module Title	Architectural Acoustics		
Module Code	UFCFTJ-15-3	Level	Level 6
For implementation from	2018-19		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Contributes towards			
Module type:	Standard		
Pre-requisites	Audio Process Design and Implementation 2018-19		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: See Learning Outcomes.</p> <p>Outline Syllabus: The syllabus includes:</p> <p>Fundamental concepts; sources and receivers; sound propagation, diffraction, refraction; reflection, scattering, transmission, absorption, damping, insulation, isolation; impulse responses; diffuse and free field conditions; excitation and resonance; image sources; echoes and reverberation; Sabine and non-Sabine spaces.</p> <p>Properties of acoustic treatments within enclosed spaces; porous and resonant absorbers; diffusers; parallel and non-parallel surfaces; curved surfaces.</p> <p>Quantifying the characteristics of acoustic environments; standardised measures, their benefits and limitations.</p> <p>The application of acoustic principles and measures to the design and evaluation of interior</p>

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performance environments associated with speech and music.

Acoustic measurement techniques.

Properties of acoustic transmission paths within buildings, and related remedial measures.

Acoustic simulation and estimation.

Teaching and Learning Methods: Teaching sessions will comprise a series of lectures and practicals based on the syllabus content. The lectures will introduce the underlying concepts and explore their application in typical situations. The practicals will involve the students simulating acoustic environments using specialist software. These techniques will also be directly relevant to the coursework.

Support will also be provided via email and virtual learning environments.

Contact Hours:

Activity

Contact time: 36 hours

Assimilation and development of knowledge: 74 hours

Exam preparation: 10 hours

Coursework preparation: 30 hours

Total study time: 150 hours

Part 3: Assessment

Component A: Exam. The exam will test the students' knowledge, understanding, and analytical skill related to the fundamental principles of acoustics, basic noise control techniques, and current standards.

Component B: Report, The report will comprise a modelling and simulation exercise for an interior performance space that is designed for listening to (or recording) speech or music.

Criteria against which student performance is assessed will be provided with each assessment brief.

First Sit Components	Final Assessment	Element weighting	Description
Report - Component B		50 %	Report
Examination - Component A	✓	50 %	Examination (2 hours)
Resit Components	Final Assessment	Element weighting	Description
Report - Component B		50 %	Report
Examination - Component A	✓	50 %	Examination (2 hours)

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Part 4: Teaching and Learning Methods																			
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <table border="1"> <thead> <tr> <th colspan="2" style="text-align: center;">Module Learning Outcomes</th> </tr> </thead> <tbody> <tr> <td>MO1</td> <td>Specify suitable acoustic requirements of buildings and spaces using standardised measures and techniques</td> </tr> <tr> <td>MO2</td> <td>Identify and quantify noise and vibration affecting buildings and determine if the design criteria have been achieved</td> </tr> <tr> <td>MO3</td> <td>Determine the acoustic design, or remedial treatments, required to achieve a suitable acoustic environment</td> </tr> <tr> <td>MO4</td> <td>Analyse the behaviour of sound in buildings and specialist facilities for the production and enjoyment of speech and music</td> </tr> </tbody> </table>	Module Learning Outcomes		MO1	Specify suitable acoustic requirements of buildings and spaces using standardised measures and techniques	MO2	Identify and quantify noise and vibration affecting buildings and determine if the design criteria have been achieved	MO3	Determine the acoustic design, or remedial treatments, required to achieve a suitable acoustic environment	MO4	Analyse the behaviour of sound in buildings and specialist facilities for the production and enjoyment of speech and music								
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Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://uwe.rl.talis.com/modules/ufcftj-15-3.html</p>																		