



Programme Specification

BIM in Design, Construction and Operation [Frenchay]

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Section 1: Key Programme Details

Part A: Programme Information

Programme title: BIM in Design, Construction and Operation [Frenchay]

Highest award: MSc BIM in Design, Construction and Operation

Interim award: PGCert BIM in Design, Construction and Operation

Interim award: PGDip BIM in Design, Construction and Operation

Awarding institution: UWE Bristol

Teaching institutions: UWE Bristol

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:

Chartered Institute of Building

Royal Institution of Chartered Surveyors (RICS)

Modes of delivery: Full-time, Part-time

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

For implementation from: 01 September 2026

Programme code: K21012

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: There is an increasing demand in the built environment for more efficient ways of working, driven by technological advances. Building Information Modelling (BIM) has become a key approach to achieving these improvements. Its value is recognised globally, with many countries mandating its use and numerous private organisations adopting it to enhance their processes and outcomes. The UK is a recognised leader in BIM implementation, governed by the ISO 19650 series, which has also influenced international standards. Alongside BIM, emerging technologies are being integrated with BIM (BIM-enabled solutions), further amplifying its benefits.

The MSc Building Information Modelling (BIM) in Design, Construction and Operations aims to provide professionals with the knowledge and practical skills needed to apply BIM and related technologies effectively. Unlike other postgraduate programmes, this MSc takes a holistic approach, covering the use of BIM and innovative technologies across the full project lifecycle, from design to construction and operations.

Sustainability is a key focus, demonstrating how BIM can support environmentally responsible practices throughout all stages of a project. Students also gain hands-on experience in collaborative working through group projects and activities that reflect real-world BIM practice. Furthermore, the programme offers opportunities for students to implement innovative and sustainable methods in professional settings through a module-based placement. This practical experience helps them develop highly sought-after skills and enhances their employability.

Overall, the MSc highlights innovative, sustainable, and collaborative practices in building information modelling and management, delivered through an integrated, lifecycle-focused approach. This combination makes the programme distinctive and highly relevant to industry, offering strong career prospects for UWE graduates.

Features of the programme: Description of distinctive features of the programme:

Professional recognition:

The MSc Building Information Modelling (BIM) in Design, Construction and Operations is accredited by the Royal Institution of Chartered Surveyors (RICS) and the Chartered Institute of Building (CIOB). This accreditation demonstrates that the programme meets the high professional standards required by leading industry bodies in the UK, enhancing the credibility of the degree and supporting graduates' career progression in the built environment.

Study mode:

The course is delivered in person and is available in both full-time (minimum one year) and part-time (minimum two years) formats, providing flexibility for students with different professional commitments.

Interdisciplinary approach:

Students come from a wide range of disciplines within the built environment, enriching the learning experience and fostering collaboration in BIM-related projects. Core modules are shared across other programmes, offering opportunities for students to engage with peers from related fields and develop a broader understanding of BIM in context.

Project-based Learning:

BIM is best learned through practical application, addressing real-world challenges. Accordingly, the BIM-related modules of this programme are project-based, providing students with the opportunity to work on both group projects, which develop collaboration and interdisciplinary skills, and individual projects, which test their understanding of BIM through practical application.

Industry placement project:

The programme provides all students with the opportunity to undertake a non-paid placement, working on a specific BIM-related project within a professional company. This integrated experience allows students to apply their knowledge in a real-world context, gain valuable industry insight, and enhance their employability upon graduation.

Educational Aims: The programme aims to:

Provide a critical and integrated understanding of Building Information Modelling (BIM) and digital approaches in the built environment, focusing on their role in enhancing design, construction, and facilities management across the full project lifecycle.

Explore the role of BIM across essential domains of built environment practice, including sustainability, project management, legal and financial dimensions, underscoring its relevance to current industry challenges.

Provide students with the opportunity to engage with practical applications of BIM, preparing them for effective implementation in professional settings and future careers.

Foster collaborative skills essential for working within BIM-enabled workflows, emphasising interdisciplinary coordination and stakeholder engagement.

Introduce students to key digital tools and platforms central to BIM and digital construction, enabling them to evaluate their applications and make informed choices in practice.

Support the development of communication and critical thinking skills, enabling students to articulate and evaluate BIM-related concepts across diverse professional contexts.

Encourage innovation and originality in addressing professional challenges, supporting graduates to act as drivers of digital transformation in the built environment.

Programme Learning Outcomes:

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

Programme Learning Outcomes

- PO1. Critically appraise Building Information Modelling (BIM) and BIM-enabled emerging practices and technologies, focusing on their application to the design, construction, management, and maintenance of the built environment.
- PO2. Apply BIM knowledge to solve complex, real-world problems in key stages of a project's lifecycle, working collaboratively with interdisciplinary teams to generate, develop, and critically evaluate alternative solutions.
- PO3. Critically analyse and justify decisions related to the design, construction, and operation in the built environment, drawing on BIM data and BIM-enabled insights.
- PO4. Evaluate how BIM supports sustainability through improved environmental performance and whole-life cost efficiency across the project lifecycle.
- PO5. Design and critically evaluate BIM implementation strategies that respond to client/user needs, promoting effective use of technology, collaborative workflows, information management and coordination throughout the project lifecycle.
- PO6. Produce project outputs across its lifecycle that demonstrate BIM-enabled processes in practice, with awareness of key construction considerations such as legal and cost-benefit implications.
- PO7. Communicate and justify BIM-enabled project strategies and processes across the project lifecycle to both technical and non-technical audiences using appropriate and professional forms of media.
- PO8. Critically evaluate the legal, contractual, and organisational factors that shape professional practice in the construction industry and their implications for informed decision-making and effective project delivery.
- PO9. Apply innovative approaches to address research questions and professional challenges in BIM and digital construction, demonstrating independent critical thinking and originality.

