Buckinghamshire New University

PROGRAMME SPECIFICATION

1. Key Information

Programme Title:	Sustainable Product Design
Awarding Institution:	Buckinghamshire New University
Teaching Institution(s):	Buckinghamshire New University
Subject Cluster:	3D Design
Award Title (including separate Pathway Award Titles where offered):	BSc (Hons) Sustainable Product Design BSc (Hons) Sustainable Product Design with Foundation Year BSc (Hons) Sustainable Product Design (Top-Up) - to be launched in 2025/6
Pathways (if applicable)	N/A
FHEQ level of final award:	Level 6: Bachelor's Degree with Honours
Other award titles available (exit qualifications):	Certificate of Higher Education Diploma of Higher Education BSc Sustainable Product Design
Accreditation details:	Institution of Engineering Designers at RProdDes level
Length of programme:	3 years 4 years with Foundation Year 1 year Top-Up
Mode(s) of Study:	Full Time
Mode of Delivery:	In person (on-site) delivery
Language of study:	English
QAA Subject Benchmark(s):	Art & Design (2019)
Other external reference points (e.g. Apprenticeship Standard):	N/A
Course Code(s):	BSSUSPFT / BSSUSPFY / BSSUSPTU
UCAS Code(s):	
Approval date:	
Date of last update:	

2. Programme Summary

This degree course offers you the opportunity to study Sustainable Product Design so that you are in a position to follow career ambitions within the profession or progress to postgraduate studies upon graduation. It enables you to successfully design innovative and functional products that include a successful interface between products and users. The aim of the course is to create sustainable designers with advanced design knowledge and skills

who are able to consider, incorporate and communicate their knowledge and apply their skills in the professional development of sustainable products. By working through a sequence of challenging projects, you will acquire a wide range of creative and technical skills, which enable you to complete sustainable design projects from the stages of client consultation through to final product presentation. By studying on this course, you will develop as multi-disciplinary designers who have a focus on sustainability within Product Design by the time of their final major project in the third year. A BSc Sustainable Product Design student will tend towards a technologically innovative approach, backed up with a sound understanding of cultural insight and user behaviour.

3. Programme Aims and Learning Outcomes

Programme Aims

This programme aims to:

1. Introduce learners to the wide range of skills, techniques, strategies and methods that will allow them to realise and communicate their full creative potential.
2. Allow learners to develop a sound basis for research and review that will enable them to gain specific skills and transferable knowledge applicable to academic work and to future roles.
3. Encourage learners to plan personal development and improve their capacity to understand and apply what they are taught and help to review, plan and manage their learning.
4. Ensure that by the end of the course learners are aware of their ambitions, abilities and potential, so that they can enter the area of sustainable product design or related professional areas appropriate to their ambitions.
5. Provide learners with the ability to critique, interpret, evaluate and apply social and cultural meaning, and professional context, and synthesise these into the creative development and commercialisation of new sustainable products
6. Equip learners with the skills and knowledge to efficiently present to professional clients with a clear understanding of market, costing, pricing, manufacturing/technology implications of batch/mass production, protection and exploitation of intellectual property rights

Programme Learning Outcomes

Knowledge and Understanding (K)

On successful completion of the programme you will be able to:

ID	Learning Outcome
K1	Apply knowledge of sustainable product design concepts and theories to practical work
K2	Demonstrate a detailed and sophisticated knowledge of the historical and contemporary context of design.
K3	Apply research and analysis to the design process so that creative, innovative and commercial solutions may be developed, protected and exploited

K4	Communicate effectively as a sustainable designer, thinker and practitioner with an informed, critical insight into their own practice within the context of the broader field of art and design
K5	Respond to different design challenges and devise programmes of work which will result in successful and timely resolution

Analysis and Criticality (C)

On successful completion of the programme you will be able to:

ID	Learning Outcome
C1	Evaluate design solutions in relation to ethical and sustainable practice
C2	Critically evaluate material from a variety of sources to inform design and design related activities
C3	Critically employ design methodologies and be able to present a range of design solutions to particular issues and business applications
C4	Be positively self-analytical and to solve design problems in practical and conceptual ways
C5	Apply literacy, numeracy and analysis to design processes

Application and Practice (P)

On successful completion of the programme you will be able to:

