

Programme Specification for Undergraduate Programme

Leading to:

BA (Hons) Industrial Design and Technology

BA (Hons) Industrial Design and Technology with Professional Practice

Applicable for all undergraduate students **starting at Level 1 in 2018**

| Version No. | Date | Notes – QA USE ONLY | QAM/O |
|-------------|----------------|---|-------|
| 2018/19 v1 | 27 July 2018 | Updated programme specification for 2018 entrants. | JP |
| 2018/19 v2 | September 2018 | Minor modification to programme: addition of LBIC provided level 0. | JP |

| Undergraduate Programme | |
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| 1. Awarding institution | Brunel University London |
| 2. Teaching institution(s) | Brunel University London |
| 3. Home school/associated institution | College of Engineering, Design and Physical Sciences/ Department of Design |
| 4. Contributing school(s)/associated institution | LBIC for alternative level 0 (see section 25). |
| 5. Programme accredited by | Institution of Engineering Designers |
| 6. Final award(s) and FHEQ Level of Award | BA (Hons) Industrial Design and Technology (FHEQ level 6) BA (Hons) Industrial Design and Technology with Professional Practice (FHEQ level 6) |
| 7. Programme title | BA (Hons) Industrial Design and Technology |
| 8. Programme type (Single honours/joint) | Single honours |
| 9. Normal length of programme (in months) for each mode of study | 36 months FT; 48 months thick sandwich mode |
| 10. Maximum period of registration for each mode of study | Normal or standard duration plus 3 years (6 years FT; 7 years thick sandwich mode) |
| 11. Variation(s) to September start | None |
| 12. Modes of study | Standard |
| 13. Modes of delivery | Full-time; thick sandwich |
| 14. Intermediate awards, titles and FHEQ Level of Award | CertHE Industrial Design and Technology (FHEQ level 4) DipHE Industrial Design and Technology (FHEQ level 5) DipHE in Industrial Design and Technology with Professional Practice (FHEQ level 5) BA (Ord) Industrial Design and Technology (FHEQ level 6) BA (Ord) Industrial Design and Technology with Professional Practice (FHEQ level 6) |
| 15. UCAS Code | HW72/HWR2 |
| 16. JACS Code | W200 |
| 17. Route Code | W200UADESTCH LBIC route code: TBC |
| 18. Relevant subject benchmark statements and other external and internal reference points used to inform programme design | QAA UK Quality Code for Higher Education which includes the English Framework for Higher Education Qualifications within Part A on Setting and Maintaining Academic Standards QAA Subject Benchmark Statement Brunel University London 2030 Brunel Placement Learning Policy, as published under the 'Placements' section of the ' Managing Higher Education Provision with Others ' page. |
| 19. Admission Requirements | Details of entry requirements are provided on the University's and College website. Levels of English for non-native speakers are outlined on the language requirements pages. |

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| 20. Other relevant information (e.g. study abroad, additional information on placements) | Students will normally be expected to successfully complete at least 44 weeks industrial placement between Levels 2 and 3. The placement will be subject to the approval of the Subject Area of Design and can be split between several institutions. At the discretion of the responsible Officer, a period of shorter duration than 44 weeks may be acceptable. Part of the placement can be an academic exchange at an overseas university, subject to approval of the Exchange Tutor in Design. |
| 21. Programme regulations not specified in Senate Regulation 2. Any departure from regulations specified in Senate Regulation 2 must be stated here and approved by Senate. | None |
| 22. Further information about the programme is available from the College website. | Course webpage |

23. EDUCATIONAL AIMS OF THE PROGRAMME

The programme aims to produce graduates who are able to play an important part in all aspects of the design process. BA ID&T students, at the end of their course, are able to design contextually and realise their designs prototypically having an understanding of the technologies included in their concepts. BA ID&T students will demonstrate their knowledge and skills through the module assessments.

Although sharing some modules with the Department's BSc Product Design programme, this particular programme follows a distinctive direction of technological understanding through a practice-led teaching philosophy. It aims to produce designers who have a high practical ability to realise their design solutions and a comprehensive understanding of design and theory issues. At level three, the Contextual Design module is compulsory and students can choose to specialise in Graphics, Environmentally Sensitive Design, Lighting Design or Human Factors. A design process skill-base across a range of disciplines is offered. Final year options have both a strong technological and humanistic focus, and major projects generally comprise both aesthetic models and functional prototypes.

