Programme Specification

Architectural Technology and Design [SHAPE]

Version: 2030-31, v2.0, Validated

Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Architectural Technology and Design [SHAPE]

Highest award: BSc (Hons) Architectural Technology and Design

Interim award: BSc Architectural Technnology and Design

Awarding institution: UWE Bristol

Affiliated institutions: School for Higher and Professional Education

Teaching institutions: School for Higher and Professional Education

Study abroad: No

Year abroad: No

Sandwich year: No

Credit recognition: No

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

Professional, statutory or regulatory bodies: Not applicable

Modes of delivery: Full-time, Part-time

Entry requirements: For the current entry requirements see the UWE public website.

For implementation from: 01 August 2029

Programme code: K13B13

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: The BSc (Hons) Architectural Technology and Design at the SHAPE is a professionally oriented programme that prepares students for careers in the design and delivery of high-performance buildings. Rooted in the science and practice of architectural technology, the course equips graduates with the technical, environmental, regulatory, and digital skills essential to contemporary construction and design practice.

Combining creative problem-solving with a deep understanding of materials, structures, and sustainability, the programme emphasises the integration of design, production, and procurement processes. Students develop the ability to analyse and address technical design challenges, delivering functional, buildable, and environmentally responsive solutions within the regulatory frameworks of the HK and global construction industries.

The course fosters independent, critical thinking alongside collaborative practice. Students work through studio-based projects, technical workshops, and real-world simulations that reflect the complex, interdisciplinary nature of professional environments. Core skills include digital design and modelling, construction detailing, specification writing, contract administration, fire and life safety, and sustainable design integration.

Opportunities for industry engagement are embedded in the programme. The course is also connected to industry through part-time tutors, guest lectures, site visits, and live projects, building a strong foundation for graduate employment.

Graduates of the programme are well-prepared for technical design roles in architectural practice, consultancy, construction firms, and product development.

Features of the programme: Professional Alignment: The course is aligned to the criteria of both the Chartered Institute of Architectural Technologists (CIAT) and the Chartered Institute of Building (CIOB), ensuring it meets the educational standards expected for progression to chartered status. The curriculum is designed to support graduates in gaining the professional competencies required for technical design and project delivery roles across the built environment sector.

Design and Technical Integration: The programme places architectural technology at the core of the design process. Students work through studio-based projects that develop their ability to take designs from concept to detailed technical resolution, gaining skills in material specification, environmental performance, and construction detailing.

Teaching Resources: Students benefit from dedicated studio spaces, digital fabrication facilities, and construction laboratories. These purpose-built learning environments support hands-on exploration of materials, technologies, and sustainable construction practices.

Digital Literacy: Students are equipped with industry-relevant digital skills including 2D/3D CAD, BIM, visualisation, and performance simulation. The integration of digital tools throughout the design process supports advanced technical analysis and communication across multidisciplinary teams.

Global and Local Perspectives: Students are encouraged to tackle design challenges rooted in both local communities and global contexts.

Industry Engagement: The course maintains strong connections with industry through part-time tutors, guest lectures, live briefs, and site visits. These partnerships provide insight into current practice and offer pathways to internships, mentorship, and graduate employment.

Educational Aims: Aim 1 – To develop graduates who possess the knowledge, skills, and behaviours required to practise as professional architectural technologists, capable of delivering robust, buildable, and sustainable design solutions from concept to construction.

Aim 2 – To develop graduates who are collaborative and inclusive in their approach, able to work effectively within multidisciplinary teams, and aware of their responsibilities in promoting ethical, diverse, and equitable working environments.

Aim 3 – To develop graduates who are reflective in their thinking and communication, committed to lifelong learning and the continuous development of their professional skills and judgement.

Aim 4 – To develop graduates who are technically innovative and sustainability-focused, able to integrate the latest materials, methods, and digital technologies to address climate and performance challenges in the built environment.