ID	Learning Outcome
P1	Demonstrate working proficiency in a range of materials and sustainable manufacturing processes, observing health and safety protocols
P2	Communicate development stages of design projects through accurate drawings, realistic visualisations, models and working prototypes
P3	Effectively apply varied technologies to a wide range of design tasks
P4	Specify materials, processes, components, and products to meet complex requirements, embedding sustainable practice.
P5	Analyse existing products and components using a range of design methods, suggest improvements, and evaluate their success

Transferable skills and other attributes (T)

On successful completion of the programme you will be able to:

ID	Learning Outcome
T1	Devise schedules for design projects, work independently, ethically, meet deadlines and costs
T2	Respond to feedback and work as part of a multidisciplinary team through collective and creative engagement and collaboration
T3	Effectively communicate and present complex work in a variety of situations and audiences

T4	Employ a wide range of information and communication technologies effectively in the development of design outcomes
T5	Use design research to develop creative, useful and useable solutions, realised through a range of creative and technical 2D and 3D skills

Graduate Attributes

The BNU Graduate Attributes of: Knowledge and its application; Creativity; Social and ethical awareness and responsibility; and Leadership and self-development focus on the development of innovative leaders in professional and creative capacities, who are equipped to operate in the 21st Century labour market and make a positive impact as global citizens.

On this programme, attributes are developed through graduates becoming members of the Institution of Engineering Designers and Registered Product Designers (RProdDes). You will also have partially completed the academic requirements for becoming a Chartered Product Designer (CTPD) and be eligible for entry into a master's programme in Product Design in order complete the educational requirements. Upon graduation, you may gain employment within the following areas:

• Product and Industrial Designer • Automotive designer • Model maker • Design Engineer • Exhibition, Display and Event Designer • Furniture and Kitchen Designer • CAD Visualiser and Technician • Production and Set Designer • Prop Designer and Maker, Art Director

You may become self-employed or be employed in practices that may range in size from large companies to SMEs and small partnerships. You may also study PGCE courses upon completion of this award. You receive access to the university Careers Service throughout your studies, with focused sessions on applications, career searches, online presence and promotion of creative outcomes. Employment opportunities of relevance to you are placed on the website and highlighted to teaching staff. This support continues for two years after graduation

4. Entry Requirements

The University's general entry requirements will apply to admission to this programme with the following additions / exceptions:

- Relevant experience gained from the design and manufacturing sector
- Technical qualifications that demonstrate relevant knowledge and skills

You will be expected to have an aptitude for creative and practical work and evidence of this may be requested through a portfolio.

If you do not meet the entry requirements you may, if you have relevant professional experience of a minimum of 2 years in industry, still be invited for interview, where you will be required to demonstrate the necessary knowledge and understanding for entry onto the course.

Previous study, professional and / or vocational experiences may be recognised as the equivalent learning experience and permit exemption from studying certain modules in accordance with our accreditation of prior learning (APL) process.

5. Programme Structure

Pathway 1 or stand-alone course **[add further tables for each additional pathway]**

Level	Modules (Code, Title and Credits)	Exit Awards
Foundation Year[1]	**Core modules:** FY026 Preparing for Success Knowledge and Creativity FY027 Preparing for Success Self-development and Responsibility FY028 Inquiry Based Learning FY041 Introduction to Design and Development **Option modules:** No option modules are available at this level. **Opportunity modules:** No Opportunity modules are available at this level.	**N/A.** No credit is awarded at this Level.
Level 4	**Core modules:** CAD4063 Craft Skills CAD4016 Critical and Historical Thinking CAD4042 Materials and Processes CAD4064 Design Communication CAD4065 Sustainable Practice CAD4060 Design Project	**Certificate of Higher Education**, awarded on achievement of 120 credits at Level 4
Level 5	**Core modules:** CAD5023 Design Visualisation CAD5077 Sustainable Design CAD5050 Professional Studies for Product Design	**Diploma of Higher Education**, awarded on achievement of 240 credits, including a minimum of 120 credits at Level 5

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[1] Modules on the Foundation Year only apply to learners who are enrolled on the "with Foundation Year" programme.

	CAD5051 Applied Production and Manufacture CAD5092 Design and Research Theory CAD5052 Industry Brief	
Level 6	**Core modules:** CAD6006 Final Major Project CAD6007 Professional Practice CAD6025 Final Major Project Research CAD6011 Design for manufacture CAD6039 Dissertation	**Ordinary Degree**, awarded on achievement of 300 credits, including 60 credits at Level 6 and 120 credits at each of Levels 4 and 5 **Honours Degree**, awarded on achievement of 360 credits, including 120 credits at each of Levels, 4, 5 and 6

Please note: Not all option modules will necessarily be offered in any one year. Other option modules may also be introduced at a later stage enabling the programme to respond to changes in the subject area.

