



Module Specification

Advanced Technology and Environment 3

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Part 1: Information

Module title: Advanced Technology and Environment 3

Module code: UBLMT3-15-3

Level: Level 6

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Environment & Technology

Department: FET Dept of Architecture & Built Environ

Partner institutions: None

Field: Architecture and the Built Environment

Module type: Module

Pre-requisites: Architectural Technology and Environment 2 2023-24

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module contributes to the final year of study in the BSc Hons Architecture degree and, although it is not corequisite with that programme's final studio module, should encourage close links with related architectural design being undertaken by the student.

The module requires the students to marshal the technical knowledge they have developed over the preceding years of study and exercise design judgment in the

use of this knowledge to develop a technical strategy that is integrated with their design intentions for a design project.

Features: Not applicable

Educational aims: This module encourages extended in-depth explanation of a student's technical strategies and a focused exploration of selected detail designs, thus demonstrating the student's understanding of and skill in the application of contemporary construction technology.

Outcomes of the module may include the following:

A description of the 'General Arrangement' of the building – demonstrating its organization and type of structure, building envelope and its relationship with the primary and secondary structure, services, fire escape strategy and environmental strategies;

The design and explanation of architectural elements – in a detailed drawing that demonstrates how construction detailing has informed an architectural idea; and how it conforms to necessary regulations;

The declaration and substantiation of an environmental and sustainability strategy for a building;

A costing and specification exercise highlighting material choice, quantities and of materials and embodied energy.

Outline syllabus: The students develop a detailed integrated technology and environmental strategy for their buildings and as part of this requirement will be expected to evaluate and provide information in response to the following thematic questions:

Structural Principles and Structural Sizes

Material Choices and Properties

Environmental Comfort

Building Physics and Thermal Performance

Construction Detailing

Construction Poetics

Assembly, Maintenance and Safety

Data and Research

Ethics and Value

Part 3: Teaching and learning methods

Teaching and learning methods: The teaching and learning of this module is delivered through critical masterclasses by industry experts. Each masterclass will have a case study analysis to develop the students' understanding of how the technology and environmental strategies come together in real buildings.

The module will also have a series of tutorials to support the students in developing their presentations and report. These tutorials will be in small groups of 5-7 to ensure deep learning.

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

MO1 Establish a set of building performance and technical criteria (including physical and regulatory items) for a specific proposed architectural project; and describe this general arrangement of services, structure and building envelope with accuracy and in detail

MO2 Evaluate a range of construction technologies, then identify and research a technical strategy containing material, component and system choices that be used to compose the detailing of an integrated element with an architectural and technical intention

MO3 Demonstrate a maturing understanding of the integration of construction technologies, and sustainable building practice

MO4 Demonstrate an ability to select and utilize a structural and constructional technology appropriate to the form and language of architecture of the project in hand and provide a technical and cost rationale for those material selections

MO5 Demonstrate an ability to choose and utilize materials appropriate to the form and language of architecture of the project in hand and provide a technical and cost rationale for those material selections

MO6 Demonstrate an ability to choose and utilise the appropriate visualisation tools and communicate architectural design ideas and construction technology drawings through the use of a variety of drawn and modelling media

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/modules/ublmt3-15-3.html) via the following link <https://uwe.rl.talis.com/modules/ublmt3-15-3.html>

Part 4: Assessment

Assessment strategy: Submission for this module will be divided equally between the drawn and annotated explanation of the strategic and detailed design of architectural proposal in the form of a report and a group presentation. The report will consist of drawings, sketches and diagrams and approximately 2000 words. The aims of the report at this level are to create an opportunity for students to understand the necessity for research with design practice and to develop a deeper understanding of a particular building precedent in detailed design and technology. The group presentation will develop the critical analysis of precedent studies that the students will then be able to embed in their design thinking. The resubmission will take place as an individual presentation.

Both assessment vehicles support and develop skills in what is understood to be one of the central professional activities of an architectural designer, which is understood

to be the development of design solutions and description of these using drawings, models and also written technical description. To this end the two assessments mimic design activity that students will undertake if they choose to continue in architectural practice.

Assessment tasks:**Report (First Sit)**

Description: Detailed design report (2000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO5, MO6

Presentation (First Sit)

Description: Group Presentation

Weighting: 50 %

Final assessment: Yes

Group work: Yes

Learning outcomes tested: MO1, MO3, MO4, MO5

Report (Resit)

Description: Detailed design report (2000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO5, MO6

Presentation (Resit)

Description: Individual Presentation

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO3, MO4, MO5

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Architecture [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Architecture [Sep][FT][Frenchay][3yrs] BSc (Hons) 2020-21

Architecture {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2020-21