



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Advanced Manufacturing		
Module Code	UFMF74-15-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	Engineering Business Management [Sep][FT][Frenchay][1yr] MSc 2018-19		
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 who require a comprehensive understanding of manufacturing in the Aerospace and related 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> <p>Communication skills</p> <p>Self-management skills</p> <p>IT skills in context</p>

## STUDENT AND ACADEMIC SERVICES

Problem formulation and decision making

Progression to independent learning

Awareness of professional literature

Working with others

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

**Outline Syllabus:** Traditional and new innovative manufacturing processes and assembly techniques used in the aerospace industry and other developing industrial sectors.

Design for manufacture, assembly, maintenance and minimum cost whilst meeting customer requirements.

The influence of composite materials and other advanced materials on manufacturing technology and manufacturing processes.

The structure, strengths and limitations of manufacturing philosophies and approaches.

Relationship between business strategy and manufacturing system.

Organisation of manufacturing and production facilities.

Tools and techniques for optimising manufacturing efficiency and quality.

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

Teaching and learning will be conducted via interactive workshops, lecturing, and case studies. Further e-learning material will be provided.

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

STUDENT AND ACADEMIC SERVICES

<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	Manufacturing technology and the importance of technological developments and automation in generating and maintaining competitive advantage in the World marketplace
	A2	The significance of manufacturing philosophies, approaches, systems and quality in enhancing the effectiveness and profitability of manufacturing operations
	A3	The need for co-ordination between the business strategy of the company and its manufacturing system
	A4	The importance of the integration of product design, manufacturing system design and manufacturing technology selection
	<b>Intellectual Skills</b>	
	B1	Propose suitable manufacturing technology and techniques for the production of specified components and appraise each technique in terms of manufacturing efficiency and quality
	<b>Subject/Professional Practice Skills</b>	
	C1	Traditional and new innovative manufacturing processes and assembly techniques used in the aerospace industry and other developing industrial sectors
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>The reading list for this module can be accessed via the following link:</p> <p><a href="https://uwe.rl.talis.com/modules/ufmf74-15-m.html">https://uwe.rl.talis.com/modules/ufmf74-15-m.html</a></p>	