



## **Module Specification**

### **BIM in Operation and Maintenance**

Version: 2023-24, v2.0, 01 Aug 2023

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## **Part 1: Information**

**Module title:** BIM in Operation and Maintenance

**Module code:** UBLMMK-15-M

**Level:** Level 7

**For implementation from:** 2023-24

**UWE credit rating:** 15

**ECTS credit rating:** 7.5

**College:** Faculty of Environment & Technology

**School:** FET Dept of Architecture & Built Environ

**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:** Not applicable

**Features:** Not applicable

**Educational aims:** See Learning Outcomes

**Outline syllabus:** 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

**MO9** Work as part of a team

**Hours to be allocated:** 150

#### Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

**Reading list:** The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/index.html) via the following link <https://uwe.rl.talis.com/index.html>

## Part 4: Assessment

### **Assessment strategy:** The Assessment:

Practical Skills Assessments - This are designed to evaluate students' practical skills in planning and applying BIM processes and technology throughout building operation and maintenance. State of the art technology, including hardware and software, is used to support students in their learning process. Students are expected to work on real-life case study to provide a real-life experience of using BIM in operation and maintenance.

Report (2500 words) - Students are expected to prepare a report requiring a detailed knowledge of the application of BIM in operation and maintenance. It is important for the student to appreciate the depth of detail required in which BIM is applied at operation and maintenance stages, including prevailing and emerging collaborative practices. This report is also a reflective piece of work to examine the strengths and limitations of current and emerging BIM processes and technology at operation and maintenance stages. The report will be of a standard suitable for dissemination to senior management in practice.

Resit Practical Skills Assessment - a similar brief to that described above, which may include a summary of changes from any previously submitted work.

Resit Report - a similar brief to that described above, which may include some topic changes.

### **Assessment tasks:**

#### **Practical Skills Assessment (First Sit)**

Description: Practical Skills Assessment (BIM Model)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO3, MO4, MO5, MO6, MO7, MO8, MO9

**Report (First Sit)**

Description: Report (2500 words/equivalent)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

**Practical Skills Assessment (Resit)**

Description: Practical skills assessment (BIM Model)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO3, MO4, MO5, MO6, MO7, MO8, MO9

**Report (Resit)**

Description: Report (2500 words equivalent)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

**Part 5: Contributes towards**

This module contributes towards the following programmes of study:

BIM in Design, Construction and Operation [Frenchay] MSc 2023-24

BIM in Design, Construction and Operation [Frenchay] MSc 2022-23

Building Surveying [Sep][PT][Frenchay][3yrs] - Withdrawn GradDip 2021-22

Building Surveying {With Preparatory Studies} [Sep][PT][Frenchay][3yrs] - Withdrawn  
MSc 2021-22

