



MODULE SPECIFICATION

Part 1: Information			
Module Title	Aero-Acoustics		
Module Code	UFMEWD-15-M	Level	Level 7
For implementation from	2019-20		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
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: Theory and solution methods in generation and propagation of sound. Analytical and numerical aspects will be considered.</p> <p>Measurement of sound and human factors. Consideration will be given to apparatus and techniques.</p> <p>Acoustics in the context of aerospace - internal and external to the vehicle.</p> <p>Teaching and Learning Methods: The course will be delivered via teaching notes and lectures which will include the use of appropriate teaching aids and demonstrations. There will be tutorials, to complement the lectures, involving numerical problem solving.</p> <p>Scheduled learning includes lectures and computer practical sessions.</p> <p>Independent learning includes hours engaged with essential reading, software, case study preparation, assignment preparation and completion etc.</p>

STUDENT AND ACADEMIC SERVICES

Contact Hours:

Contact: 36 hours

Assimilation and skill development: 42 hours

Coursework: 54 hours

In-class test preparation: 18 hours

Total: 150 hours

Part 3: Assessment

Strategy: in-class open book test (25%), individual coursework (75%)

The Assessment:

The learning outcomes are examined through two elements:

An in-class open book test around middle of the term to assess students' understanding on aero-acoustics concepts and CFD knowledge and skill;

An individual coursework element designed to assess the students' abilities on problem solving via the use of suitable numerical simulation software packages.

These two elements aim to develop and enhance their competencies in critically evaluating and analysing modelling results within the context of computational acoustics.

First Sit Components	Final Assessment	Element weighting	Description
Practical Skills Assessment - Component B		75 %	
In-class test - Component A	✓	25 %	In-class open book test (120 minutes)
Resit Components	Final Assessment	Element weighting	Description
Practical Skills Assessment - Component B		75 %	Assignment
Examination - Component A	✓	25 %	Examination (120 minutes)

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" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Module Learning Outcomes</th> <th style="text-align: left;">Reference</th> </tr> </thead> <tbody> <tr> <td>Show an appreciation of the practical and human aspects in relation to aero-acoustics</td> <td>MO1</td> </tr> <tr> <td>Demonstrate a thorough understanding of the theory, nature, origin and propagation of sound</td> <td>MO2</td> </tr> <tr> <td>Apply methods of noise reduction in relation to acoustic problems arising in aerospace</td> <td>MO3</td> </tr> <tr> <td>Justify and evaluate specific techniques with regard to acoustic analysis and measurement</td> <td>MO4</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Show an appreciation of the practical and human aspects in relation to aero-acoustics	MO1	Demonstrate a thorough understanding of the theory, nature, origin and propagation of sound	MO2	Apply methods of noise reduction in relation to acoustic problems arising in aerospace	MO3	Justify and evaluate specific techniques with regard to acoustic analysis and measurement	MO4						
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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/ufmewd-15-m.html</p>																

Part 5: Contributes Towards
This module contributes towards the following programmes of study: