MODULE SPECIFICATION

Part 1: Information			
Module Title	Product Design and Development		
Module Code	UFMFSQ-15-M	Level	Level 7
For implementation from	2019-20		
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		
Module type:	Project		

Pre-requisites	None
Excluded Combinations	None
Co- requisites	None
Module Entry requirements	None

Part 2: Description

Overview: Innovation and introduction of new products to the market is one of the fundamental processes in industry. This module covers modern tools and methods for product design and development to enable the introduction of new innovative products to the market. Intensification of competition, rapidly changing technologies and shorter product life cycles require an integrated approach to management of product development in order to create better quality products with enhanced capabilities at attractive prices with compressed time to market cycles.

Educational Aims: See Learning Outcomes.

Outline Syllabus: Topics include product development process, effective design management, customer needs identification, concept generation and selection, product architecture, industrial design, concurrent engineering, design for assembly/manufacture, life cycle costing and design to cost, design validation, and innovative products.

Teaching and Learning Methods: The module employs cases and hands-on exercises to reinforce the key ideas.

Part 3: Assessment			
The assessment for this module is a project in which students conceive, design and prototype a physical product. Students are expected to work on an individual report of 2500 words in length to evaluate the theoretical concepts encountered within the module and apply them to a real-world problem. The referred assignment will involve a reworking of the original report based on the feedback received from the initial submission. The length of the report is 2500 words.			
First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Report - Component A	✓	100 %	Individual report (2500 words)
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Report - Component A	✓	100 %	Individual report (2500 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**
Identify and analyse the role of product design and development process in manufacturing industry	MO1
Define the components of product design and development processes and their relationships from concept to customer	MO2
Evaluate the design management process and how innovation can be successfully brought to the market place to satisfy customers in an effective manner	MO3
Undertake a methodical approach to the management of product development	MO4
Differentiate between the important methods, technologies, latest trends, tools and techniques of product design and development and how they can be effectively utilised	MO5
Carry out cost and benefit analysis through various cost models	MO6

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	115
Total Independent Study Hours:	115
Scheduled Learning and Teaching Hours:	
Face-to-face learning	35

	Total Scheduled Learning and Teaching Hours:	35
	Hours to be allocated	150
	Allocated Hours	150
Reading List	*The reading list for this module can be accessed via the following link:*	

Part 5: Contributes Towards
This module contributes towards the following programmes of study: Engineering Business Management [Sep][PT][Frenchay][2yrs] MSc 2019-20