

### Summary Information

Module Code	7060BEPG
Formal Module Title	Materials Technology
Owning School	Civil Engineering and Built Environment
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

### Teaching Responsibility

LJMU Schools involved in Delivery
Civil Engineering and Built Environment

### Learning Methods

Learning Method Type	Hours
Lecture	33
Seminar	11
Tutorial	11

### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

### Aims and Outcomes

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

**After completing the module the student should be able to:**

**Learning Outcomes**

Code	Number	Description
MLO1	1	Critically analyse the materials requirements for specific structural and non-structural applications.
MLO2	2	Critically analyse current developments in materials technology.
MLO3	3	Analyse the behaviour of materials under fire conditions.
MLO4	4	Critically evaluate recent developments in Materials Technology.

**Module Content**

Outline Syllabus	The 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	<p>This module develops techniques for evaluating and understanding the behaviour of engineering materials under various service conditions including exposure and loading regimes. It aims to:</p> <p>enhance your understanding of the behaviour of Civil Engineering Materials under a wide range of service conditions</p> <p>develop your ability to evaluate new developments in Materials Technology and to compare critically the choice of materials for specific applications</p>
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 be able to make intelligent decisions with regard to choice of materials for Civil Engineering applications. Also they will 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)	Module Learning Outcome Mapping
Centralised Exam	Examination	60	3	MLO1, MLO2, MLO3, MLO4
Portfolio	Portfolio	40	0	MLO2

**Module Contacts**

**Module Leader**

Contact Name	Applies to all offerings	Offerings
Rafal Latif Al-Mufti	Yes	N/A

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------