Module Specification

Innovation, Technology and Design

Version: 2028-29, v1.0, Approved

Contents

Part 1: Information

Module title: Innovation, Technology and Design

Module code: UADBBH-15-3

Level: Level 6

For implementation from: 2028-29

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Arts, Technology and Environment

School: CATE School of Arts

Partner institutions: None

Field: Design

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This is the 15-credit optional module for Product Design Technology BSc (Hons) students who undertake the 15-credit placement module as part of a sandwich year.

Features: Not applicable

Educational aims: This module aims to deliver the teaching and learning so that students are able to:

- Creatively explore and apply future-facing technology in the context of Product Design Technology;
- Develop innovative technology driven design projects;
- Integrate visual, physical and interactive components addressing complex future facing challenges;
- Demonstrate systematic and logical design approaches to technical design.

Outline syllabus: The module is formed around one or two advanced technical design projects, which will be presented in an exhibition format. The module will be delivered through lectures, readings and seminar discussion.

In order to stay current, the nature of the specific projects and themes explored in this module will adapt to match emergent trends in technology, materials and design. They are likely to include such themes as:

Design Strategies:
Deeper understanding of the design process for complex technical design projects and how to integrate the tools and skills learned in other modules into that process.

Design Knowledge:
Material and manufacturing process selection, Product Design specification and constraints. Applied ergonomics human strength and people size. Concept selection and evaluation methods and strategies. Mechanical product design and design detailing.

Creating 3D test rigs and working prototypes to experimentally analyse and develop designs.

Advanced Computation Design Techniques:
Such as finite element analysis mechanical simulations or parametric and generative design.

The taught content is adapted to support the projects that individual students are studying in a particular year, hence while all of the preceding topics will be covered

in the module, the depth of coverage in a particular year and by a particular student will vary.

Part 3: Teaching and learning methods

Teaching and learning methods: The teaching and learning strategy for this module is studio/workshop project-based learning in which a topic demonstration will introduce the students to the assigned or upcoming exercises and/or project which supports and frames their acquisition of topic specific knowledge and skills.

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

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

The module is typically delivered via projects, seminars, group critiques, workshops, individual tutorials and independent study.

Teaching sessions in the module are aimed at building students skills, knowledge and understanding of the different approaches to innovative technology within the context of Product Design Technology.

Emphasis will be placed on establishing a meaningful relationship between conceptual and practical activities. Analytical, evaluative and planning skills will be supported through seminars/tutorials/individual critiques, in order to encourage students to adopt an ongoing engagement with ideas/processes/methods of production beyond the familiar. Critical engagement and reflection on ideas/practices examined within the module will be documented and presented for assessment in the supporting and development work.

Scheduled learning includes lectures, seminars, tutorials, project supervision, demonstration, workshops, fieldwork, external visits, and supervised time in studio/workshop.

Students are required to develop a body of work representing their acquired design skills throughout this module and these will form a core part of the learning, teaching and assessment process. Students' portfolios can be hand and / or digital in format and should contain a range of content that includes but is not limited to: physical model making, 2D and 3D drawing, CAD and digital modelling in response to pre-defined project briefs.

The development of critical, analytical and evaluative skills is supported and encouraged through (for instance) the use of inclusive resources, discussion in group critiques and activities, and through individual tutorials. Students are encouraged and supported in the development of their visual, verbal and written communication skills through all aspects of the teaching and learning process and will have access to a range of Study Skills support available centrally.

Independent study/self-guided study includes hours engaged with creative, academic and technical development, visual and textual research, workshop activity and any learning via the VLE outside of taught sessions.

The reading and resource list for this module will be accessible via a live link on the VLE and will also be available via the module handbook and Talis Library systems.

The reading and resource list is inclusive and accessible and has been designed to amplify a diverse range of critical and creative voices, ensuring representation across multiple perspectives and disciplines. It is designed inspire curiosity and to support a broad range of Learners through the inclusion of source material across diverse formats, media and platforms, ensuring accessibility for all learning styles and needs.

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

MO1 Demonstrate effective, appropriate and creative exploration and application of future-focused technology.

MO2 Design and develop innovative technology-driven projects that integrate physical, visual, and interactive components to address complex future creative challenges.

MO3 Demonstrate a high-level use of technology appropriate for entering the professional industry.

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://rl.talis.com/3/uwe/lists/5694E013-3BFF-F751-3A85-3825F3A4377E.html?lang=en-GB&login=1

Part 4: Assessment

Assessment strategy: The assessment strategy of the programme that this module contributes to reflects the School of Art's philosophy, which considers assessment to be an active part of the learning process and a tool for learning.

This module takes a programmatic approach to assessment. Summative assessment is via portfolio submission which includes a collection of related work developed over a period of time which may include aspects of drawing, writing and research, and a strong practical element.

This should include:
- Process documentation

- Research and development work
- Evidence of decision-making in response to design briefs
- Presentation of project work
- Reflective documentation
- End-user observations and insights
- Software skills
- Additional documentation relevant to the Product Design Technology discipline.

The portfolio assessment in this module is inclusive and is designed to foster and demonstrate the value of a process-centric approach to learning. The module will include a (regularly reviewed) combination of diverse formats and / or modes of Assessment (including physical / digital) and has been designed to offer students of all learning styles the maximum opportunity to demonstrate the skills, knowledge and experiences that they have gained throughout the module.

Within the submission, students are expected to present evidence of work which demonstrates engagement with the minimum number of contact hours for the module, as well as the minimum number of independent study hours. The portfolio work will evidence personal developmental activities, and assessment is designed to reduce issues of plagiarism.

Students will receive regular feedback formatively via midpoint group presentations as well as during group tutorials. This provides students with timely and detailed understanding of their progress and provides clear feed-forward guidance regarding future development. The formative feedback and summative assessment processes of this module are embedded into studio pedagogy and as such establish an authentic, inclusive approach to assessment that builds students' confidence as they progress.

Self and peer evaluation constitute an important part of formative feedback in this module and are embedded to facilitate the progression towards autonomous learning.

At Level 6 assessment is via numerical grading. This assessment structure is

designed to enable students to achieve and evidence the learning outcomes of the module. Students receive personalised feedback against the module learning outcomes. The module is assessed holistically.

Summative assessment feedback provides students with detailed understanding of their progress and achievement of the learning outcomes and provides clear feed-forward guidance regarding future development. As part of the summative assessment process students are supported in developing individual ‘Action Plans’ based on their assessment feedback.

Students who do not pass at the first sit will be given a re-sit opportunity. The re-sit assessment requirements will be the same as the first sit.

Assessment tasks:

Portfolio (First Sit)
Description: Portfolio of final body of work and supporting materials.
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Portfolio (Resit)
Description: Portfolio of final body of work and supporting materials.
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study: