MODULE SPECIFICATION

Part 1: Information			
Module Title	Engineering Experimentation		
Module Code	UFMFEG-30-0	Level	Level 3
For implementation from	2020-21		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engineering Design & Mathematics		
Module Type:	Project		
Pre-requisites	None		
Excluded Combinations	None		
Co-requisites	None		
Module Entry Requirements	None		
PSRB 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; 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 based on the students' summary of their on campus or online laboratory activities with supporting evidence for each lab activity. Resit assessment will be a project based on the laboratory exercises which encourages students 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)

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	**Reference**
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.	MO1
Safely perform experimental work in a laboratory or workshop environment, applying and understanding appropriate techniques to obtain, record and analyse data.	MO2
Assemble and test pre-designed electronic circuits and have a rudimentary understanding of analysis of their performance.	MO3
Prepare laboratory reports based on information recorded in the laboratory log book and demonstrate progression towards independent investigation, research and learning.	MO4

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	228
Total Independent Study Hours:	228
Scheduled Learning and Teaching Hours:	
Face-to-face learning	72
Total Scheduled Learning and Teaching Hours:	72

	Hours to be allocated	300
	Allocated Hours	300
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/modules/ufmfeg-30-0.html	

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Computer Security and Forensics {Foundation} [Feb][FT][GCET][4yrs] BSc (Hons) 2020-21
Computer Security and Forensics {Foundation} [Oct][FT][GCET][4yrs] BSc (Hons) 2020-21
Aerospace Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Aerospace Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2020-21
Aerospace Engineering with Pilot Studies {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Aerospace Engineering with Pilot Studies {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2020-21
Electronic Engineering {Foundation Year} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2020-21
Electronic Engineering {Foundation Year} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Robotics {Foundation Year}[Sep][SW][Frenchay][5yrs] BEng (Hons) 2020-21
Robotics {Foundation Year}[Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Mechanical Engineering {Foundation Year}[Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Mechanical Engineering {Foundation Year}[Sep][SW][Frenchay][5yrs] BEng (Hons) 2020-21
Building Services Engineering {Foundation} [Oct][FT][GCET][4yrs] BEng (Hons) 2020-21
Automotive Engineering {Foundation}[Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Automotive Engineering {Foundation}[Sep][FT][Frenchay][5yrs] BEng (Hons) 2020-21
Building Services Engineering {Foundation} [Feb][FT][GCET][4yrs] BEng (Hons) 2020-21
Civil and Environmental Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2020-21
Civil and Environmental Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Civil Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2020-21
Civil Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2020-21