STUDENT AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Information			
Module Title	Aero-Acoustics		
Module Code	UFMEWD-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	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
Contributes towards			
Module type:	Standard		
Pre-requisites	Aerodynamics B 2017-18, Computational Fluid Dynamics 2018-19		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
Educational Aims: See Learning Outcomes **Outline Syllabus:** Theory and solution methods in generation and propagation of sound. Analytical and numerical aspects will be considered. Measurement of sound and human factors. Consideration will be given to apparatus and techniques. Acoustics in the context of aerospace - internal and external to the vehicle. **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.

Scheduled learning includes lectures and computer practical sessions.

Independent learning includes hours engaged with essential reading, software, case study preparation, assignment preparation and completion etc.

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)

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Part 4: Teaching and Learning Methods	
Learning Outcomes	On successful completion of this module students will be able to:

	Module Learning Outcomes
MO1	Show an appreciation of the practical and human aspects in relation to aero-acoustics
MO2	Demonstrate a thorough understanding of the theory, nature, origin and propagation of sound
MO3	Apply methods of noise reduction in relation to acoustic problems arising in aerospace
MO4	Justify and evaluate specific techniques with regard to acoustic analysis and measurement

Contact Hours	**Contact Hours**	
	Independent Study Hours:	
	Independent study/self-guided study	114
	Total Independent Study Hours:	114
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	36
	Total Scheduled Learning and Teaching Hours:	36
	Hours to be allocated	150
	Allocated Hours	150

Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/modules/ufmewd-15-m.html