6. Learning, Teaching and Assessment

Learning and teaching

- Studio Projects

Sustainable Product Design is taught through a sequence of projects which enable you to gain skills and knowledge. Projects are designed to present new challenges to you as you progress through the course and involve working with varied sites, clients and requirements. All projects commence with an oral introduction to a written brief, which guides you through the subsequent stages of research and analysis, design development and final presentation. You record your work and keep a portfolio from the first year onwards.

- Lectures

You receive lectures that are specific to Sustainable Product Design projects and these take place within the designated studio for the course. In addition, you benefit from a rich and varied programme of Critical and Historical Studies lectures, looking at the history and theory of art and design in ways which are both useful and stimulating. All lectures are designed to inspire and inform you in a cross disciplinary environment and to instigate discussions.

- Tutorials

You may have tutorials which are individual or in small groups and these help you to focus on evaluating your studio and written work and in identifying directions for study and research. Tutors will question and advise you, presenting alternatives and questioning decisions, in order to help you realise your full potential and to develop critical and evaluative skills.

- Seminars

Seminars enable open discussion between you and the tutors. You are encouraged to question, test your knowledge and to listen to other's points of view, thus enabling your critical abilities to develop. The seminar ranges from large group formal sessions to informal small discussion groups and is usually directed by a studio tutor. Critical and Historical Studies mixed-discipline seminars encourage you to make conceptual connections with other areas of art and design practice.

- Group Critiques

The formal critique (crit) when you are required to display your work to a panel of tutors and your peers is considered central to your learning experience. The process encourages you to become increasingly articulate and confident when discussing your work and prepares you for client presentations when you enter practice. The crit is seen as an important forum not only for critical appraisal but also for debate and discussion among the panel, and as an opportunity for you to question the opinions of your tutors.

- Self-directed study

You have to engage in independent working and develop project management and time management skills in connection with both practical and theoretical activities. Self-directed study is essential to successfully managing and achieving programme learning outcomes.

- Personal Development Planning

Learners across all three levels of the course are required to record their work as they progress through sequences of projects. 2D and 3D artefacts in different media are photographed and documented so that an ongoing digital portfolio is kept. Aspects of design practice such as site visits and collaborations with clients or colleagues on other courses are also documented. PDP Portfolios encourage you to employ self-evaluation skills and critically reflect upon the learning outcomes for projects and the connections between studio and written work.

- The Studio

Although Sustainable Product Design learners are taught within CAD suites, workshops, libraries and lecture theatres across the campus, they are based in the designated studio for the course. It is in the studio that learning and teaching activities for design projects take place. External clients who work with students on live projects will visit the studio for reviews of work as well as students from other courses who are collaborating on projects with students. The studio encourages professional learning as it mirrors practices in the profession and enables peer learning.

- CAD

Computer aided design is an essential skill for Sustainable Product Design learners to acquire and apply to project work. Learners are taught a range of 2D and 3D programmes and related technologies through structured lessons in CAD suites. There are computers within the designated studio for the course and learners have access to CAD support sessions outside the times of their timetabled lessons.

- Workshops

You receive inductions so that you can use the extensive range of workshops on the campus including wood, metal, plastic, engineering, ceramics, print, fashion and textiles, to make presentation pieces for projects. We have CAD/CAM machines, rapid prototyping and laser cutting facilities, and photographic, film and video facilities, with technicians who will assist you to use them.

- Virtual Learning Environment (Blackboard)

The course will use the VLE throughout the teaching of modules. Project briefs, lecture notes, and supporting information including videos or recordings of lectures, Power Point presentations and study skills guides are made available, and students will be encouraged to research information across year groups.

- Student Support

The Learning Development Unit is available to support learners wishing to enhance their study skills and learners with learning difficulties such as dyslexia are supported by the Disabilities Unit. Learners also receive support through the Student Experience Directorate which offers career and financial advice, as well as counselling.

- Institution of Engineering Designers

The course has been designed to meet the accreditation requirements for RProdDes membership of the Institution of Engineering Designers (IED). The IED provide professional support and advice for students and graduates of accredited courses, as well as organising

regular visits, conferences, student prizes and other activities to encourage and motivate students, and to help develop their subsequent careers in Product Design.

