



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Flight Test Principles and Practice		
Module Code	UFMFFB-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: Students must be science and engineering graduates or equivalent engaged in professions which require a comprehensive understanding of the fundamental concepts flight test.</p> <p><b>Educational Aims:</b> See Learning Outcomes</p> <p><b>Outline Syllabus:</b> Measurement of airspeed, pressure errors</p> <p>Trials planning, reporting and risk assessment</p> <p>Flight test instrumentation</p> <p>Avionic systems testing</p> <p>Performance flight testing: Take-off and landing performance, level flight performance, range and</p>

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endurance, climb and descent performance

Stability and control flight testing: Longitudinal static, manoeuvre and dynamic stability, lateral and directional static and dynamic stability, asymmetric flight

Qualitative evaluation, use of the handling qualities rating scale

**Teaching and Learning Methods:** Scheduled learning:

This is a 5-day full-time course at FlightSafety (Farnborough) which will involve lectures and exercises on full-flight simulators. Flight test exercises will be conducted on full-flight (level C/D) simulators (Gulfstream IV, Beech King Air, Cessna Citation etc). Hence the course is not dependent on weather or time of year.

Guest speakers from industry will make presentations on pertinent topics. Course notes will be distributed at the start of the course. Additional costs per student will be made for flight simulator exercises. Students would typically receive 3 45-minute sessions of simulator time per team of 3 students. Simulator exercises may be run outside normal office hours depending on scheduling by FlightSafety.

### 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 the 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	Final Assessment	Element weighting	Description
Final Project - Component A	✓	100 %	Project
Resit Components	Final Assessment	Element weighting	Description
Final Project - Component A	✓	100 %	Project

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<b>Part 4: Teaching and Learning Methods</b>		
Learning Outcomes	On successful completion of this module students will be able to:	
	<b>Knowledge and Understanding</b>	
	A1	Flight test methodology
	A2	Assessment of risk in a flight trial
		<b>Intellectual Skills</b>
	B1	Awareness of professional literature
		<b>Subject/Professional Practice Skills</b>
	C1	Planning and executing flight tests for aircraft performance, stability and control analysis
	C2	Planning and execution of flight trials to demonstrate compliance with civilian certification standards
	C3	Structuring a flight test investigation
	C4	Undertaking measurements in a flight test environment
		<b>Transferable Skills and other attributes</b>
	D1	Communication skills
	D2	Self-management skills
	D3	IT skills in context
	D4	Problem formulation and decision making
D5	Progression to independent learning	
D6	Awareness of professional literature	
D7	Working with others	
Contact Hours	<b>Contact Hours</b>	
	<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
	<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/index.html">https://uwe.rl.talis.com/index.html</a></p>	