



## **Module Specification**

### **Design and Engineering Studio 3**

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## Part 1: Information

**Module title:** Design and Engineering Studio 3

**Module code:** UBLMRE-45-3

**Level:** Level 6

**For implementation from:** 2023-24

**UWE credit rating:** 45

**ECTS credit rating:** 22.5

**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:** Studio 2 2023-24

**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.

In addition to the Learning Outcomes, the educational experience may explore, develop, and practise but not formally discretely assess the following:

Working as a member of a group and meeting obligations to others within the module cohort.

The use of learning resources in support of studio practice, including building Regulation Guidance and, in particular, the relationship between written architectural theory and criticism and design practice.

Professional habits of work, time-keeping and punctuality.

**Outline syllabus:** The module is taught as a sequence of studio projects. Each project brief provides a scenario that encourages critical evaluation, exploration and learning by the student.

The studio projects are supported by lectures and workshops through which key skills and technical knowledge can be expanded. Projects vary in length although this time period does not correlate with the assessment value of the project – a short project about design ideas, for example, may carry equal assessment weight to a longer project that requires the physical making of a thing.

Design & Engineering Studio 3 introduces the principles of frame construction in larger buildings addressing the follow key issues:

The investigation, critical appraisal and selection of structural systems. Construction methods and materials.

Construction detailing of frame buildings

Environmental comfort and thermal performance in non-domestic buildings.

Assembly, maintenance and safety – current construction processes, comparison of procurement routes and assessment of health and safety.

Methods of predicting building performance and fire escape.

Methods of estimating the cost and value of building construction and property development and the ethical role of the construction professional.

Typically, Technical Element 2 of the Portfolio submission will include three work elements through which students are to demonstrate their learning of this technical syllabus:

General arrangement drawings – demonstrating the organisation of structure and construction envelope for a frame-structured building of three or more storeys;

The design of a building element – in model and detail drawing that demonstrates how construction detailing has informed an architectural idea;

A technical logbook –this is to be an edited account of the student's work that demonstrates the knowledge they have gained from their studio work and from the lecture and seminar series associated with the module.

Each project is critically reviewed at various stages jointly by academics and peers at its point of conclusion and indicative assessment feedback is provided. Students are expected to act on feedback and revise their projects as necessary for the final portfolio submission. The portfolio constitutes the formal assessment point for the module.

Students are expected to make this portfolio a full and comprehensive account of all their work on the module and to this end they are directed to keep sketch books, and field trip journal and an illustrated journal across the year to catalogue their observations, their process of design research and conceptual development for each project.

These sketch books and the journals are an integral part of portfolio submission. Students will be expected to curate and provide a well presented portfolio

### **Part 3: Teaching and learning methods**

**Teaching and learning methods:** Scheduled learning: As noted above the programme strategy provides students with a greater understanding of architectural and engineering design and construction delivered as a studio-based and problem-centred learning experience. It expands their knowledge of cultural contexts and augments their ability to undertake and realise a rigorous piece of research.

Independent learning: The studio-based teaching continues the ethos of 'learning by doing'. Specific studio time is scheduled during which students are undertaking self directed work, undertaking workshops or engaged in small group design seminars.

Students are encouraged to engage in constructive discussions with each other and design tutors relating to their design and research projects. Projects are undertaken with staged submissions or presentations throughout the year and the bulk of students' time will be devoted to this work. Notwithstanding this, the final portfolio will form the critical resolution and demonstration of the year's work. Scheduled learning includes lectures, seminars, group tutorials, project supervision, demonstration, practical classes and workshops; fieldwork; external visits; work based learning; supervised time in studio/workshop.

Independent learning includes hours engaged with essential reading, design project and dissertation research and preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below.

246 hours contact time that includes lecture based sessions, workshop session exploring practical design issues related to project work, small-group design seminars offering specific tutorial support on project work, and skills workshops led by technical support staff.

189 hours are scheduled for the assimilation and development of knowledge through

coursework preparation in the form of design projects including self directed learning within a timetabled design studio space.

A final 15 hours are schedule for final preparation of the portfolio assessment vehicle (as most of the work towards this will have been done in the design project work outlined above.

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

**MO1** Demonstrate an ability to create a well ordered design proposal responds to and satisfies the requirements of a clearly defined brief and relates to client and user needs and the wider social and cultural context.

**MO2** Demonstrate an ability to evaluate critically locational, social, cultural, historical and morphological contexts in relation to architectural and urban design

**MO3** Demonstrate an understanding of structural, environmental principles and the application of different materials and communicate this visually and verbally and in writing

**MO4** Demonstrate an ability to communicate architectural design ideas and environmental engineering concepts using architectural conventions and a range of media including: drawing, model making, 3D constructions, video and photography, the use of computer aided design techniques and verbal presentation.

**MO5** Demonstrate an ability select and design mechanical and electrical services that satisfy comfort, safety and amenity criteria, and integrate these into buildings.

**MO6** Demonstrate an ability apply quantitative tools to the analysis of design problems and the testing of solutions.

**MO7** Demonstrate a developing understanding of the potential for positive and negative environmental impacts associated with design decisions.

**MO8** Demonstrate knowledge of contemporary frame construction and detailing in the design of a general arrangement for the structure, fabric and services of a non-domestic building of three or more storeys.

**MO9** Apply knowledge of contemporary construction techniques in the detailed design of an architectural assembly that expresses a declared architectural intention.

**Hours to be allocated:** 450

**Contact hours:**

Independent study/self-guided study = 204 hours

Face-to-face learning = 246 hours

Total = 450

**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:** Both assessments must be passed for Summative and Referral assessment.

100% of the module mark is awarded for the portfolio submitted at the formal assessment point for the module (the portfolio includes a technical element). The design portfolio is formally understood by the professional validating bodies as the vehicle suitable for the assessment of an architectural student and, as such is the assessment vehicle identified for this module.

The summative assessment is a holistic review of the portfolio submission, which is reviewed with regard to a range of assessment criteria published with the module guide. Typically, the criteria cover themes such as: development and realisation of the brief, response to user needs; architectural organisation; response to context; visual, verbal and written communication.

Formative review and assessment occurs at the conclusion of each of the design projects taken during the year. Each project may differently emphasise an aspect of the learning outcomes identified for the module and this particular emphasis is expressed to the student as part of the project brief.

It is usual for a small part of the module (part of one project) to be conducted as group work, which usually equates to less than 10% of the module workload. Guidance related to the portfolio submission requires that this work element is interpreted individually as part of the portfolio and that a clear distinction is made in the portfolio between the group work and any individual work that flows from this.

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

Description: Design element of portfolio

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO8, MO9

**Portfolio (First Sit)**

Description: Technical element of portfolio

Weighting: 40 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7, MO8, MO9

**Portfolio (Resit)**

Description: Design element of portfolio

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO8, MO9



**Portfolio (Resit)**

Description: Technical element of portfolio

Weighting: 40 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7, MO8, MO9

**Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Architecture and Environmental Engineering [Sep][FT][Frenchay][4yrs] BEng (Hons)  
2021-22

Architecture and Environmental Engineering [Sep][SW][Frenchay][5yrs] BEng (Hons)  
2021-22

Architecture and Environmental Engineering {Foundation} [Sep][SW][Frenchay][6yrs]  
BEng (Hons) 2020-21

Architecture and Environmental Engineering {Foundation} [Sep][FT][Frenchay][5yrs]  
BEng (Hons) 2020-21