



Module Specification

Weathertightness

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Part 1: Information

Module title: Weathertightness

Module code: UBLMH5-15-M

Level: Level 7

For implementation from: 2024-25

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: A module in the MSc Facade Engineering programme. Only suitable as CPD for people with extensive prior knowledge of Facade systems.

Features: Not applicable

Educational aims: To provide an understanding of the principles of façade weathertightness, how it can be specified and assessed.

Outline syllabus: Building Façades are required to be weathertight to provide a dry comfortable environment for the building occupants. Failure to satisfy this requirement is a major cause of dissatisfaction for building owners and occupants.

Weathertightness includes the ability of the façade to resist air leakage, water penetration and maintain these properties when subjected to windload.

This module considers how weathertightness is achieved concentrating on modern methods of façade construction. This will include discussion of design principles in terms of drained and ventilated systems and pressure equalisation and practical application in terms of the use of sealants and gaskets.

Specification of weathertightness is generally based on testing and a major part of the course is taken up with the details of testing for weathertightness.

As weathertightness requirements are related to wind load the course will include lectures on the assessment of wind loads on Façades.

Part 3: Teaching and learning methods

Teaching and learning methods: The module will be delivered by means of:

Lectures and seminars which enable students to support their own independent learning by exploring deeper issues pertaining to Façade Engineering, visiting speakers will be used to provide up to date material and context to the applications of the subject area.

Directed reading examining the key principles and relevant criteria relating to a number of topics of importance to Façade Engineering.

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

MO1 Evaluate weathertightness performance criteria, appropriate testing procedures and factors which influence the design of joints and seals in Façades.

MO2 Examine how a façade design accounts for rainwater management over long periods of time and under the worst expected conditions.

MO3 Appraise the factors which influence the wind load on Façades and the role of structural engineers in accounting for these.

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 118 hours

Face-to-face learning = 32 hours

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/ublmh5-15-m.html) via the following link <https://uwe.rl.talis.com/modules/ublmh5-15-m.html>

Part 4: Assessment

Assessment strategy: The assessment will be a presentation of a report into the weathertightness performance of a given real-world complex façade design in an exposed location, discussing the tests of the assimilation and reflection on weathertightness.

Resit assessment will be similar to the first attempt.

Assessment tasks:

Presentation (First Sit)

Description: Presentation (15 minutes)

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Presentation (Resit)

Description: Presentation (15 minutes)

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Façade Engineering [Frenchay] MSc 2024-25

Façade Engineering [Frenchay] MSc 2024-25

Façade Engineering [Frenchay] MSc 2024-25

Façade Engineering [Frenchay] MSc 2024-25

Façade Engineering [Frenchay] MSc 2023-24