



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Engineering Experimentation		
Module Code	UFMFEG-30-0	Level	Level 3
For implementation from	2018-19		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
Contributes towards	<p>Computer Security and Forensics [Oct][FT][GCET][4yrs] BSc (Hons) 2018-19</p> <p>Software Engineering [Oct][FT][GCET][4yrs] BEng (Hons) 2018-19</p> <p>Robotics {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19</p> <p>Robotics {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19</p> <p>Computer Security and Forensics {Foundation} [Sep] [FT] [GCET] [4yrs] BSc (Hons) 2018-19</p> <p>Civil and Environmental Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19</p> <p>Civil and Environmental Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19</p> <p>Electronics and Telecommunication Engineering [Feb][FT][GCET][4yrs] BEng (Hons) 2018-19</p> <p>Mechanical Engineering and Vehicle Technology [Feb][FT][GCET][4yrs] BEng (Hons) 2018-19</p> <p>Computer Security and Forensics [Feb][FT][GCET][4yrs] BSc (Hons) 2018-19</p> <p>Mechanical Engineering and Vehicle Technology [Oct][FT][GCET][4yrs] BEng (Hons) 2018-19</p> <p>Electronics and Telecommunication Engineering [Oct][FT][GCET][4yrs] BEng (Hons) 2018-19</p> <p>Instrumentation and Control Engineering {Foundation} [Feb][FT][GCET][4yrs] BEng (Hons) 2018-19</p> <p>Software Engineering [Feb][FT][GCET][4yrs] BEng (Hons) 2018-19</p> <p>Mechanical Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng 2018-19</p> <p>Mechanical Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng 2018-19</p> <p>Mechanical Engineering {Foundation} [Sep][FT][Frenchay][5yrs] MEng 2018-19</p> <p>Mechanical Engineering {Foundation} [Sep][SW][Frenchay][6yrs] MEng 2018-19</p> <p>Automotive Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19</p> <p>Automotive Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19</p>		

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	Automotive Engineering {Foundation} [Sep][FT][Frenchay][5yrs] MEng 2018-19 Automotive Engineering {Foundation} [Sep][SW][Frenchay][6yrs] MEng 2018-19 Aerospace Engineering with Pilot Studies (Design) {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19 Aerospace Engineering with Pilot Studies (Design) {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19 Aerospace Engineering with Pilot Studies {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19 Aerospace Engineering with Pilot Studies {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19 Aerospace Engineering with Pilot Studies (Manufacturing) {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19 Aerospace Engineering with Pilot Studies (Systems) {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19 Aerospace Engineering with Pilot Studies (Manufacturing) {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19 Aerospace Engineering with Pilot Studies (Systems) {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19 Instrumentation and Control Engineering {Foundation} [Oct][FT][GCET][4yrs] BEng (Hons) 2018-19 Instrumentation and Control Engineering {Foundation} [Feb][PT][GCET][8yrs] BEng (Hons) 2018-19 Instrumentation and Control Engineering {Foundation} [Oct][PT][GCET][8yrs] BEng (Hons) 2018-19 Aerospace Engineering (Design) {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19 Aerospace Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19 Aerospace Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19 Aerospace Engineering (Manufacturing) {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19	
Module type:	Project	
Pre-requisites	None	
Excluded Combinations	None	
Co- requisites	None	
Module Entry requirements	None	

### Part 2: Description

**Educational Aims:** See Learning Outcomes

**Outline Syllabus:** A varied and diverse mixture of laboratory and workshop activities will be undertaken intended to demonstrate the range and flavour of the many degree programmes that foundation engineering students may progress to. For example, students may receive sessions relating to Robotics, Mechanical Engineering, Automotive Engineering, Aerospace Engineering and Electronic Engineering. Topics may include a combination of the following: Programming of industrial robots; Assembly and test of electronic circuits; Investigation of mechanical systems;

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Experimental investigation and tests on mechanical structures; Basic tests on fluid flow; Machine Vision; Aerodynamics; Design and Manufacture.

**Teaching and Learning Methods:** Scheduled teaching and learning includes timetabled laboratory and workshop sessions in small groups rotating around the individual activities.

Independent learning includes hours engaged in research, investigation, analysis and preparation of laboratory records.

### Part 3: Assessment

Assessment of this module will be continuous throughout the year and based on the student's engagement in the laboratory activities sessions and by assessment of written laboratory records. The final moderation of the exercises will be made after the final hand-in of the laboratory exercises. Attendance at the timetabled session will be monitored and compulsory for assessment of that activity.

Resit assessment will be a project based on the laboratory exercises which encourages study to improve their technical knowledge and skills.

First Sit Components	Final Assessment	Element weighting	Description
Set Exercise - Component A	✓	100 %	Laboratory exercises
Resit Components	Final Assessment	Element weighting	Description
Project - Component A	✓	100 %	Research project (3000 words)

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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>Module Learning Outcomes</b>	
	MO1	Demonstrate the basic skills of experimentation including: analysis of experimental data; collection of relevant experimental data; reporting and presentation of experimental work and findings and drawing conclusions.
	MO2	Safely perform experimental work in a laboratory or workshop environment, applying and understanding appropriate techniques to obtain, record and analyse data.
	MO3	Assemble and test pre-designed electronic circuits and have a rudimentary understanding of analysis of their performance.
MO4	Prepare laboratory reports based on information recorded in the laboratory log book and demonstrate progression towards independent investigation, research and learning.	
Contact Hours	<b>Contact Hours</b>	
	<b>Independent Study Hours:</b>	
	Independent study/self-guided study	228
	<b>Total Independent Study Hours:</b>	
	228	
	<b>Scheduled Learning and Teaching Hours:</b>	
	Face-to-face learning	72
	<b>Total Scheduled Learning and Teaching Hours:</b>	
	72	
<b>Hours to be allocated</b>		
300		
<b>Allocated Hours</b>		
300		
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/ufmfeg-30-0.html">https://uwe.rl.talis.com/modules/ufmfeg-30-0.html</a></p>	