Module Specification

Development and Design Economics

Version: 2026-27, v3.0, Approved

Contents

Part 1: Information

Module title: Development and Design Economics

Module code: UBLMXS-15-2

Level: Level 5

For implementation from: 2026-27

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: Design economics and site safety management are two distinct but interconnected disciplines crucial for the success of any construction project. While one focuses on the financial aspects and value, the other provides a comprehensive framework for understanding and implementing the principles and procedures necessary to create a safe and healthy environment on construction sites.

Features: Not applicable

Educational aims: This module aims to equip students with a comprehensive understanding of how financial factors influence architectural and engineering design decisions throughout a project's lifecycle alongside provide students with the knowledge and skills necessary to ensure a safe and healthy environment on a construction site.

Outline syllabus: The content will be structured around lectures and linked workshop exercises that simulate the tasks that development surveyors and cost managers undertake from the inception up to commencement of the construction stages of a project on site and further in the construction stage of the project life cycle.

Part 1: Design economics will enable students to understand and apply economic principles to the design phase of a construction project. This includes evaluating different design options based on factors like whole-life costing, value engineering, and risk analysis to ensure financial viability.

Part 2: Health and safety management will provide students with the knowledge and skills necessary to manage health and safety on a construction site. This involves understanding relevant legislation, conducting risk assessments, implementing safety management systems, and fostering a positive safety culture to prevent accidents and promote well-being.

The students' tasks will include the evaluation of design option capital and whole life cost analysis around the following syllabus, but not limited to,

Design economics includes the establishment of value criteria, cost modelling, critical appraisal of cost data and application of whole life costing techniques.

Introduction to development and project risk management and the cost implications of sustainable development.

Internal and external environments to projects and sites and typical constraints, opportunities, mechanisms and outputs.

External environmental factors, health and safety legislation, contractual matters, teambuilding, productivity and motivation.

Evaluate the impact of design choices on the health and safety of construction workers and end-users.

Develop and implement a comprehensive Health & Safety plan for a construction project, adhering to relevant legislation.

Part 3: Teaching and learning methods

Teaching and learning methods: Following the module briefing and alongside the supporting programme of lectures. Students will undertake workshop exercises designed promote “active learning” in groups and individually. These will be managed by tutors who will also organise regular tutorials to monitor and give students feedback on their progress and performance in carrying out the workshop tasks.

Materials will be available to students to support the module content with reference material, exercises and related commentaries and video clips.

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

MO1 Critically analyse and apply key principles of design economics, including whole-life costing, risk management and value engineering, to evaluate the financial viability of construction projects.

MO2 Synthesize economic and safety considerations to make informed design decisions that achieve a balance between cost-effectiveness, project quality, and a safe working environments.

MO3 Formulate comprehensive Construction Phase Plan(s) (CPPs) that outlines strategies for managing site-specific hazards and ensuring compliance with relevant health and safety legislation, and regulatory frameworks.

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/ublmxs-15-2.html

Part 4: Assessment

Assessment strategy: A 20 mins group presentation - The group is given a case study scenario for specific building project. The task is to act as a 'Project Consultant' team and present a detailed analysis of the project's financial viability, including developing a Construction Phase Plan(s) CPPs for assessing site safety pre and during construction.

The case study is assessed as groupwork with monitoring of student attendance at groupwork tutorials and provision for adjustment of the element grade where an unequal contribution between group members is identified.

Resit presentation - a similar brief to that described above, which may include a case study change. For resit, students will be placed in new groups formed from the resit cohort, with the number of members and assigned roles determined by the module leader after the first sit results.

Assessment tasks:

Presentation (First Sit)
Description: A 20 mins group presentation

Weighting: 100 %
Final assessment: Yes
Group work: Yes
Learning outcomes tested: MO1, MO2, MO3

Presentation (Resit)
Description: 20 mins group presentation
Weighting: 100 %
Final assessment: Yes
Group work: Yes
Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Quantity Surveying and Commercial Management {Apprenticeship-UWE} [Frenchay] BSc (Hons) 2023-24

Quantity Surveying and Commercial Management [Frenchay] BSc (Hons) 2023-24

Quantity Surveying and Commercial Management {Foundation} [Frenchay] BSc (Hons) 2024-25

Quantity Surveying and Commercial Management [Frenchay] BSc (Hons) 2025-26

Quantity Surveying and Commercial Management [AustonSingapore] BSc (Hons) 2026-27

Quantity Surveying and Commercial Management [AustonSingapore] BSc (Hons) 2026-27

Quantity Surveying and Commercial Management [BIET] BSc (Hons) 2026-27

Quantity Surveying and Commercial Management [BIET] BSc (Hons) 2026-27

Quantity Surveying and Commercial Management {Apprenticeship-UWE} [Frenchay] BSc (Hons) 2023-24

Quantity Surveying and Commercial Management [Frenchay] BSc (Hons) 2025-26

Quantity Surveying and Commercial Management [Frenchay] BSc (Hons) 2023-24