

Summary Information

Module Code	4502ICBTQS
Formal Module Title	Building Technology and Design
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	15
Academic level	FHEQ Level 4
Grading Schema	40

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	45
Tutorial	20

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
APR-PAR	PAR	April	12 Weeks
JAN-PAR	PAR	January	12 Weeks

SEP-PAR	PAR	September	12 Weeks
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Aims and Outcomes

Aims	Aim(s) of the module is to introduce modern building construction technology, forms of buildings structures, building structural element design, internal special planning, finishing & related services and to demonstrate an understanding of environmental friendly building design principles to meet regulatory standards. This module focuses on the technology of low-rise & multi-storey residential, commercial & institutional buildings designed for both private and public use.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Identify the technology of various types of buildings, form of substructures & superstructures, principles of building structural element planning & designing and Identify & understand essential building services, and space requirements of various type of building.
MLO2	2	Examine the principles of spatial planning to achieve basic functional requirements of various type of buildings and assess methods and techniques of external works of all types of buildings & landscaping work in building sites.
MLO3	3	Recognise specifications and standards for building works, structural designing and building services of various type of building, and Apply various legislative requirements for internal spatial planning and design development requirements of local authorities & regulatory bodies.
MLO4	4	Demonstrate knowledge on sustainability design principles and its applications on various types of buildings to achieve environmentally friendly and low energy design according to national & international standards.

Module Content

Outline Syllabus	Note: Tutor must address below indicative content applies to various type of buildings such as low-rise & multi-storey residential/commercial & institutional buildings designed for both private and public use; Site evaluation and investigation for subs-structural arrangements and foundation design Foundation types: Shallow type (Isolated pad, Strip pad, Strap & Raft) and Deep types of foundations (Friction, End-bearing and In-situ piling work & piers) Steel form of structures: Introduction to concrete structural elements (e.g. 'I', 'H', 'L' & 'Channel sections) & Connections (e.g. Simple & Moment Resistant connections) Concrete form of structures: Introduction to concrete structural elements (e.g. Concrete beams, columns, slab systems, flooring and sheer walls) Introduction to effects of seismic forces and seismic resistance design of building elements Components of services: HVAC, Electrical systems and distribution, Mechanical transportation, Fire safety, Disposal systems (Sanitary & Solid waste) Building service integration & commission Legal requirements of internal spatial planning: ventilation, building partitioning, suspended ceilings & raised floors QA & QS of Building works Introduction to Standard material specifications (BS Codes/ Euro Code) 'Neufert' standards of internal space planning Factories ordinance and internal space requirement Statutory legislative requirements for building planning, design, internal spatial planning, site development and disability access (Local & international) Building external works: Installation of exterior glazing & claddings, access road, landscape work (Hard & Soft) Landscape design: Basic principles of Softscape and Hardscape Eco-friendly & low energy building designs, environmental systems and controls LEED green rating system: Introduction to green rating criteria's
Module Overview	
Additional Information	

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Coursework	30	0	MLO2, MLO3, MLO4
Exam	Examination	70	2	MLO1

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Karl Jones	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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