

## Building Services Drawing (CAD)

### Module Information

2022.01, Approved

#### Summary Information

Module Code	4505ICBTBS
Formal Module Title	Building Services Drawing (CAD)
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	15

#### Module Offering(s)

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

## Aims and Outcomes

Aims	Aim(s) of the module is to demonstrate an understanding of various aspects of information technology & model based approaches required for construction and building services sectors and to apply CAD tools to produce various design information & modelling details of construction and building services sectors which ensure the competitive effectiveness of Building Services practice.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate an understanding about various industry standard drafting tools & packages for construction and manufacturing sectors of building, service & civil engineering structures.
MLO2	2	Demonstrate understanding and application of various tools & packages to produce detailed drawings & building information in construction and manufacturing sectors of buildings, services & civil engineering structures.
MLO3	3	Evaluate the requirement of advance information technology, Information Communication Technology (ICT) & Building Information Modelling (BIM) and skills to ensure the competitive effectiveness of the future of Building Service Engineering practice.

## Module Content

Outline Syllabus	Introduction to construction CAD packages: AutoCAD, BIM, MS Project.CAD software packages, its variants & Building Information Modelling (BIM) packages used in building, service, civil engineering & manufacturing sectors.2D drawing design of various building, service & civil engineering structures: Structural elements of buildings (sub structural & super structural), floor layouts, schedule of openings, structural detailing of civil engineering designs (Bridges & roadways) & cross sectional drawings and service engineering related drawings (mechanical, electrical & plumbing). 3D (Design) modelling of various building, service & civil engineering structures. 4D (Scheduling) of BIM for planning & tracking construction and building services activities. 5D (Cost) of BIM for integration of design (3D) and schedule (4D) with the costs associated with the components of the model.Future of BIM and dimensions & Building Service Engineering Practice: 6D (Life cycle management) and 7D (Sustainable design).
Module Overview	
Additional Information	

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Presentation	Scenario based report	30	0	MLO1, MLO2, MLO3
Exam	Written Examination	70	2	MLO1, MLO2, MLO3

## Module Contacts

**Module Leader**

Contact Name	Applies to all offerings	Offerings
Alison Cotgrave	Yes	N/A

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
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