Module Specification

Advanced Facades

Version: 2024-25, v3.0, 11 Jul 2024

Contents

Part 1: Information

Module title: Advanced Facades

Module code: UBLMJP-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: This unit looks at several areas of development and technology that are likely to play an ever increasing role in future façade design.

Outline syllabus: The use of natural ventilation in new buildings is increasing as we look for ways to reduce energy use. In order to provide comfortable conditions and meet the need of occupants, the use of automated Façades are becoming more common. How this is achieved? How are automated Façades specified, installed and commissioned? What functions can they provide? How are they controlled? Do we incorporate and integrate automated shading devices? What role can double Façades play?

Since July 2016, BIM level 2 has been required for all government funding building in the UK. What does this mean for the façade? What information is required? By who, and when? What level of detail? Who owns the information and how is it updated?

Fire performance of Façades is an area of great interest, especially after numerous recent large-scale fires around the world . This unit will discuss the principles of fire spread and how they relate to the façade. Fire testing and the regulatory requirements will be discussed.

The final section on interfaces and practical details will look at how the different performance characteristics discussed during the course can all be satisfied.

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 Appraise a complex facade engineering design, detailing the integrated approach of how a wide range of technical and procurement issues have been resolved.

MO2 Critically evaluate innovation in facade design, such as solar shading, natural ventilation, automated components, seasonal configurations and climate change adaptation.

MO3 Argue how an engineered façade design addresses the risk of fire loading and propagation, demonstrating insight into the testing and standards required as part of a rigorous regulatory environment.

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 118 hours

Face-to-face learning = 32 hours

Total = 0

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/ublmjp-15-m.html

Part 4: Assessment

Assessment strategy: The presentation will be assessed via a video presentation on a real world practical activity which a professional façade engineer would need to undertake on a complex façade.

The written assignment is assessed via a report which supports assimilation and reflection of taught material and of the most recent literature on the subject of fire risks.

Resit strategy will be in the same format as the first attempt.

Assessment tasks:

Presentation (First Sit)
Description: Video Presentation (7-10 mins)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2

Written Assignment (First Sit)
Description: Report (2,500 words)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO3

Presentation (Resit)
Description: Video Presentation (7-10 mins)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2

Written Assignment (Resit)
Description: Report (2,500 words)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: 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 2023-24