



Module Specification

Product CAD

Version: 2020-21, v3.0, 03 Jun 2021

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Part 1: Information

Module title: Product CAD

Module code: UBLFDA-15-2

Level: Level 5

For implementation from: 2020-21

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Environment & Technology

Department: FET Dept of Architecture & Built Environ

Partner institutions: None

Delivery locations: Frenchay Campus

Field: Architecture and the Built Environment

Module type: Standard

Pre-requisites: Product Design Studio 1 2020-21

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Not applicable

Educational aims: See Learning Outcomes.

Outline syllabus: Element 1- Computer aided designing solids and surfaces: Use of an industry standard CAD package to communicate ideas through 3D modelling.

Element 2- CAD for manufacturing: Designing for manufacture 'DFM' with the aid of CAD.

Element 3- Photorealistic rendering: Use of rendering software to create photorealistic images to simulate product usage scenarios.

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.

Note: all elements are not weighted equally in study or assessment time.

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.

Part 3: Teaching and learning methods

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

Module Learning outcomes:

MO1 Employ Critical Analysis

MO2 Apply creative and logical thinking processes as well as design methodologies to the creation of design solutions

MO3 Select and use various 2D, 3D and CAD techniques to design intent and detail

MO4 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

MO5 Apply a systematic approach to problem solving using appropriate design tools and techniques

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/ublfda-15-2.html) via the following link <https://uwe.rl.talis.com/modules/ublfda-15-2.html>

Part 4: Assessment

Assessment strategy: 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.

Assessment components:**Examination (Online) - Component A (First Sit)**

Description: Online Exam

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO3, MO5

Project - Component B (First Sit)

Description: Coursework

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Examination (Online) - Component A (Resit)

Description: Online Examination

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested:

Project - Component B (Resit)

Description: Coursework

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested:

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Interior Architecture [Sep] [FT] [Frenchay] [3yrs] BA (Hons) 2019-20

Interior Architecture [Sep][SW][Frenchay][4yrs] BA (Hons) 2019-20

Interior Architecture (International) [Sep][SW][Frenchay][5yrs] BA (Hons) 2019-20

Interior Architecture (International) [Sep][FT][Frenchay][4yrs] BA (Hons) 2019-20

Interior Architecture (International) {Foundation} [Sep][SW][Frenchay][6yrs] BA (Hons) 2018-19

Product Design Technology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2018-19

Product Design Technology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2018-19

Creative Product Design {Foundation} [Sep][FT][Frenchay][4yrs] BA (Hons) 2018-19

Creative Product Design {Foundation} [Sep][SW][Frenchay][5yrs] - Not Running BA (Hons) 2017-18

Product Design {Foundation} [Sep][FT][Frenchay][4yrs] BA (Hons) 2018-19

Product Design {Foundation} [Sep][SW][Frenchay][5yrs] BA (Hons) 2018-19

Interior Architecture (International) {Foundation} [Sep][FT][Frenchay][5yrs] BA (Hons) 2018-19

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

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