



## MODULE SPECIFICATION

Part 1: Information			
Module Title	The Aerospace Design Process		
Module Code	UFMF76-15-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:	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 science and engineering graduates or equivalent engaged in professions which require a comprehensive understanding of all the stages from new product concept to certification and entry into service.</p> <p><b>Educational Aims:</b> In addition to the Learning Outcomes, on completion of this module a student will typically be able to demonstrate key transferable skills in:</p> <p>Communication skills</p> <p>Self-management skills</p> <p>IT skills in context</p> <p>Problem formulation and decision making</p>

## STUDENT AND ACADEMIC SERVICES

Progression to independent learning

Awareness of professional literature

Working with others

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

**Outline Syllabus:** Ability to assess relative importance of aerospace customer requirements and priorities

Understanding of civil and military Certification requirements

Awareness of military ISO 15288 (CADMID)

Generation of innovative and adaptive aerospace design configurations

Use of appropriate and effective communication processes, e.g.

Drawings

Simulations

Analytical assessment and comparison of competing designs

Critical review of through-life design processes using case studies

Concept acceptance within the intended market place

Role of the Chief Engineer organisation

Human Factors

Issues concerning the environment and sustainable aviation

**Teaching and Learning Methods:** Contact Hours/Scheduled Hours: 35 hours over five days, or equivalent t for work-based or distance learning.

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.

## STUDENT AND ACADEMIC SERVICES

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.			
First Sit Components	<b>Final Assessment</b>	<b>Element weighting</b>	<b>Description</b>
Project - Component A	✓	100 %	Project
Resit Components	<b>Final Assessment</b>	<b>Element weighting</b>	<b>Description</b>
Project - Component A	✓	100 %	Project

Part 4: Teaching and Learning Methods		
Learning Outcomes	On successful completion of this module students will be able to:	
	<b>Knowledge and Understanding</b>	
	A1 Evaluation and development of initial concept and establishment of requirements	
	A2 Vehicle design, component integration, certification and end of life disposal	
	<b>Intellectual Skills</b>	
	B1 The ability to reason, form concepts and solve problems using unfamiliar information to deduce innovative and adaptive solutions	
	<b>Subject/Professional Practice Skills</b>	
	C1 Requirements driven design	
C2 Airworthiness, environment and sustainable aviation		
Contact Hours	<b>Contact Hours</b>	
	<b>Independent Study Hours:</b>	
	Independent study/self-guided study	115
	<b>Total Independent Study Hours:</b>	115

STUDENT AND ACADEMIC SERVICES

	<b>Scheduled Learning and Teaching Hours:</b>	
	Face-to-face learning	35
	<b>Total Scheduled Learning and Teaching Hours:</b>	35
	<b>Hours to be allocated</b>	150
	<b>Allocated Hours</b>	150
Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p><a href="https://uwe.rl.talis.com/modules/ufmf76-15-m.html">https://uwe.rl.talis.com/modules/ufmf76-15-m.html</a></p>	