- Study visits and tours

The Course Team arranges visits to galleries, museums and lectures as well as visits to industry sites.

Assessment

Formative Assessment

Across all three levels of the course, learners receive oral and/or written formative feedback at informal and formal stages. In both practical and theory sessions, this feedback is intended to direct you towards achieving results at summative stages which will have been successfully evolved and resolved. Formative feedback is delivered to you during personal one-to-one tutorials, group tutorials, seminars and group critiques. You will contribute informal peer assessment during group tutorials and seminars and discuss each other's work in a constructive manner, as you would do in practice. Formative assessment includes suggestions as to how design projects might best progress and you will be given references that they should investigate further.

Summative Assessments

You will receive briefings about all aspects of assessment at the start of each academic year, or module delivery. You will receive oral feedback, usually during a group critique for a project. You will engage in informal peer feedback during group critiques as well as self-evaluation. Summative assessment marks are aligned to the assessment criteria for each module where you will receive detailed written feedback.

Contact Hours

You can expect to receive approximately 12 hours of scheduled learning activities per week and will be expected to undertake about 16-18 hours of independent study, including the development of practical skills in studios/workshops. As stated above the learning hours will be constructed from a variety of learning types (methods), which includes: lectures; seminars; tutorials/supervisions; demonstrations, practical classes and workshops; supervised time in studio/workshop; fieldwork/external visits; work-based learning; independent study; completion of assessment tasks; placement/study abroad.

7. Programme Regulations

This programme will be subject to the following assessment regulations:

Academic Assessment Regulations, with the following exceptions:

- Level Six students must pass the FMP module in order to be awarded their Ordinary Degree. This module may not be compensated.
- The calculation of this award will be as follows: Level 5: 33%; Level 6: 67%
- Referral Opportunities: As with any award at Buckinghamshire New University, if a student has not received a pass mark for a module or piece of assessment, they may be required to be reassessed in the component(s) that they have failed.

8. Support for learners

The following systems are in place to support you to be successful with your studies:

- The appointment of a personal tutor to support you through your programme
- A programme handbook and induction at the beginning of your studies
- Library resources, include access to books, journals and databases - many of which are available in electronic format – and support from trained library staff
- Access to Blackboard, our Virtual Learning Environment (VLE), which is accessible via PC, laptop, tablet or mobile device
- Access to the MyBNU portal where you can access all University systems, information and news, record your attendance at sessions, and access your personalised timetable
- Academic Registry staff providing general guidance on University regulations, exams, and other aspects of students and course administration
- Central student services, including teams supporting academic skills development, career success, student finance, accommodation, chaplaincy, disability and counselling
- Support from the Bucks Students' Union, including the Students' Union Advice Centre which offers free and confidential advice on University processes.

9. Programme monitoring and review

BNU has a number of ways for monitoring and reviewing the quality of learning and teaching on your programme. You will be able to comment on the content of their programme via the following feedback mechanisms:

- Formal feedback questionnaires and anonymous module 'check-ins'
- Participation in external surveys
- Programme Committees, via appointed student representatives
- Informal feedback to your programme leader

Quality and standards on each programme are assured via the following mechanisms:

- An initial event to approve the programme for delivery
- An annual report submitted by the External Examiner following a process of external moderation of work submitted for assessment
- The Annual Monitoring process, which is overseen by the University's Education Committee
- Review by the relevant PSRB(s)
- Periodic Subject Review events held every five years
- Other sector compliance and review mechanisms

10. Internal and external reference points

Design and development of this programme has been informed by the following internal and external reference points:

- The Framework for Higher Education Qualifications (FHEQ)
- The QAA Subject Benchmark Statement – Art and Design 2020
- The PSRB Standards of Proficiency (SOP) for Institution of Engineering Designers (IED)
- The BNU Qualifications and Credit Framework
- The BNU Grading Descriptors

- The University Strategy, Impact 2022

Mapping of Subject Benchmark Statement and any relevant Apprenticeship Standard to Programme Learning Outcomes

Subject Benchmark Statement / Apprenticeship Standard:	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Benchmark / Standard requirement	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
Subject specific knowledge understanding, attributes and skills: i - present evidence that demonstrates some ability to generate ideas independently and/or as self-initiated activity and/or in response to set briefs	x			x		x									x	x				
ii - demonstrate proficiency in observation, investigation, enquiry, visualisation and/or making	x			x			x	x			x	x	x	x				x	x	x
iii - develop ideas through to outcomes that confirm the student's ability to select and use materials, processes and environments	x		x		x		x	x	x		x		x	x		x			x	x

