Programme Specification

Product Design Technology [Bower]

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Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Product Design Technology [Bower]

Highest award: BSc (Hons) Product Design Technology

Interim award: BSc Product Design Technology

Interim award: DipHE Product Design Technology

Interim award: CertHE Product Design Technology

Awarding institution: UWE Bristol

Teaching institutions: UWE Bristol

Study abroad: No

Year abroad: No

Sandwich year: Yes

Credit recognition: No

School responsible for the programme: CATE School of Arts, College of Arts, Technology and Environment

Professional, statutory or regulatory bodies:

Institution of Engineering Designers (IED)

Modes of delivery: Full-time, Sandwich

Entry requirements:

For implementation from: 01 September 2024

Programme code: W24000

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: The General aims of the programme are:

To produce graduates with the capacity to proactively solve problems.

To produce graduates with strong communication skills, who are able to explain their concepts to a diverse audience using a range of media.

To prepare students for progression to further study and/or research into product design or related disciplines.

To produce practitioners with an ethical awareness who can take on contemporary issues and objectively seek new and innovative solutions.

Features of the programme: Every year, every student at Level 2 and 3 undertakes a live projects with an industry partner. At Level 3 every student undertakes an individual major projects with human-centred design briefs created by the students. The course has a strong focus on industry and knowledge and skills to increase employability within the design industry.

Educational Aims: The Specific aims of the programme are:

To prepare students for a careers in Product Design.

To produce graduates with a sound understanding of the tools and techniques used to support the product design and development process.

To produce practitioners with the ability to develop initial design concepts into functional engineered product models leading to resolved product concepts.

To give students an understanding of product/system development tools, engineering simulation tools, materials, manufacturing processes and business practices.

To develop students with a through understanding of the technologies underpinning effective engineered product design, realisation and development.

To prepare students for progression to further study and/or research into design or related disciplines.

To develop students' independent study skills and prepare them for lifelong learning experiences.

Programme Learning Outcomes:

On successful completion of this programme graduates will achieve the following learning outcomes.

Knowledge and Understanding

A1. Design methods, tools and techniques

A2. Primary and Secondary research techniques

A3. Materials and Processes

A4. 2 and 3 dimensional communication techniques

A5. Multimedia tools and techniques

A6. Product modelling tools and techniques, including rapid prototyping, hand construction and finishing

A7. Contextual perspective of product design in western cultures

A8. The nature of creativity in design and the design process

A9. Methods and strategies for the generation and evaluation of alternative design solutions

A10. The contribution and capabilities of IT and computer-based systems for product design, development and optimization

A11. Applied engineering concepts

A12. The impact of sustainability upon the process of design

Intellectual Skills

B1. The formulation of effective approaches to learning

B2. Critical Thinking

B3. Analysis

B4. Synthesis of different types of information

B5. Evaluation

B6. Problem Solving

B7. Appreciate problem contexts

B8. Balance conflicting objectives

Subject/Professional Practice Skills

C1. Develop an awareness of group working methods appropriate to the design industries and the benefits of this approach

C2. Create engineered products/systems that correspond to stated requirements

C3. Use real and virtual models to develop and refine design concepts

C4. Develop initial design concepts into functional product descriptions

C5. Understand the engineering implications of design specifications

C6. Generate and evaluate alternative design solutions

C7. Search for, and evaluate, information and solutions using a wide range of information sources – including the internet

C8. Manage multi- disciplinary projects

C9. Specify appropriate electro-mechanical devices for incorporation into design solutions

Transferable Skills and other attributes

D1. Communication skills: to communicate orally or in writing, including, for instance, the results of technical investigations, to peers and/or to “problem owners”

D2. Self-management skills: to manage one's own time; to meet deadlines; to work with others having gained insights into the problems of team based project development

D3. IT Skills in Context (to use software in the context of problem-solving investigations, and to interpret findings)

D4. Problem formulation: to express problems in appropriate notations

D5. Progression to independent learning: to gain experience of, and to develop skills in, learning independently of structured class work. For example, to develop the ability to use on-line facilities to further self-study

D6. Comprehension of professional literature: to read and to use literature sources appropriate to the discipline to support learning activities

D7. Working with Others: to be able to work as a member of a team; to be aware of the benefits and problems which teamwork can bring

Assessment strategy: The assessment strategy to enable the learning outcomes to be achieved and demonstrated:

Students will experience a range of assessment modes; Group and Individual design projects feature strongly, usually assessed by presentation, exhibition and/or direct submission of the design. Coursework is also assessed as; practical projects, written assignments, graphic or visual communication, dissertations and design portfolios.

Student support:

Part B: Programme Structure

Year 1
Full time and sandwich students must take 120 credits from the modules in Year 1.

Year 1 Compulsory Modules (Full Time and Sandwich)
Full time and sandwich students must take 120 credits from the modules in Compulsory Modules (Full Time and Sandwich).

Module Code	Module Title	Credit
UBLFC8-30-1	Design Communication 2025-26	30
UBLF98-15-1	Design in Context 2025-26	15
UBLFU8-15-1	Graphic Design 2025-26	15
UBLFQ9-30-1	Mechanisms and Structures 2025-26	30
UBLFEA-30-1	Product Design Studio 1 2025-26	30

Year 2
Full time and sandwich students must take 120 credits from the modules in Year 2.

Year 2 Compulsory Modules (Full Time and Sandwich)
Full time and sandwich students must take 120 credits from the modules in Compulsory Modules (Full Time and Sandwich).

Module Code	Module Title	Credit
UBLFD9-15-2	Materials and Processes 2026-27	15
UBLF9A-15-2	Physical Computing 2026-27	15
UBLFDA-15-2	Product CAD 2026-27	15
UBLLXR-15-2	Product Design Engineering 2026-27	15
UBLLYA-60-2	Product Design Technology Studio 2 2026-27	60

Year 3
Full time students must take 120 credits from the modules in Year 3.
Sandwich students must take 15 credits from the modules in Year 3.

Year Out:
We recommend that students take this opportunity to do a year-long placement in industry or research. However, this is not necessary and students can enter the third year immediately after year 2. For students wishing to take a sandwich year, the module “Workbased Research Project UBLMG4-15-3” must be taken.

Year 3 Compulsory Modules (Full Time)
Full time students must take 120 credits from the modules in Compulsory Modules (Full Time).

Module Code	Module Title	Credit
UBLFA8-15-3	Design in Practice 2027-28	15
UBLFB8-15-3	Design Research Methods 2027-28	15
UBLF79-45-3	Individual Project (Product Design) 2027-28	45
UBLFM9-15-3	Innovation, Technology and Design 2027-28	15
UBLFFA-30-3	Product Design Studio 3 2027-28	30

Year 3 Compulsory Modules (Sandwich)
Sandwich students must take 15 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UBLMG4-15-3	Work-Based Research Project 2027-28	15

Year 4
Sandwich students must take 105 credits from the modules in Year 4.

Year 4 Compulsory Modules (Sandwich)
Sandwich students must take 105 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UBLFB8-15-3	Design Research Methods 2028-29	15
UBLF79-45-3	Individual Project (Product Design) 2028-29	45
UBLFM9-15-3	Innovation, Technology and Design 2028-29	15
UBLFFA-30-3	Product Design Studio 3 2028-29	30

Part C: Higher Education Achievement Record (HEAR) Synopsis

The programme prepares students for successful careers in product design and the design industries. Within the programme there is a particular focus on real world experience and preparing young professionals for industry. Graduates are able to demonstrate excellent creative and technical competence, the capacity to critically evaluate complex information and the skills to apply their knowledge in solving challenging product and design engineering design problems.

Part D: External Reference Points and Benchmarks

QAA subject benchmark statements:

QAA Art and Design benchmark statement 2008:

The programme design team has taken special note of the definition of Art and Design, outlined in section 3.1 of the QAA document Subject Benchmark Statement: Art and Design (2008). “Art and design is a subject that embraces an overlapping and changing community of many disciplines. It also engages with many other subjects, including media and communications; the performing arts; the built environment; information technology and computing; engineering; business; and, notably, the history of art, architecture and design.” As a product design programme, the Product Design Technology degree is deliberately multidisciplinary, embracing elements of product design, engineering, history, art practice and reference to other disciplines such as media and communication. This approach has informed the combination of study modules and the projects contained within them, and seeks to be responsive to changing social needs (such as market forces, design techniques and shifts in practice). This approach has clear links with other strategic drivers, including employability and networking.

In terms of Level 6 (graduating level), requirements such as critical evaluation and the understanding of professional practice issues related to the designer’s relationship with clients, markets, users and consumers were key in the development of the studio modules. At the heart of the programme lies the ability to generate

ideas independently and/or collaboratively in response to set briefs and/or self-initiative activities. The programme has also taken into consideration the application of information skills to navigate, retrieve, and manage information from a variety of sources and to communicate ideas and information in visual, oral and written forms this is specially evidenced in the Design Research Methods and the studio modules.

In designing this programme, the faculty has drawn upon the following external reference points:

The QAA Framework for Higher Education Qualifications in England, Wales and Northern Ireland

The QAA Benchmark Statement for Engineering:

The QAA Subject Benchmark Statement for Engineering outlines skills and knowledge expected of a graduate in an engineering discipline (Section 4 of the Statement refers), while noting that they should be interpreted in the context of the particular engineering discipline which is being studied. These benchmarks map closely to the skills contained in the learning outcomes for this programme, and hence we have confidence that the programme is in accordance with the precepts of the Statement.
UWE's Learning and Teaching Strategy has informed the faculty's policy for the delivery of its programmes.

The Institute of Engineering Designers (IED) Learning Outcomes document:

The IED Learning Outcomes has provided our benchmark for ensuring that our students are receiving an education that will enable them to become accredited Product Designers, and go on to seek professional status after graduation.

The programme design team has also looked at:

UWE's 20/20 Strategy

UWE Employability Strategy

QAA code of practice: section 8 Career Education, information, advice and guidance

UWE Widening Participation Strategy

UWE Sustainability Strategy

QAA Education for Sustainable Development

The programme design team has taken full account of the UWE Bristol Strategy 2020, specifically the themes “Ready and able graduates”, “Outstanding learning and Strategic partnerships” and “Connections and networks” (the 4th theme of “Research with Impact” has also been considered in relation to this undergraduate degree, especially in terms of research informed teaching, where students are exposed to ideas and techniques which form the research interests of teaching staff, evidenced in the Design Research Methods and Individual Project modules). Further, the Creative product Design programme is linked with employers, institutions and other bodies throughout the Bristol city region and beyond. Sustainability and behaviour change inform the Creative Product Design programme, explicitly and implicitly: the degree programme focuses its attention on integrating sustainable design in the design process, while also producing graduates who place human-centred at the heart of a creative design process.

Faculty Technology Enhanced Learning (TEL) Strategy (2012-2017): The delivery of the programme has been informed by the Faculty’s TEL policy on teaching, learning and assessment including a strong emphasis on formative work, skills development and innovative approaches to teaching and learning.

Students provide end of module feedback which is incorporated into module actions and development. Students also provide feedback via Student-Staff Forums and Programme Management Committees.

The NSS is thoroughly evaluated and action plans devised to improve performance

year on year.

The feedback of External Examiners is valued and key to ensuring a competitive and appropriate offering in the broader academic context.

All modules and programmes are required to produce action focused annual reports to constantly review and enhance teaching and learning within the programme, Staff development and training along with innovation in module delivery and assessment (within the confines of Professional Body requirements where necessary) are strongly encouraged.

The curriculum has been developed to allow access to all involving wider consultation within the faculty and taking on board existing policies.

Part E: Regulations

Approved Variant to University Regulations and Procedures (from 2022-23 Award Boards).

The following variant regulation for compensation applies to students on this award which has been accredited by a PSRB that comes under the auspices of the Institution of Engineering Designers (IED).

The variant applied from 2022-23 Award Boards onwards. (Note - Compensation applied to all levels not just new students).

- The permitted maximum compensated credit is 30 credits for a Bachelors or Integrated Masters degree and a maximum of 20 credits in a Masters degree.

- The awarding of compensated credit may be considered for an overall module mark in the range 30% to 39% for Levels 4-6 and 40%-49% for Level 7.

No excused credit.