24. PROGRAMME AND INTERMEDIATE LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding (K) cognitive (thinking) skills (C) and other skills and attributes (S) in the following areas:

| Level | Category (K = knowledge and understanding, C = cognitive (thinking) skills, S = other skills and attributes) | Learning Outcome | Associated Assessment Blocks Code(s) | Associated Study Blocks Code(s) | Associated Modular Blocks Code(s) |
|----------------------|---|---|--------------------------------------|---------------------------------|--------------------------------------|
| 1 | | | | | |
| | K | The theory and context of design processes | | | DM1315 DM1603 |
| | | Placing visual thinking into the design process | | | DM1315 DM1611 |
| | | A systems approach to designing. | | | DM1316 DM1313 |
| | | The concepts, principles and theories of the core sub disciplines supporting the design process; | | | DM1313 DM1316 DM1603 DM1611 |
| | C | Demonstrate a broad understanding of 20 th and 21 st Century design issues; | | | DM1315 |
| | | Analyse and reflect upon data collected in the human environment; | | | DM1315 |
| | | Scrutinise and collate information from a variety of sources; | | | DM1315 DM1316 DM1611 |
| S (Practical Skills) | Use a wide range of tools and processes to prototype design solutions of mechanical and electronics systems | | | DM1316 DM1313 | |
| | Use sketching skills interactively to | | | DM1315 | |

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| | | develop design ideas; | | | DM1611 | |
| | | Interface a computer to the control artefacts designed by the student. | | | DM1313 DM1316 | |
| | S (Transferable Skills) | Write technological reports in a recognised academic format; | | | DM1603 DM1316 DM1313 | |
| 2 | | | | | | |
| | K | The role of designers in society and the constraints within which their professional judgement will be exercised; | | | DM2316 | |
| | | The professional and ethical responsibilities of a design practitioner; | | | DM2316 | |
| | | Business operation and working practice within the Design Industry ('with Professional Practice' awards) | | DM2554 | DM2555 | |
| | C | Develop design solutions to meet specific performance requirements; | | | DM2318 DM2320 DM2604 | |
| | | Evaluate design communication strategies | | | DM2604 DM2603 | |
| | | Scrutinise and collate information from a variety of sources; | | | DM2316 DM2318 DM2604 | |
| | | Evaluate the feasibility of potential design solutions; | | | DM2318 DM2320 DM2604 | |
| | | Produce reflective communication(s) describing professional development experiences ('with Professional Practice' awards) | | | DM2555 | |
| | S (Practical skills) | Construct virtual modelling to simulate the form, function and performance of design solutions; | | | DM2604 DM2603 | |
| | | Apply visual media in the presentation of design ideas; | | | DM2603 DM2316 | |
| | | Prepare design portfolios; | | | DM2316 | |
| | | Make product presentations using electronic media. | | | DM2316 DM2318 DM2604 | |
| | S (Transferable Skills) | Plan, manage and execute both time and resources for project development; | | | DM2555 | |
| | | Contribute effectively as a member of a team; | | | DM2316 DM2604 | |
| | | Learn independently in familiar and unfamiliar situations; | | | DM2555 DM2316 | |
| | | Learn effectively for the purpose of continuing professional development and in a wider context ('with Professional Practice' awards) | | | DM2555 | |
| | 3 | | | | | |
| | | K | The concepts, principals and theories relevant to the student's chosen area of design specialisation; | DM3804 DM3801 | DM3701 | DM3329 DM3316 DM3615 |
| C | | Use creative approach to solve design | DM3804 | DM3701 | DM3329 | |

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| | | problems or improve existing designs; | | | DM3310 |
| | | Evidence understanding of environmental and energy issues that inform modern designers. | | | DM3316 |
| | | Evidence understanding of human centred design issues that inform modern designers. | DM3804 | DM3701 | DM3329 |
| | | Balance potentially conflicting requirements to resolve a single design solution. | DM3804 | DM3701 | DM3310 |
| | S (Practical Skills) | Produce a physical three-dimensional model to demonstrate and evaluate user interactions; | DM3804 | DM3701 | DM3329 |
| | | Realise designs as functioning prototypes integrating appropriate technologies; | DM3804 | DM3701 | |
| | S (Transferable Skills) | Communicate effectively with engineers, designers and non-technical specialists using a variety of appropriate techniques; | DM3801 | DM3701 | |
| | | Plan, manage and execute both time and resources for project development; | DM3801 | DM3701 | |

Learning/teaching strategies and methods to enable learning outcomes to be achieved, including formative assessments

The modules students study at levels 1 and 2 are focused on providing a sound academic foundation of subject knowledge. At level three students study subjects considered central to design, choose three further subjects from a pool of modules and undertake a Major Design Project.

Knowledge and understanding are acquired through a combination of lectures and other tutor-led activities such as group tutorials, laboratory sessions, computing sessions, manufacturing workshops, and guided independent study. At Level 1, the programme provides students with an introduction to the knowledge required to develop design solutions. At Level 2, the technological content is extended and the knowledge is applied to a range of mechanical and electronic systems. Also, at this level, an understanding of the design development process is acquired through a range of modules structured to promote graphical, creative and communication skills. At Level 2, the design project offers students a first opportunity to demonstrate mastery of the technical, creative and personal skills acquired during the programme. At Level 3, the options develop and extend knowledge and understanding of management practices in new product development and develop knowledge of the professional and ethical responsibilities of engineering designers. The Level 3 major project allows students to conduct an individual research and development project of their choice. It is intended to provide students with an opportunity to demonstrate the integration of their technical abilities and creative skills together with abilities in project planning, management and communication. Also at Level 3, students can select further modules to extend their knowledge in other areas of the design discipline.

Cognitive skills are developed concurrently with knowledge and understanding, through the teaching and learning programme outlined above. As students progress through the latter half of the programme they are given greater freedom to direct their own study areas within a guided framework. They are also encouraged to take their knowledge from the different subject domains and apply it in a holistic approach to problem solving.

The practical, professional and transferable skills are developed throughout the programme. Workshop-based skills are taught by experienced teaching technicians in a workshop environment providing the hands-on practise required. Other practical skills such as graphics, computing, and computing analysis skills are also taught with a high level of hands-on experience, in the majority of cases using industry-standard software. At every level the students are encouraged to learn through discussion with tutors and their peers. Presentation skills are developed through practical assignments and more informal tutorial session. Written skills are mainly developed through feedback from written assignments. Time-management is learned through the experience of meeting pre-notified coursework deadlines.

Summative assessment strategies and methods to enable learning outcomes to be demonstrated.

Knowledge and understanding are tested by means of a range of assessment tasks including, written and viva voce examinations, laboratory reports, written coursework, individual and group design projects, problem solving exercises, structured assignments, oral presentations, and visual media projects.

The range of assessment methods listed above will form the basis for assessment throughout the programme. Students will be expected to discuss or demonstrate their approaches and methods used to solve design problems, as well as their final

solutions. In written activities students will be expected to have researched and critically analysed the material gathered, appropriate to the level.

Where practical skills are taught on the programme these will be assessed by coursework requiring the application of that skill, e.g. workshop skills are tested by the production of various artefacts in wood, metal and plastic. Computing skills will be assessed by generation of suitable programs or models depending on the software used. Reports and oral presentations in various modules assess written and oral communication skills. Self-organised learning is encouraged at all levels of the programme and increases as students' progress, but is mainly demonstrated through the undertaking and completion of the major project. Group projects are used in various modules to allow students to demonstrate their ability to work in teams. The ability of students to manage time and resources is demonstrated by requesting the submission of work by specified firm deadlines, with late work being penalised in the mark awarded.

25. Programme Structure, progression and award requirements

Programme structures and features: levels, assessment blocks, credit and progression and award requirements

- **Compulsory block:** one which all students registered for the award are required to take as part of their programme of study. These will be listed in the left hand column;
- **Optional block:** one which students choose from an 'option range'. These will be listed in the right hand column;
- A **core assessment** is an assessment identified within an assessment block or modular block (either compulsory or optional) which must be passed (at grade D- or better) in order to be eligible to progress and to be eligible for the final award. All core assessments must be specified on the programme specification next to the appropriate assessment or modular block:

Where students are expected to pass the block at D- or better, but not necessarily all elements, then the block itself is core.

e.g. AB3000 Project (40)
Core: Block

Where only some elements of assessments are required to be passed at D- or better, these will be identified by listing each element that is core

e.g. ABXXX1 Title (XX credits)
Core: 1 & 4

Where students are expected to pass all assessments in a block then this will be identified. By setting the assessment this way, students are also required to pass the block by default. This will be identified thus:

e.g. ABXXX Title (XX credits)
Core: All, Block

- A **non-core assessment** does not have to be passed at grade D- or better, but must be better than a grade F, in order to progress and to be eligible for the final award.

Level 0

The Level 0 structure available to international students is specified in document "Validated Programme Element Specification for LBIC Foundation Year in Design". These documents also specify the admission and progression requirements.

Level 1

| Compulsory assessment block codes, titles and credit | Optional assessment block codes, titles and credits |
|---|--|
| None | None |
| Compulsory study block codes, titles and credit volume | Optional Study block codes, titles and credit volume |
| None | None |
| Compulsory modular block codes, titles and credits | Optional modular block codes, titles and credits |
| DM1611 Graphic Communication (20) DM1313 Creative Engineering Practice (20) DM1316 Product Analysis (20) DM1315 Design Process 1 (40) Core: Block DM1603 Materials with Manufacturing (20) | None |

Level 1 Progression and Award Requirements

[As per Senate Regulation 2](#)

| Level 2 | |
|--|---|
| Compulsory assessment block codes, titles and credits None | Optional assessment block codes, titles and credits None |
| Compulsory study block codes, titles and credit volume None | Optional Study block codes, titles and credit volume None |
| Compulsory modular block codes, titles and credits DM2318 Systems Design (20) DM2320 Design Applications (20) DM2316 Design Process 2 (40) Core: Block DM2604 Design for Manufacture (20) DM2603 Design Communication (20) | Optional modular block codes, titles and credits None |
| Level 2 Progression and Award Requirements As per Senate Regulation 2 | |
| Level 2 – Sandwich Placement | |
| Compulsory assessment block codes, titles and credits | Optional assessment block codes, titles and credits |
| Compulsory study block codes, titles and credit volume DM2554 Pre-placement module (zero credits) | Optional study block codes, titles and credit volume |
| Compulsory modular block codes, titles and credits This modular block is only a requirement for the with Professional Practice awards. DM2555 Professional Practice Industrial Experience (120) Core: Block | Optional modular block codes, titles and credits |
| Level 2 Placement Progression and Award Requirements As per Senate Regulation 2 For BA (Hons) Industrial Design and Technology with Professional Practice, DM2555 will contribute 25% of the Level 2 profile and hence 8.3% of the overall degree calculation | |
| Level 3 | |
| Compulsory assessment block codes, titles and credits DM3804 Industrial Design & Technology Major Project Core: Block (40) DM3801 Design & Innovation, Process & Management (20) | Optional assessment block codes, titles and credits None |
| Compulsory study block codes, titles and credit volume DM3701 Major Project (60) | Optional study block codes, titles and credit volume None |
| Compulsory modular block codes, titles and credits DM3310 Contextual Design (20) | Optional modular block codes, titles and credits Two options selected from: DM3316 Environmentally Sensitive Design (20) DM3329 Human Factors (20) DM3615 Graphic Communication 3 (20) |
| Level 3 Progression and Award Requirements As per Senate Regulation 2 For the award BA (Hons) Industrial Design and Technology with Professional Practice, DM2555 will contribute 8.3% of the overall degree classification. | |

Please note: this specification provides a concise summary of the main features of the programme and the learning outcomes that a 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 can be found in the modular block, assessment and study block outlines and other programme and block

information. The accuracy of the information contained in this document is reviewed by the University from time to time and whenever a modification occurs.