Module Specification

Product CAD

Version: 2023-24, v3.0, 15 Jun 2023

Contents

Part 1: Information

Module title: Product CAD

Module code: UBLFDA-15-2

Level: Level 5

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Arts, Technology and Environment

School: CATE School of Architecture and Environment

Partner institutions: None

Field: Architecture and the Built Environment

Module type: Module

Pre-requisites: Product Design Studio 1 2023-24

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

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

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

4- Surface modelling and complex forms: Use of current surface modelling software and techniques 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 upcoming 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 peer learning.

Module Learning outcomes: On successful completion of this module students will achieve the following 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 via the following link https://uwe.rl.talis.com/modules/ublfda-15-2.html

Part 4: Assessment

Assessment strategy: Within the Portfolio the student prepares a series weekly exercises to demonstrate key skills during the 1st half of the module. These are then brought together via an in depth 3D CAD model using an agreed Masterpiece case study, in the 2nd half of the module. These are then marked as a single portfolio of work to reflect the professional nature of the subject area.

Summative Assessment: Coursework is evaluated on subject specific criteria and clearly stated on the programmatic briefs which are set out at the beginning of the project. This is to ensure students can choose a case study that is relevant to their course and career interests.

The resit brief will match the main sit.

Assessment tasks:

Portfolio (First Sit)
Description: Portfolio
Weighting: 100 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Portfolio (Resit)
Description: Portfolio
Weighting: 100 %
Final assessment: No
Group work: No

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

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Product Design [Frenchay] BA (Hons) 2022-23

Product Design Technology [Frenchay] BSc (Hons) 2022-23

Interior Architecture [Frenchay] BA (Hons) 2022-23

Interior Architecture (International) {Foundation} [Sep][SW][Frenchay][6yrs] - Withdrawn BA (Hons) 2021-22

Interior Architecture (International) {Foundation} [Sep][FT][Frenchay][5yrs] - Withdrawn BA (Hons) 2021-22

Product Design Technology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2021-22

Product Design Technology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2021-22

Product Design {Foundation} [Sep][SW][Frenchay][5yrs] BA (Hons) 2021-22

Product Design {Foundation} [Sep][FT][Frenchay][4yrs] BA (Hons) 2021-22

Interior Architecture {Foundation} [Sep][SW][Frenchay][5yrs] BA (Hons) 2021-22

Interior Architecture {Foundation} [Sep][FT][Frenchay][4yrs] BA (Hons) 2021-22