



Module Specification

Design and Engineering Studio 4

Version: 2023-24, v3.0, 05 Jul 2023

Contents

Module Specification	1
Part 1: Information	2
Part 2: Description	2
Part 3: Teaching and learning methods	5
Part 4: Assessment.....	8
Part 5: Contributes towards	10

Part 1: Information

Module title: Design and Engineering Studio 4

Module code: UBLMRV-60-3

Level: Level 6

For implementation from: 2023-24

UWE credit rating: 60

ECTS credit rating: 30

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: Design and Engineering Studio 3 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 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 content of this module (in terms of the subjects for investigation and the design tasks undertaken) will be determined by the design studio teaching team at the start of each academic session in response to current national and international agendas and the research and practice interests and specialisms of the teaching team and the department.

Students will be given a design brief in each academic year – one of which will have a technical substantiation report submitted alongside it as well as Technical Research Element on an aspect of architecture and environmental engineering. They will critically develop this brief and undertake research around the themes of the brief. This research will focus around the theoretical, cultural and historical context of the issues, including developing an understanding of the requirements of the clients and users of the project.

The brief will be based on a real site with a real client and the students will also have to research to understand the physical, social, economic and environmental context. Some of this research work will be undertaken in study groups. This response will be informed by the study and analysis of a number of relevant built and fine art precedents. In developing a design response it is expected that students experiment with a range of media in order to test out design ideas and ultimately to present their ideas in a way that is appropriate to their proposal.

Each element of the 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 project as necessary for the final portfolio submission of their year's work as a portfolio. The portfolio which includes a technical research element 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, their process of design research, technical and conceptual development for each project. Students will be expected to curate and provide a well presented portfolio.

In addition to the design element of the module students will undertake a technical research element which will run concurrently with design project. Students will be expected to have gained an understanding of different research approaches and methodologies and produced a synopsis and undertaken a literature review within a preceding level 6 foundation module.

The technical research element is a self directed undertaking based on an agreed research question or hypothesis. Students will be allocated a tutor to offer guidance and support. It is the student's responsibility to make contact with the supervisor.

Design Studio and Engineering 4 requires the students to marshal the technical knowledge they have developed over the preceding years of study and exercise design judgement in the use of this knowledge to develop a technical strategy that is integrated with their design intentions for their major project. As the technical descriptions are to suit and be integrated with the nature of each student's individual enquiry the mode of technical description is not prescribed; but typically this technical substantiation will include similar technical elements to those required at levels 4, 5 and 6 that is:

A description of the 'General Arrangement' of the building – demonstrating its organisation of structure, construction envelope, services and fire escape strategy;

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

A Technical Logbook – that evaluates the building with reference to the thematic questions discussed previously in Level 4, 5 and 6 studies and outlined below.

In developing an integrated technology strategy for their buildings students will be expected to evaluate and answer 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

Advanced Mechanical and Electrical Services

Building Lifecycles

Data and Research

Ethics and Value

The students will also have to produce a technical substantiation report alongside their portfolios. This will provide evidence of their investigations into appropriate structural, environmental, material, constructional and advance building services strategies. It will also provide evidence of their investigations into the relevant regulations that might inform their design proposals. It will evidence their ultimate choice of approach and justify the decisions that they have made. Evidence might take the form of product and material research, precedent studies, calculations and modelling.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning: As noted above the intended Programme strategy is to provide the students with a greater understanding of

architectural and engineering design and construction delivered as a studio-based and problem-centred learning experience. Expand their knowledge of cultural context and augment 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 to be scheduled during which students are either undertaking self directed work or 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/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 Technical Research Element research and preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below. Scheduled sessions may vary slightly depending on the module choices you make.

As a 60 credit module, students are expected to study for a total of 600 hours across the year. This time requirement is allocated as follows:

246 hours contact time that includes lecture based sessions, small-group design seminars (providing tutorial support for on-going project work), feedback sessions, skills workshops and demonstrations, and one-to-one sessions as appropriate.

354 hours self-directed learning, including sessions within a timetabled design studio space, in which students are expected to prepare for, develop and resolve design projects, as well as respond to feedback and prepare final presentation material and portfolio content.

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

MO1 Demonstrate an ability to conceive and execute a design proposals that 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 the ability to evaluate and form considered judgements in relation to key theoretical, cultural (fine arts, humanities) and historical concepts and relate them to their design.

MO3 Provide substantiated design proposals which demonstrates successful resolution of the conflicting requirements of client and user needs, available technology, sustainability, programme, and commercial viability

MO4 Demonstrate an ability to integrate environmental criteria into an architectural strategy. And to demonstrate the ability to apply the knowledge and skills required for the design of more complex mechanical and electrical services.

MO5 Determine an appropriate technical strategy that responds to the functional requirements of a complex brief with a well-ordered technical solution that recognises and refines the ordering principles of that design intention; and describe this general arrangement of services, structure and building envelope with accuracy and in detail. This will also include an appreciation of the environmental impacts of choices of materials and systems as well as building lifecycles.

MO6 Evaluate a range of construction technologies, then identify and research a technical strategy and material choices that is used to compose the detail of an architectural component that is refined to convey a declared architectural intention.

MO7 Define and justify a research question or hypothesis and undertake a substantial research investigation directly related to an aspect of architecture and environmental engineering with a clear and substantiated methodological approach.

MO8 Demonstrate a grounding in existing work related to the area of research and an understanding of how this informs the research strategy, analysis and findings

Hours to be allocated: 600

Contact hours:

Independent study/self-guided study = 354 hours

Face-to-face learning = 246 hours

Total = 600

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/ubl/mrv-60-3.html) via the following link <https://uwe.rl.talis.com/modules/ubl/mrv-60-3.html>

Part 4: Assessment

Assessment strategy: 100% of the module mark is awarded for the Portfolio submitted at the formal assessment point for the module. 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: response to user needs; architectural organisation; response to context; drawing skill; and 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 component 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.

The assessment has three clear tasks that must be passed separately from each other (with a minimum mark of 40% in each), they are the design portfolio task (60%), Technical element of the portfolio (20%) and the Technical research element of the portfolio (20%).

ALL PORTFOLIO TASKS MUST BE PASSED INDIVIDUALLY AT 40%

Assessment tasks:

Portfolio (First Sit)

Description: Design element of portfolio.

Each task must be passed at 40%.

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO6

Portfolio (First Sit)

Description: Technical element of portfolio

Weighting: 20 %

Final assessment: No

Group work: No

Learning outcomes tested: MO5

Portfolio (First Sit)

Description: Technical research element of portfolio

Weighting: 20 %

Final assessment: No

Group work: No

Learning outcomes tested: MO7, MO8

Portfolio (Resit)

Description: Design element of portfolio

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO6

Portfolio (Resit)

Description: Technical element of portfolio

Weighting: 20 %

Final assessment: No

Group work: No

Learning outcomes tested: MO5

Portfolio (Resit)

Description: Technical research element of portfolio

Weighting: 20 %

Final assessment: No

Group work: No

Learning outcomes tested: MO7, MO8

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Architecture and Environmental Engineering [Sep][FT][Frenchay][4yrs] BEng (Hons)
2020-21

Architecture and Environmental Engineering [Sep][SW][Frenchay][5yrs] BEng (Hons)
2019-20

Architecture and Environmental Engineering {Foundation} [Sep][FT][Frenchay][5yrs]
BEng (Hons) 2019-20

Architecture and Environmental Engineering {Foundation} [Sep][SW][Frenchay][6yrs]
BEng (Hons) 2018-19