Module Specification

Facade Materials and Components

Version: 2023-24, v2.0, 06 Aug 2023

Contents

Part 1: Information

Module title: Facade Materials and Components

Module code: UBLMFK-15-M

Level: Level 7

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

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: None

Excluded combinations: None

Co-requisites: Introduction to Facade Systems 2023-24

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Co-requisites : Students must have already completed or be currently enrolled in UBLLYS-15-M Introduction to Façade Systems. This requirement is compulsory for FT and PT students. Advisory for CPD students who only intend to take an individual module.

Features: Not applicable

Educational aims: This module covers the principal materials used in a contemporary facade with the exception of glass which is covered by a discrete unit on glass and glazing.

Outline syllabus: Material selection plays a key role in façade design. In addition to providing the façade aesthetic, different materials and their detailing will influence numerous factors including the thermal performance, fire performance, weathertightness and durability.

Failure to understand how different materials perform, how they should be maintained and limitations to their use will result in a façade which will not perform as intended and ultimately fail prematurely.

Module Aims:

To provide an understanding of the through-life performance of the many materials used in façade construction.

Content:

Overview of materials including: metal, ceramic, polymeric, timber and fabric. Forming and assembly processes. Durability and processes of degradation. Methods for assessing performance including Failure Mode Effects Analysis (FMEA).

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 and receiving formative feedback. Occasional speakers will be used to provide up to date material and context to the applications of the subject area.

A series of tutorials are designed to provide knowledge and practical skills relevant to façade engineering.

Presentations by and to the group by the students will also be used to enable students to develop the skills and capabilities to analyse problems, negotiate, make decisions and present solutions to problems. The formative work in the presentation will provide research material useful to the final report.

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

The module is delivered by way of five study days for face to face teaching.

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

MO1 Analyse and identify the primary properties of the many façade materials and potential issues when they are used together and incorporated in complex assemblies. (Component A,B)

MO2 Identify ways to evaluate, specify and verify the performance of materials. (Component A,B)

MO3 Understand the differences between some common forms of assembly, mounting and other detailing. (Component A,B)

MO4 Identify and evaluate typical factors which might cause a typical facade component to degrade or fail in service (Component B)

MO5 Demonstrate oral communication skills in a multi-disciplinary group environment (Component A)

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 118 hours

Face-to-face learning = 32 hours

Total = 150

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/ublmfk-15-m.html

Part 4: Assessment

Assessment strategy: Assessment will be via a presentation and a written assignment.

The Presentation is an individual presentation on Façade Materials

The written assignment thakes the form of an Essay (2500 words) which supports assimilation and reflection of taught material in the context of the literature and application to real world examples identifying and evaluating factors which might cause a typical facade component to degrade or fail in service.

Resit strategy will consist on working through a similar form of assessment.

Assessment tasks:

Presentation (First Sit)
Description: Individual Presentation on a material issue (7-10 minutes)
Weighting: 25 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO5

Written Assignment (First Sit)
Description: Essay on Materials (2500 words)
Weighting: 75 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4

Presentation (Resit)

Description: Individual Presentation on a material issue (7-10 minutes)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO5

Written Assignment (Resit)

Description: Essay on Materials (2,500 words)

Weighting: 75 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Façade Engineering [Frenchay] MSc 2023-24

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