

Summary Information

Module Code	6500CIVSL
Formal Module Title	Advanced Civil Engineering Materials
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Md Sadique	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
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Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
International College of Business and Technology

Learning Methods

Learning Method Type	Hours
Lecture	36
Seminar	6
Tutorial	12

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-PAR	PAR	September	28 Weeks

Aims and Outcomes

Aims	To further develop the student's understanding of the behaviour of Engineering Materials under a wide range of service conditions. To develop the student's ability to evaluate new developments in Materials Science and to compare critically the choice of materials for specific applications.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Critically analyse the materials requirements for specific structural and non-structural applications.
MLO2	Critically analyse current developments in materials development.
MLO3	Analyse the behaviour of materials under fire conditions.
MLO4	Undertake an in-depth critical analysis of recent developments in a chosen area of Materials Science.

Module Content

Outline Syllabus

Relationships between materials properties and environment leading to durability criteria. Design for durability, life cycle planning and maintenance. Production and properties of advanced materials including composite materials. Assessment of novel structural materials. Fire: combustion and spread of fire, behaviour and deterioration of structural materials in fire conditions.

Module Overview

Additional Information

This module develops techniques for evaluating and understanding the behaviour of engineering materials under various service conditions including exposure and loading regimes. On completion of the module students should have an understanding of the performance of a range of materials commonly used in the design of structures and an appreciation of new developments in the industry.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Report	2000 Word Report	40	0	MLO4, MLO2
Exam	Examination	60	3	MLO1, MLO3