Aim 5 – To develop graduates with strong transferable skills including critical thinking, digital literacy, problem-solving, and communication—skills that enable them to thrive across a wide range of roles within the construction and design industries.

Aim 6 – To develop graduates who are curious, research-aware, and intellectually engaged, capable of applying evidence-based thinking to support technical innovation and design excellence in architectural technology.

Programme Learning Outcomes:

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

Programme Learning Outcomes

PO1. Demonstrate the knowledge, skills, and behaviours of contemporary architectural technology practice, applying independent problem-solving in national and international contexts, including complex projects with incomplete client information. [keyword: Professional Practice]

PO2. Apply ethical frameworks in building development, recognising issues of equality, diversity, and inclusion, identifying unethical behaviours, and critically evaluating mechanisms for conflict resolution. [keyword: Ethics]

PO3. Identify and describe examples of unethical behaviours in the process of developing buildings; demonstrate an ability to complete a design project within a policy framework defined by the latest code of ethics considerations for equality, diversity, and inclusion; and critically analyse mechanisms for resolving conflicts in ethical behaviours. [keyword: Ethics]

PO4. Demonstrate knowledge of management and procurement in building development, applying economic skills in tendering and contract administration, and critically evaluating project risks through value engineering. [keyword: Economic]

PO5. Apply technical design knowledge of materials, structures, and environments to case study projects, and critically assess opportunities and challenges of emerging building technologies. [keyword: Technical]

PO6. Demonstrate knowledge of health, safety, and legal frameworks affecting building design, applying fire and life safety design techniques, and critically analysing developments in construction law and risk management. [keyword: Legal]

PO7. Demonstrate detailed awareness of the environmental, political, social, and technological contexts of architectural technology, evaluating designs against sustainability indicators, and formulation potential solutions to addressing the performance gap. [keyword: Sustainability]

PO8. Apply digital measurement and modelling techniques to represent buildings, use industry-standard CAD and analysis tools, and critically reflect on the evolving role of digital technologies in design, construction, and handover. [keyword: Digital]

Assessment strategy: This programme employs a rigorous and industry-informed assessment strategy that reflects the interdisciplinary and practice-oriented nature of architectural technology. Emphasising real-world relevance, technical precision, and design integration, the assessment approach ensures students develop the knowledge, behaviours, and transferable skills needed to thrive in contemporary practice.

Integrated Assessment Components

1. Design Portfolios and Digital Submissions- Portfolios document students' progression in technical design, construction detailing, and environmental performance across all levels of study.
Assessments require the use of industry-standard digital tools (e.g., CAD, BIM, environmental analysis software) to produce comprehensive and professional documentation.

2. Technical and Design Integration Projects - Students complete projects that

simulate real-world design and construction processes, combining specification writing, procurement strategies, and technical design.
Submissions include detailed technical drawings, environmental strategies, and critical appraisals of buildability and performance.

3. Laboratory and Workshop-Based Reports - Practical investigations assess students' understanding of material properties, construction methods, and building performance systems.
Reports focus on the ability to analyse data, test hypotheses, and communicate findings relevant to construction science and sustainability.

4. Oral Presentations, Vivas, and Technical Reviews - Design reviews and technical vivas are used throughout the programme to assess students' ability to communicate ideas clearly and justify design decisions.
These sessions develop confidence, clarity, and professional presentation skills while testing individual critical reasoning.

5. Computer-Based Assessments - digital tests assess foundational knowledge in construction technology, fire safety, legal frameworks, and environmental systems.
These are used particularly at earlier levels to establish core technical and regulatory competencies.

6. Live Projects and Real-World Case Studies - Students engage with real or simulated briefs involving external stakeholders or community needs.
Deliverables include feasibility studies, stakeholder reports, and technical design proposals grounded in regulatory and economic contexts.

7. Collaborative and Group-Based Assessments - Group work is embedded within inter-professional and design studio modules to simulate the collaborative nature of industry.
Assessments focus on both individual contributions and collective outcomes, promoting teamwork, communication, and shared responsibility.

8. Final Design Studio Project - In the final year, students undertake a capstone

design project that synthesises learning across the programme.
Outputs include a detailed technical portfolio, digital models, construction specifications, and a final review presentation assessed by staff and industry professionals.

Transferable Skills and Professional Attributes
The assessment strategy fosters key graduate attributes including:

Communication – through written reports, technical drawings, and oral presentations.

Collaboration – via group projects and peer critique activities.

Critical Thinking – through reflective components in design portfolios and case-based assignments.

Digital Literacy – by embedding CAD, BIM, and analytical software throughout assessment tasks.

Time Management – supported by carefully scheduled deadlines that avoid assessment clustering and promote steady progression.

Inclusivity and Feedback Literacy
1. Formative Feedback Opportunities - Formative feedback is embedded in studio tutorials, interim reviews, and draft submissions, supporting iterative improvement and confidence building.

2. Diverse Assessment Formats - A balanced mix of design submissions, technical reports, oral presentations, and examinations ensures accessibility and inclusivity for diverse learning styles.

3. Feedback Integration Support - Students receive guidance on how to interpret and act on feedback, with clear links between formative and summative assessments to

support ongoing development.

Alignment with Professional Standards

This assessment strategy is aligned with the expectations of the Chartered Institute of Architectural Technologists (CIAT) and the Chartered Institute of Building (CIOB). It ensures that students are equipped to meet professional competency standards relating to technical design, sustainability, construction knowledge, and digital integration. By embedding interdisciplinary practice and authentic assessment, the programme prepares graduates for a wide range of roles across design consultancy, construction, and product development within the built environment.

Student support: The BEng (Hons) Building Services Engineering programme at SHAPE is committed to providing robust, inclusive, and personalised support that enables students and apprentices to thrive academically, professionally, and personally.

Tutors Support

All students and have access to a team of academic tutors who provides one-to-one support throughout the course. This helps students reflect on their academic progress, set development goals, and navigate university life. Tutors act as a key point of contact for academic and wellbeing concerns and provide a consistent relationship across the student journey.

Skills Development and Digital Training

The programme embeds digital and academic skills development within modules, supported by targeted workshops, drop-ins, and online resources. Students gain confidence using a range of digital platforms. SHAPE's library and learning support teams offer additional assistance in areas such as:

- Academic writing and referencing
- Data analysis and visualisation
- Information literacy
- Time management and revision strategies

The programme follows UWE's Framework for Inclusive Teaching, ensuring learning materials, assessments, and support mechanisms are accessible to all. Students from a variety of backgrounds benefit from inclusive practices that respect individual learning needs and cultural identities.

Feedback and Reflective Learning
The course place strong emphasis on feedback literacy, helping students and apprentices interpret, apply, and respond to feedback. This includes:
- Formative reviews in design and technical modules
- Reflective logs and self-assessment tasks
- Guidance on using feedback for future improvement

Technology-Enhanced Learning
All students have access to UWE's digital learning platforms.
These provide:
- Recorded lectures and asynchronous learning materials
- Assignment submission and feedback portals
- Discussion boards and collaborative tools
- Access to software licenses for off-site use

Part B: Programme Structure

Year 1

This structure diagram demonstrates the student experience of level 6 of BSc(Hons) Architectural Technology and Design through to Graduation. Such a journey would be typical of a student at School for Higher and Professional Education (SHAPE) in Hong Kong, including: level and credit requirements, interim award requirements, module diet, including compulsory and optional modules.

Students join via Direct Entry at Level 6. For any direct entry into level 6, all the core learning outcomes for year 1 and year 2 must first be achieved. A formal mapping of feeder programmes shows this in detail, such as those prepared for the Higher Diplomas in IVE Hong Kong. For non-feeder programmes proof of having met the learning outcomes shall be assessed on a case-by-case basis.

Year 1 Compulsory Modules (Full-time)
Full-time students must take 120 credits from the modules in Compulsory Modules (Full-time).

Module Code	Module Title	Credit
UBLL8J-30-3	Digital Innovations for Architectural Technologists 2030-31	30
UBLL8S-45-3	ATD Studio 3 2030-31	45
UBLMXB-15-3	Conserving Buildings and Places 2030-31	15
UBLLDC-15-3	Interdisciplinary Professional Practice 2030-31	15
UBLL7U-15-3	Energy Performance and Retrofit 2030-31	15

Year 1 Compulsory Modules (Part-time)
Part-time students must take 105 credits from the modules in Compulsory Modules (Part-time).

Module Code	Module Title	Credit
UBLL8S-45-3	ATD Studio 3 2030-31	45
UBLL8J-30-3	Digital Innovations for Architectural Technologists 2030-31	30
UBLMXB-15-3	Conserving Buildings and Places 2030-31	15
UBLLDC-15-3	Interdisciplinary Professional Practice 2030-31	15

Year 2
Part-time students must take 15 credits in Year 2.

Year 2 Compulsory Modules (Part-time)
Part-time students must take 15 credits from modules in Compulsory Modules (Part-time).

Students continue with ATD Studio 2 in Year 2

Module Code	Module Title	Credit
UBLL7U-15-3	Energy Performance and Retrofit 2031-32	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

This final year top-up undergraduate programme meets the professional requirements of the Chartered Institute of Architectural Technologists (CIAT) and the Chartered Institute of Building (CIOB). It prepares students to approach the built environment's design and development ethically and responsibly, addressing societal, client, user, and environmental needs.

Rooted in the inter-professional ethos of UWE's School of Architecture and Environment, the course emphasises people, technology, and sustainability. Its design-led curriculum integrates construction technology, design and digital skills.

Part D: External Reference Points and Benchmarks

The programme is aligned with the Chartered Institute of Architectural Technologists (CIAT) Educational Standards, which define the core competencies required for professional practice as an Architectural Technologist. These include design process management, construction technology, technical design integration, procurement knowledge, and regulatory compliance. CIAT's standards have shaped the programme's learning outcomes, curriculum design, and assessment strategies, ensuring relevance to industry.

The curriculum reflects the QAA Subject Benchmark Statement for Architectural Technology (2022), which defines the academic expectations for honours degree programmes in this discipline. This includes an emphasis on sustainability, technical problem-solving, the integration of digital tools, and understanding the whole-life performance of buildings. The benchmark recognises architectural technology as an applied design discipline situated at the interface between architecture, engineering, and construction.

The programme aligns with the UWE Bristol Employability Strategy, embedding core

graduate attributes such as communication, collaboration, and critical thinking. Students gain real-world experience through live projects, industry engagement, and skills development aligned with professional expectations in the built environment.

In line with the QAA Code of Practice: Section 8 (Career Education, Information, Advice and Guidance), the programme provides students with structured opportunities to reflect on their career goals, engage with employers, and prepare for a variety of career paths in architectural technology, design consultancy, and the construction industry.

Sustainability is a central theme across the programme and is guided by the UWE Sustainability Strategy, the UN Sustainable Development Goals (UNSDGs), and AdvanceHE's Education for Sustainable Development (ESD) competencies. Students are encouraged to adopt ecological thinking in their projects, explore circular design approaches, and critically engage with the environmental impact of their design and technical decisions.

Together, these reference points guide the structure, content, and pedagogical approach of the programme—ensuring alignment with academic standards, professional expectations, and global challenges. The curriculum promotes progression from foundational to advanced knowledge, and embeds sustainability, inclusivity, and ethical practice throughout, preparing students for meaningful careers in architectural technology and the wider built environment.

Part E: Regulations

Approved to University Regulations and Procedures.