Module Specification

BIM in Operation and Maintenance

Version: 2025-26, v2.0, Approved

Contents

Part 1: Information

Module title: BIM in Operation and Maintenance

Module code: UBLMMK-15-M

Level: Level 7

For implementation from: 2025-26

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Arts, Technology and Environment

School: CATE School of Architecture and Environment

Partner institutions: None

Field: Architecture and the Built Environment

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module introduces the use of BIM in the operational phase of buildings, focusing on its integration with Operation and Maintenance (O&M) and Facilities Management (FM) practices. Students will learn how to apply BIM in these areas while developing teamwork skills to address real-life scenarios.

Features: Not applicable

Educational aims: This module aims to develop students' practical and analytical skills in applying BIM for building operation, maintenance, and facilities management through real-life, team-based scenarios.

Outline syllabus: Topics covered likely to include, bit not limited to:

BIM for building and asset operation and maintenance

BIM-Facilities Management (FM) integration

System control

Space tracking

Asset management

Maintenance management

Existing conditions modelling

Condition documentation

New directions and developments of BIM for operation and maintenance

Part 3: Teaching and learning methods

Teaching and learning methods: The module will be delivered by means of a series of lectures, seminars and tutorials.

Lectures and seminars will be used to enable students to support their own independent learning by exploring deeper issues pertaining to the use of BIM in operation and maintenance, and receiving formative feedback. Occasional speakers will be used to provide up to date material and context to the applications of the

subject area.

A series of tutorials are designed to provide knowledge and practical skills in the use of BIM processes and technology in building and asset operation and maintenance.

Presentations by and to the group by the students will also be used to enable students to develop the skills and capabilities to analyse problems, negotiate, make decisions and present solutions to problems. The formative work in the presentation will provide research material useful to the final report.

Directed reading examining the key principles and relevant criteria relating to a number of topics of importance to BIM in operation and maintenance. Their implications on property and real-estate services are also examined by bringing together the BIM, FM and collaboration.

Hours
The module is delivered by way of five study days for face to face teaching. Recorded lectures and the use of email discussion groups of virtual learning environments (VLEs) and other technology-aided means are also employed.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Critically analyse the role of BIM for building and asset operation and maintenance

MO2 Assess BIM-Facilities Management (FM) integration

MO3 Apply BIM for system control

MO4 Use BIM for space tracking

MO5 Use BIM for asset management

MO6 Apply BIM for maintenance management

MO7 Apply BIM for existing conditions modelling

MO8 Produce condition documentation

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/ublmmk-15-m.html

Part 4: Assessment

Assessment strategy: FIRST SIT:

Presentation (group presentation): This assessment is designed to evaluate students' practical skills in planning and applying BIM processes and technologies throughout building operation and maintenance. State-of-the-art hardware and software are used to support students in their learning. As part of the assessment, students will work in groups to develop a BIM-enabled strategy for the operation and maintenance (O&M) and facilities management (FM) of a client portfolio of their choice. All findings and proposals must be presented as part of a group presentation, not exceeding 25 minutes followed by Q&A.

RESIT:

Presentation (Individual): Students who fail the presentation must revisit the group work and prepare an individual presentation. For the resit, the student should follow the same brief: to propose a BIM-enabled strategy for the operation and maintenance (O&M) and facilities management (FM) of a client portfolio of their choice. They must select one of the themes covered during the teaching day to structure their strategy around. All findings and proposals must be presented individually in a presentation not exceeding 10 minutes followed by Q&A.

Resit deliverable(s) will be scaled appropriately for individual presentation addressing the group task complexity.

Assessment tasks:

Presentation (First Sit)
Description: Group presentation.
The presentation (max 25 minutes).
Weighting: 100 %
Final assessment: Yes
Group work: Yes
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7, MO8

Presentation (Resit)
Description: Individual presentation (maximum 10 minutes).
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7, MO8

Part 5: Contributes towards

This module contributes towards the following programmes of study:

BIM in Design, Construction and Operation [Frenchay] MSc 2024-25

BIM in Design, Construction and Operation [Frenchay] MSc 2025-26