Assessment strategy: A variety of assessment methods are used in the programme, including portfolios with practical and research components, individual and group presentations, reports, and a dissertation.

As a practice-led programme, many assessments are project-based, enabling students to engage with realistic BIM scenarios and industry challenges. These

projects, undertaken both individually and in groups, help students apply collaborative workflows, problem-solving, and critical thinking in contexts that mirror professional practice. Presentation assessments are designed to evaluate students' ability to explain and justify the application of new skills and concepts to peers and industry audiences. Reports are also based on project-related briefs, requiring students to analyse projects and propose well-reasoned solutions, integrating relevant theory and professional insights.

The dissertation is a fully research-based, student-led assessment, with each student supported by a designated supervisor throughout the process.

Across all modules, structured guidance is provided to support assessment preparation and skill development. In keeping with the research-informed curriculum, students are required to integrate appropriate research into their assessments, reinforcing their ability to critically analyse information and apply it to both academic inquiry and professional practice.

Student support: Students on the programme can apply for free student membership with RICS and CIOB, the professional bodies accrediting the programme. This provides access to a wide range of professional development opportunities, networks, and resources.

Students are also encouraged to take part in extracurricular activities relevant to the programme, such as site visits, field trips, job fairs, and industry events, which take place occasionally. These can be organised by UWE, the MSc BIM programme team, or external partners. Where site visits or field trips are arranged within the programme, students will be informed in advance to allow them to participate. Any costs associated with optional opportunities will be clearly communicated.

A distinctive feature of the programme is the industry placement project, which all students undertake as part of their assessed learning. Placement opportunities are sourced and supported by the programme team, ensuring equity of access and alignment with professional practice. Students receive academic guidance and

supervision throughout the placement, enabling them to apply their knowledge in a live context, gain valuable industry insight, and strengthen their employability upon graduation.

Part B: Programme Structure

Year 1

Full time students must take 180 credits from the modules in Year 1.

Part time must take 75 credits from the modules in Year 1.

Year 1 Compulsory Modules (Full Time)

Full time students must take 180 credits from the modules in Compulsory Modules (Full Time).

Module Code	Module Title	Credit
UBLLCB-30-M	Construction Law, Procurement and Project Management 2026-27	30
UBLMM4-30-M	BIM in Business and Practice 2026-27	30
UBLMHF-15-M	BIM in Construction Operations 2026-27	15
UBLMGW-15-M	BIM in Design Coordination 2026-27	15
UBLMMK-15-M	BIM in Operation and Maintenance 2026-27	15
UBLLY7-60-M	Dissertation 2026-27	60
UBLMQ4-15-M	Low/zero Impact Buildings 2026-27	15

Year 1 Compulsory Modules (Part Time)

Part time students must take 75 credits from the modules in Compulsory Modules (Part Time).

Module Code	Module Title	Credit
UBLLCB-30-M	Construction Law, Procurement and Project Management 2026-27	30

UBLMM4-30-M	BIM in Business and Practice 2026-27	30
UBLMGW-15-M	BIM in Design Coordination 2026-27	15

Year 2

Part time students must take 105 credits from the modules in Year 2.

Year 2 Compulsory Modules (Part Time)

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

Module Code	Module Title	Credit
UBLMHF-15-M	BIM in Construction Operations 2027-28	15
UBLMMK-15-M	BIM in Operation and Maintenance 2027-28	15
UBLLY7-60-M	Dissertation 2027-28	60
UBLMQ4-15-M	Low/zero Impact Buildings 2027-28	15

Part C: Higher Education Achievement Record (HEAR) Synopsis**Part D: External Reference Points and Benchmarks**

The MSc Building Information Modelling (BIM) programme at UWE Bristol has been designed and developed with reference to a combination of academic benchmarks, external professional standards, and institutional expectations.

Reference Points

The following have framed the programme design:

QAA Frameworks for Higher Education Qualifications (FHEQ, 2023) confirming the positioning of the programme at Level 7, with learning outcomes emphasising critical evaluation, originality, complex problem-solving, and professional judgement.

RICS (Royal Institution of Chartered Surveyors) Accreditation Requirements – requiring demonstration of professional competence, sustainability awareness, digital transformation, and client-focused practice.

CIOB (Chartered Institute of Building) Education Framework – setting expectations around leadership, project management, legal and contractual understanding, collaboration, and application of digital technologies.

UWE Bristol Academic Regulations and Policies – including requirements for programme learning outcomes, assessment principles, inclusivity, and employability.

Impact on Programme Design

The requirements of both the RICS and CIOB have strongly influenced the shape of the programme:

Professional Practice: Outcomes explicitly address legal, contractual, and organisational contexts (PO6, PO8), reflecting RICS and CIOB expectations for effective and accountable professional decision-making.

Digital Construction Competence: BIM-enabled processes are embedded across the curriculum (PO1–PO7), ensuring students gain not only technical skills but also the ability to integrate digital tools into professional workflows.

Sustainability and Whole-Life Value: Both professional bodies require engagement with sustainability and lifecycle thinking; this is reflected in the explicit focus on whole-life cost and environmental performance (PO4).

Collaboration and Communication: Professional expectations around interdisciplinary teamwork and client engagement are addressed through learning outcomes on collaboration and communication (PO2, PO7).

Innovation and Leadership: The expectation that graduates act as leaders in digital construction has informed the inclusion of originality, innovation, and autonomy (PO9).

Part E: Regulations

Approved to University Regulations and Procedures.