



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Airworthiness		
Module Code	UFMF75-15-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:	Project		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Features:</b> Module Entry requirements: The module is intended for engineering graduates engaged in professions, which require a comprehensive understanding airworthiness in the aerospace sectors.</p> <p><b>Educational Aims:</b> On completion of this module a student will typically be able to demonstrate key transferable skills in:</p> <ul style="list-style-type: none"> <li>Communication skills</li> <li>Self-management skills</li> <li>IT skills in context</li> <li>Problem formulation and decision making</li> <li>Progression to independent learning</li> <li>Awareness of professional literature</li> </ul>

## STUDENT AND ACADEMIC SERVICES

### Working with others

These will be taught and practised, but not formally assessed.

**Outline Syllabus:** The module comprises the following:

Historical development and justification for regulations

Certification requirements: the central issues and procedures

Differences of MoD Policies from Civil Policies: clarification of the MoD's position as both customer and regulator

Harmonisation of American and European certification requirements

Helicopter regulations

Problems of collaboration in International Consortia

Internal structures in Design Engineering Organisations

Regulations specific to engines

Safety standards for light aircraft

The Legal Scene and Accident Investigation

Maintaining Continued Airworthiness

Safety Assessment

**Teaching and Learning Methods:** Contact Hours/Scheduled Hours: 35 hours over five days, or equivalent.

Pre-module work: Students are given a selection of current Joint Airworthiness Requirements, to make them familiar with typical wording. Also, recent papers are circulated which outline current thinking about airworthiness.

Teaching Strategy: The module material is presented in lectures, case studies and demonstrations, with a number of expert speakers making presentations.

Learning Strategy: Students need to ensure they complete the required pre-work, and their learning will be enhanced by team discussion during the module, and by individual learning as part of the assessment.

Post-module Assessment Strategy: Students are required to undertake individual project work. This is agreed with the module leader, student and student's line/training manager, to ensure the assessment is controlled.

### Part 3: Assessment

As a "short fat" module taught in a single week, the single component and element in the assessment will be a project assignment to be submitted after approximately 8 weeks. The assignment will require demonstration of independent learning of theory and critical reflection of their work both in the classroom and during the assignment period outside the classroom. A mix of general and individual written feedback will be provided. The word-length of the assessment is not relevant as its content will be judged on quality of content and conciseness of expression in order to maximise communication effectiveness and avoid reproduction of taught material, but will normally be expected to be around 3000 to 5000 words.

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First Sit Components	Final Assessment	Element weighting	Description
Project - Component A	✓	100 %	Project
Resit Components	Final Assessment	Element weighting	Description
Project - Component A	✓	100 %	Project

### Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	
		<b>Reference</b>
	Recognise the historical justification for regulations and be able to explain the manner in which these serve as design guidelines without becoming prescriptive aids to design	A1
	Be able to discuss the breadth of design, manufacture and operation to which airworthiness affects requirements for construction and flight	A2
	Understand the processes available to the manufacturer for showing compliance with such requirements	A3
		<b>Reference</b>
	The implications of airworthiness in regions of engineering beyond those already familiar to the participant, e.g. restrictions on engine manufacture, specialities for small aircraft, military aircraft etc.	B1
	Understanding the strength and significance of carefully worded regulations	B2
		<b>Reference</b>
	Show competence in drawing up a programme of such processes for a significant vehicle component	C1
	Demonstration of understanding of the overall concept of airworthiness in a structured, sequential manner	C2
	Critical evaluation of relevant airworthiness regulations and demonstration of how well they encapsulate the needs of a particular aerospace industry (e.g. military operated unmanned aerial vehicles, general aviation aircraft in civilian airspace etc.)	C3
Contact Hours	<b>Independent Study Hours:</b>	
	Independent study/self-guided study	115
	<b>Total Independent Study Hours:</b>	115
	<b>Scheduled Learning and Teaching Hours:</b>	
	Face-to-face learning	35

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	<b>Total Scheduled Learning and Teaching Hours:</b>	35
	<b>Hours to be allocated</b>	150
	<b>Allocated Hours</b>	150
Reading List	<i>The reading list for this module can be accessed via the following link:</i> <a href="https://uwe.rl.talis.com/modules/ufmf75-15-m.html">https://uwe.rl.talis.com/modules/ufmf75-15-m.html</a>	

### Part 5: Contributes Towards

This module contributes towards the following programmes of study: