

Part 1: Basic Data		
Awarding Institution	University of the West of England	
Teaching Institution	University of the West of England	
Delivery Location	Frenchay Campus	
Faculty responsible for programme	Faculty of Environment and Technology	
Department responsible for programme	Architecture and the Built Environment	
Modular Scheme Title	Undergraduate modular scheme	
Professional Statutory or Regulatory Body Links <i>Name of PSRB</i> <i>Type of approval</i> Dates	IED	
	Currently accredited in partial fulfillment of CEng.	
	November 2011 – November 2016	
Highest Award Title	BSc (Hons) Product Design Technology	
Default Award Title	n/a	
Interim Award Titles	BSc Product Design Technology Diploma of Higher Education Product Design Technology Certificate of Higher Education Product Design Technology	
UWE Progression Route		
Mode(s) of Delivery	SW, Full Time, Part Time	
Codes	UCAS:	JACS:
	ISIS2: W240	HESA:
	W240 (SW) W24A13 (FT/PT)	
Relevant QAA Subject Benchmark Statements	Engineering (2010) and Art & Design (2008)	
CAP Approval Date	March 2013 v 1, Feb 2014 v1.1; June 2015 v1.2; Feb 2016 v1.3	
Valid From	September 2016	
Valid until Date	September 2018	
Version	1.3	

Part 2: Educational Aims of the Programme

The Specific aims of the programme are;

1. To prepare students for a careers in Product Design.
2. To produce graduates with a sound understanding of the tools and techniques used to support the product design and development process.
3. To produce practitioners with the ability to develop initial design concepts into functional engineered product models leading to resolved product concepts.
4. To give students an understanding of product/system development tools, engineering simulation tools, materials, manufacturing processes and business practices.
5. To develop students with a through understanding of the technologies underpinning effective engineered product design, realisation and development.
6. To prepare students for progression to further study and/or research into design or related disciplines.
7. To develop students' independent study skills and prepare them for lifelong learning experiences.

The General aims of the programme are;

1. To produce graduates with the capacity to proactively solve problems.
2. To produce graduates with strong communication skills, who are able to explain their concepts to a diverse audience using a range of media.
3. To prepare students for progression to further study and/or research into product design or related disciplines.
4. To produce practitioners with an ethical awareness who can take on contemporary issues and objectively seek new and innovative solutions.

Programme requirements for the purposes of the Higher Education Achievement Record (HEAR)

The BSc(Hons) Product Design Technology 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 3: Learning Outcomes of the Programme

The award route provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas:

A Knowledge and Understanding

Students will develop knowledge and understanding of:

1. Design methods, tools and techniques
2. Primary and Secondary research techniques
3. Materials and Processes
4. 2 and 3 dimensional communication techniques
5. Multimedia tools and techniques.
6. Product modelling tools and techniques, including rapid prototyping, hand construction and finishing
7. Contextual perspective of product design in western cultures.
8. The nature of creativity in design and the design process.
9. Methods and strategies for the generation and evaluation of alternative design solutions
10. The contribution and capabilities of IT and computer-based systems for product design, development and optimization.
11. Applied engineering concepts
12. The impact of sustainability upon the process of design.

Part 3: Learning Outcomes of the Programme

B Intellectual Skills

Students will develop skills in:

1. The formulation of effective approaches to learning.
2. Critical Thinking
3. Analysis
4. Synthesis of different types of information
5. Evaluation
6. Problem Solving
7. Appreciate problem contexts
8. Balance conflicting objectives

C Subject, Professional and Practical Skills

Students will be able to:

1. Develop an awareness of group working methods appropriate to the design industries and the benefits of this approach.
2. Create engineered products/systems that correspond to stated requirements.
3. Use real and virtual models to develop and refine design concepts.
4. Develop initial design concepts into functional product descriptions.
5. Understand the engineering implications of design specifications.
6. Generate and evaluate alternative design solutions.
7. Search for, and evaluate, information and solutions using a wide range of information sources – including the internet.
8. Manage multi- disciplinary projects.
9. Specify appropriate electro-mechanical devices for incorporation into design solutions.

D Transferable Skills and other attributes

1. Communication skills: to communicate orally or in writing, including, for instance, the results of technical investigations, to peers and/or to “problem owners”.
2. 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.
3. IT Skills in Context (to use software in the context of problem-solving investigations, and to interpret findings)
4. Problem formulation: To express problems in appropriate notations.
5. 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.
6. Comprehension of professional literature: to read and to use literature sources appropriate to the discipline to support learning activities.
7. 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.

	Foundation 0				Year 1				Year 2				Year 3							
	ML7-30-0	MYM-30-0	MLN-30-0	FBG-30-0	FEA-30-1	FC8-30-1	FU8-15-1	F98-15-1	FQ9-15-2	LYA -60-2	FDA-15-2	FD9-15-2	FN9-30-2	F9A-15-2	FB8-15-3	F79-45-3	FFA-30-3	FA8-15-3	FM9-15-3	MG4-15-3
	Foundation Design Studio	Foundation Design Comm.s	Foundation Design History	Fd'n Maths, Algebra & Calculus	Design Studio 1	Design Communication	Graphic Design	Design Context	Mechanisms and Structures	PDT Studio 2	Product CAD	Materials & Processes	Product Design Engineering	Physical Computing	Design Research Methods	Individual Project	Design Studio 3	Design in Practice	Mechanical Design	Workbased Research Project
Learning Outcomes:																				
A) Knowledge and understanding of:																				
1. Design methods, tools and techniques	✓	✓			✓	✓	✓		✓	✓				✓	✓	✓	✓		✓	✓
2. Primary & Secondary research techniques	✓		✓		✓			✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	
3. Materials and Processes	✓				✓				✓	✓		✓	✓			✓	✓		✓	
4. 2 & 3 dimensional communication techniques	✓	✓			✓	✓	✓			✓	✓					✓	✓			
5. Multimedia tools and techniques.	✓	✓			✓	✓	✓			✓	✓				✓	✓	✓			
6. Product modelling tools and techniques, including. rapid prototyping, hand construction and finishing	✓	✓			✓	✓			✓	✓	✓		✓	✓		✓	✓		✓	
7. Contextual perspective of product design in western cultures.			✓					✓							✓					✓
8. The nature of creativity in design and the design process	✓				✓					✓			✓	✓	✓	✓	✓		✓	
9. Methods and strategies for the generation and evaluation of alternative design solutions	✓				✓				✓	✓			✓	✓	✓	✓	✓		✓	
10. The contribution and capabilities of IT and computer-based systems for product design, development and optimization.	✓	✓				✓	✓				✓		✓	✓		✓	✓		✓	
11. Applied engineering concepts.				✓					✓			✓	✓	✓					✓	
12. The impact of sustainability upon the process of design.					✓					✓						✓				
(B) Intellectual Skills																				
1 The formulation of effective approaches to learning	✓		✓		✓			✓	✓	✓			✓	✓	✓		✓		✓	
2. Critical Thinking	✓		✓		✓			✓		✓			✓	✓	✓	✓	✓		✓	
3. Analysis	✓		✓	✓	✓			✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	
4. Synthesis of different types of information	✓	✓	✓	✓	✓		✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
5. Evaluation	✓		✓	✓	✓				✓	✓			✓		✓	✓	✓	✓	✓	
6. Problem Solving	✓	✓	✓	✓	✓				✓	✓			✓	✓	✓	✓	✓	✓	✓	
7. Appreciate problem contexts	✓		✓		✓			✓		✓					✓	✓	✓	✓		✓

8. Balance conflicting objectives	✓				✓					✓	✓			✓		✓	✓	✓	✓	✓	✓
(C) Subject/Professional/Practical Skills																					
1. Develop an awareness of group working methods appropriate to the creative industries and the benefits of this approach	✓				✓						✓			✓				✓	✓		✓
2. Create engineered products/systems that correspond to stated requirements										✓	✓	✓		✓	✓			✓		✓	
3. Use real and virtual models to develop and refine design concepts	✓	✓			✓	✓				✓	✓	✓		✓	✓			✓	✓		✓
4. Develop initial design concepts into functional product descriptions					✓						✓			✓	✓			✓	✓		✓
5. Understand the engineering implications of design specifications										✓	✓		✓	✓	✓			✓	✓		✓
6. Generate and evaluate alternative design solutions.	✓				✓					✓	✓			✓		✓	✓	✓		✓	
7. Search for, and evaluate, information and solutions using a wide range of information sources – including the www.	✓		✓		✓						✓		✓	✓	✓	✓	✓	✓		✓	
8. Manage multi- disciplinary projects.					✓				✓		✓						✓	✓	✓		✓
9. Specify appropriate electro-mechanical devices for incorporation into design solutions.										✓				✓	✓			✓	✓		✓
(D) Transferable skills and other attributes																					
1. Communication skills: to communicate orally or in writing, including, for instance, the results of technical investigations, to peers and/or to “problem owners”.	✓		✓		✓				✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
2. 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.	✓				✓						✓				✓	✓	✓	✓	✓		✓
3. IT Skills in Context (to use software in the context of problem-solving investigations, and to interpret findings)	✓	✓	✓		✓				✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
4. Problem formulation: To express problems in appropriate notations.	✓			✓	✓						✓			✓		✓		✓			
5. Progression to independent learning: To gain experience of, & 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.	✓		✓		✓					✓	✓			✓	✓	✓	✓	✓		✓	✓
6. Comprehension of professional literature: to read and to use literature sources appropriate to the discipline to support learning activities.			✓		✓				✓		✓			✓	✓	✓	✓	✓	✓	✓	✓
7. 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.	✓				✓						✓			✓				✓	✓	✓	✓

Part 4: Student Learning and Student Support

Teaching and learning strategies to enable learning outcomes to be achieved and demonstrated

At UWE, Bristol there is a policy for a minimum average requirement of 12 hours/week contact

time over the course of the full undergraduate programme. This contact time encompasses a range of face-to-face activities as described below. In addition a range of other learning activities will be embedded within the programme which, together with the contact time, will enable learning outcomes to be achieved and demonstrated.

Scheduled learning includes lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops; external visits; work; supervised time in studio/workshop. Scheduled sessions may vary slightly depending on the module choices made.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc. Scheduled sessions may vary slightly depending on the module choices made.

Description of the teaching resources provided for students

Workshop access providing expert training and support for a wide range tools, machinery and materials suitable for practical prototyping and model making to support project based design education.

Extensive industry standard IT facilities and software are available open access for all students to use.

Purpose built modern design studio's support creativity, collaboration and teamwork.

All modules use Blackboard for online enhanced delivery.

Students are directed towards the University Library online Study Skills resources for the development of study skills. Additional support is provided through the library by means of information and study skills sessions embedded at module level, self-directed online tutorials and as a programme of regular workshops.

Description of any Distinctive Features

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.

Part 5: Assessment

Approved to University Regulations and Procedures.

It is the Award Board's responsibility to determine whether a student's attainment at level 0 is sufficient to progress to level 1.

Assessment Strategy

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.

Assessment Map

The programme encompasses a range of **assessment methods**. These are detailed in the following assessment map: *(double click to open imbedded spread sheet)*

Assessment Map for Product Design Technology

		Type of Assessment*									
		Unseen Written Exam	Open Book Written Exam	In-class Written Test	Practical Exam	Practical Skills Assessment	Oral assessment and/or presentation	Written Assignment	Report / Project	Dissertation	Portfolio
Compulsory Modules Level 1	UBLFEA-30-1										A 100
	UBLFQ9-30-1	A 25									B 75
	UBLFC8-30-1										A 100
	UBLFU8-15-1										A 100
	UBLF98-15-1	A 25						B 75			
Compulsory Modules Level 2	UBLLYA-60-2								A 100		
	UBLLXR-15-2						A 25		B 75		
	UBLFDA-15-2				A 50			B 50			
	UBLFD9-15-2	A 50							B 50		
	UBLF9A-15-2						A 25				B 75
Compulsory Modules Level 3	UBLFFA-30-3										A 100
	UBLFB8-15-3						A 50		B 50		
	UBLFM9-15-3						A 25		B 75		
	UBLF79-45-3						A 40		A 60		
Optional Modules Level 3	UBLMG4-15-3 W.R.P. ***						A 25		B 75		
	UBLFA8-15-3 D.I.P. ***						A 50		B 50		

*Assessment should be shown in terms of either **Written Exams**, **Practical exams**, or **Coursework** as indicated by the colour coding above.

*** Module UBLMG4-15-3 Workbased Research Project to be taken only by students taking the work placement route (in penultimate year), for which they will be exempt from module UBLFA8-15-3 Design in Practice in their final year.

Part 6: Programme Structure

This structure diagram demonstrates the student journey from Entry through to Graduation for a **full time student**, including: level and credit requirements; interim award requirements; module diet, including compulsory and optional modules

Part time:

Individual part time structure may be developed in exceptional circumstances through negotiation.

ENTRY

Year 1	Compulsory Modules <ul style="list-style-type: none"> Product Design Studio 1 UBLFEA-30-1 Mechanisms & Structures UBLFQ9-30-1 Design Communication UBLFC8-30-1 Graphic Design UBLFU8-15-1 Design in Context UBLF98-15-1 	Optional Modules None	Interim Awards Certificate of Higher Education Product Design Technology 120 credits at L1
Year 2	Compulsory Modules <ul style="list-style-type: none"> Product Design Technology Studio 2 UBLLYA-60-2 Product Design Engineering UBLLXR-15-2 Product CAD UBLFDA-15-2 Materials and Processes UBLFD9-15-2 Physical Computing UBLF9A-15-2 	Optional Modules None	Interim Awards Diploma of Higher Education Product Design Technology 120 credits at L1 120 credits at L2
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 <ul style="list-style-type: none"> Individual Project Product Design UBLF79-45-3 Design Research Methods UBLFB8-15-3 Product Design Studio 3 UBLFFA-30-3 Mechanical Design UBLFM9-15-3 	Optional Modules: Choose one from: <ul style="list-style-type: none"> Design in Practice UBLFA8-15-3 Or placement students take: <ul style="list-style-type: none"> Workbased Research Project UBLMG4-15-3 During their placement year.	Interim Awards BSc Product Design Technology 300 credits at appropriate level Highest Award BSc (Hons) Product Design Technology 360 credits at appropriate level

GRADUATION**Part 7: Entry Requirements**

The University's Standard Entry Requirements apply with the following additions/exceptions*:

Tariff points as appropriate for the year of entry - up to date requirements are available through the [courses database](#).

Part 8: Reference Points and Benchmarks

QAA subject benchmark statements:

Part 8: Reference Points and Benchmarks

QAA Art & 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 multi-disciplinary, 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 & 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 (based on the Engineering Council UKSPEC criteria for CEng status) has provided our benchmark for ensuring that our students are receiving an education that will enable them to become accredited engineers, and go on to seek professional status after graduation.

The programme design team has also looked at:

Part 8: Reference Points and Benchmarks

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.

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of individual modules can be found in module specifications, available on the University's website.