Subject Benchmark Statement / Apprenticeship Standard:	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Benchmark / Standard requirement	**K1**	**K2**	**K3**	**K4**	**K5**	**C1**	**C2**	**C3**	**C4**	**C5**	**P1**	**P2**	**P3**	**P4**	**P5**	**T1**	**T2**	**T3**	**T4**	**T5**
iv - make connections between intention, process, outcome, context and methods of dissemination.		x		x	x	x				x		x			x			x	x	
Informed by professional practice: i - the broad critical and contextual dimensions of the student's discipline(s)	x	x	x	x	x		x	x	x		x				x		x			
ii - the issues which arise from the creative practitioner's relationship with audiences, clients, markets, environments, users, consumers, and/or participants	x			x		x			x			x	x					x	x	x
iii - major developments in current and emerging media and technologies in their discipline(s)		x	x	x		x		x							x	x				x
iv - the significance of the work of other practitioners in their discipline(s)	x	x	x				x								x				x	x

Subject Benchmark Statement / Apprenticeship Standard:	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Benchmark / Standard requirement	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
v - the role and impact of intellectual property.			x		x	x			x	x			x		x				x	x
Generic and graduate skills: Self-management: i - exercise self-management skills in managing workloads and meeting deadlines					x				x					x		x		x		
ii - accommodate change and uncertainty.	x		x		x			x			x					x	x	x		
Critical engagement: i - analyse information and experiences, and formulate reasoned arguments	x		x			x	x	x	x	x			x		x	x	x			x
ii - benefit from the critical judgements of others and recognise their personal strengths and needs.				x	x		x					x					x	x		
Group/team working and social skills:				x				x				x				x	x	x	x	

Subject Benchmark Statement / Apprenticeship Standard:	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Benchmark / Standard requirement	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
i - apply interpersonal, social and negotiation skills in interaction with others.																				
Skills in communication and presentation: i - communicate ideas and information in visual, oral and written forms ii - present ideas and work to their audiences.				x				x				x						x	x	
Research and information skills: i - navigate, retrieve and manage information from a variety of sources		x	x				x		x	x			x		x	x	x			x
ii - select and employ communication and information technologies				x								x				x		x	x	
iii - the ability to identify IP issues, prevent infringements of other's IP rights and take the	x	x	x	x	x	x	x	x		x				x	x					x

Subject Benchmark Statement / Apprenticeship Standard:	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Benchmark / Standard requirement	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
appropriate steps to safeguard the innovation and commercialisation processes.																				
Personal qualities: i - enquire into their discipline, their place within that discipline, and the motivation to advance it	x	x			x		x		x						x					x
ii - apply ethical principles and personal values to their work		x		x		x			x			x					x	x		

Mapping of Programme Learning Outcomes to Modules

Programme Learning Outcome	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Module Code (Core)	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
Level 4																				
CAD4001	x										x	x	x	x						
CAD4016		x	x				x								x			x	x	
CAD4003	x					x		x			x			x						
CAD4064	x	x		x								x	x							
CAD4006	x			x	x	x	x			x	x									
CAD4060	x			x	x		x	x	x	x		x	x		x	x	x		x	x
Level 5																				
CAD5004	x	x		x	x		x					x	x	x		x		x		
CAD5006			x			x		x			x							x	x	
CAD5050		x	x	x				x							x			x		x
CAD5051	x		x		x	x			x		x			x		x				x
CAD5014	x	x	x				x								x			x		
CAD5052	x		x				x	x			x		x	x			x	x		
Level 6																				
CAD6006	x	x	x						x	x	x	x		x		x		x	x	x
CAD6007				x			x			x	x	x					x			
CAD6025					x	x	x			x		x			x	x		x	x	x

Programme Learning Outcome	Knowledge and understanding (K)					Analysis and Criticality (C)					Application and Practice (P)					Transferable skills and other attributes (T)				
Module Code (Core)	K1	K2	K3	K4	K5	C1	C2	C3	C4	C5	P1	P2	P3	P4	P5	T1	T2	T3	T4	T5
CAD6011	x		x			x	x	x		x					x			x	x	
CAD6039	x	x			x		x		x	x			x		x			x	x	