



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Product CAD		
Module Code	UBLFDA-15-2	Level	Level 5
For implementation from	2019-20		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Architecture and the Built Environment
Department	FET Dept of Architecture & Built Environ		
Module type:	Standard		
Pre-requisites	Product Design Studio 1 2019-20		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Educational Aims:</b> See Learning Outcomes.</p> <p><b>Outline Syllabus:</b> Element 1- Computer aided designing solids and surfaces: Use of an industry standard CAD package to communicate ideas through 3D modelling.</p> <p>Element 2- CAD for manufacturing: Designing for manufacture 'DFM' with the aid of CAD.</p> <p>Element 3- Photorealistic rendering: Use of rendering software to create photorealistic images to simulate product usage scenarios.</p> <p>Element 4- NURBS for surface modelling: Use of a non uniform rational B-splines modelling technique to model organic surfaces to integrate with product geometry.</p> <p>Note: all elements are not weighted equally in study or assessment time.</p> <p>The structure of this module is designed so as allow students to develop and apply skills and knowledge throughout Level 2 in applied contextual themes.</p>

## STUDENT AND ACADEMIC SERVICES

**Teaching and Learning Methods:** Teaching and Learning Strategy for this module is applied exercise and project based learning in which a topic lecture will introduce the students to the assigned or up coming up contextual information which supports and frames their acquisition of topic specific knowledge, skills and supports their project work in other modules, principally Product Design Technology Design Studio, Creative Product Design Studio and for W240 students Mechanical Engineering Design.

The exercises and projects are designed to facilitate competency acquisition through applied and indirect learning, building knowledge through the introduction of new subject matter and reinvestment of gained knowledge and skills. The tutorial portion of the studio time is designed for the learner to have access to tutorial support, work in the close proximity of classmates and to self-assess his/her progress through the exercises and/or projects.

Exercise and Project work outside of scheduled hours is an essential component to the successful completion of the assigned work with an average time investment of 6+ hours per week. Students will be expected to come prepared for the module sessions with in-process or completed work and supplies.

Feedback will be in the form of direct verbal and/or written. Marking criteria and assessment format will be clearly indicated on the Project Brief made accessible to the students at the beginning of each project.

Knowledge and Skills reinvestment from parallel running modules are formative and essential for progression through the curriculum.

Additional tutorial support is offered through individual appointments with the module tutors and through PAL.

Contact: 36 hours  
 Prep for lecture: 24 hours  
 Assimilation: 24 hours  
 Project: 54 hours  
 Examination preparation: 12 hours  
 Total: 150 hours

### Part 3: Assessment

The assessment strategy in this standard module is designed to evaluate the project work undertaken in the year and culminates in a formal examination.

To best mimic professional practice the following assessment strategy has been adopted.

Summative Assessment: Coursework is evaluated on subject specific criteria clearly stated on each project brief at the outset of each exercise or project:

Formal examination [A]

Exercises and/or projects are evaluated in direct submissions. [B]

An overall mark percentage of professionalism is allotted to assess aspects of participation and engagement. [B]

Feedback: Tutor feedback is provided during tutorials as formative feedback and on submitted exercises and/or projects.

First Sit Components	Final Assessment	Element weighting	Description
Project - Component B		50 %	Coursework
Examination - Component A	✓	50 %	Exam (3 Hour)

## STUDENT AND ACADEMIC SERVICES

Resit Components	Final Assessment	Element weighting	Description
Project - Component B		50 %	Coursework
Examination - Component A	✓	50 %	Examination

Part 4: Teaching and Learning Methods																	
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th>Module Learning Outcomes</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>Employ Critical Analysis</td> <td>MO1</td> </tr> <tr> <td>Apply creative and logical thinking processes as well as design methodologies to the creation of design solutions</td> <td>MO2</td> </tr> <tr> <td>Select and use various 2D, 3D and CAD techniques to design intent and detail</td> <td>MO3</td> </tr> <tr> <td>Apply analytical skills in relation to designed objects including the ability to undertake visual analysis and to analyse designed objects in relation to their context</td> <td>MO4</td> </tr> <tr> <td>Apply a systematic approach to problem solving using appropriate design tools and techniques</td> <td>MO5</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Employ Critical Analysis	MO1	Apply creative and logical thinking processes as well as design methodologies to the creation of design solutions	MO2	Select and use various 2D, 3D and CAD techniques to design intent and detail	MO3	Apply analytical skills in relation to designed objects including the ability to undertake visual analysis and to analyse designed objects in relation to their context	MO4	Apply a systematic approach to problem solving using appropriate design tools and techniques	MO5				
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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/ublfda-15-2.html">https://uwe.rl.talis.com/modules/ublfda-15-2.html</a></p>																

## STUDENT AND ACADEMIC SERVICES

### Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Product Design Technology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Interior Architecture [Sep][SW][Frenchay][4yrs] BA (Hons) 2018-19

Interior Architecture (International) [Sep][SW][Frenchay][5yrs] BA (Hons) 2018-19

Interior Architecture (International) [Sep][FT][Frenchay][4yrs] BA (Hons) 2018-19

Interior Architecture [Sep] [FT] [Frenchay] [3yrs] BA (Hons) 2018-19

Product Design [Sep][SW][Frenchay][4yrs] BA (Hons) 2018-19

Creative Product Design [Sep][FT][Frenchay][3yrs] BA (Hons) 2018-19

Creative Product Design [Sep][SW][Frenchay][4yrs] BA (Hons) 2018-19

Product Design [Sep][FT][Frenchay][3yrs] BA (Hons) 2018-19

Product Design Technology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2018-19