

Construction Technology 2

Module Information

2022.01, Approved

Summary Information

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| Module Code | 5551BEKL |
| Formal Module Title | Construction Technology 2 |
| Owning School | Civil Engineering and Built Environment |
| Career | Undergraduate |
| Credits | 20 |
| Academic level | FHEQ Level 5 |
| Grading Schema | 40 |

Teaching Responsibility

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| LJMU Schools involved in Delivery |
| LJMU Partner Taught |

Partner Teaching Institution

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| Institution Name |
| International College IMPERIA |

Learning Methods

| Learning Method Type | Hours |
|----------------------|-------|
| Lecture | 44 |

Module Offering(s)

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

Aims and Outcomes

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| Aims | To examine construction methods and building services installations with a specific focus on framed structures, and commercial – industrial buildings. |
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After completing the module the student should be able to:

Learning Outcomes

| Code | Number | Description |
|------|--------|---|
| MLO1 | 1 | Analyse and explain a range of processes and techniques involved in the construction of the substructure for single storey and multi storey framed buildings. |
| MLO2 | 2 | Analyse and explain a range of processes and techniques involved in the construction of the superstructure for single storey and multi storey framed buildings. |
| MLO3 | 3 | Explain the principles and operation of a range of building services for industrial and commercial buildings. |
| MLO4 | 4 | Criticise the traditional construction techniques and debate the role of contemporary methods to attain sustainable development goals. |
| MLO5 | 5 | Recognise health and safety risks related to various construction techniques used for frame structured single and multi storey buildings. |

Module Content

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|------------------------|---|
| Outline Syllabus | <ul style="list-style-type: none"> • Substructure – pile foundations, displacement and replacement, pile caps and ground beams, pad foundations. Basement excavation and construction. Reinforced concrete ground floor slabs. • Superstructure – Single storey framed buildings of portal frame and lattice girder construction in steel concrete and timber. Multi storey structural frames in steel in-situ concrete and precast concrete. Cross laminated timber multi storey structures. Tunnel form and Slip form construction. Cladding to single storey and multi storey buildings. Roofing to single and multi-storey buildings. Structural concrete floors,- metal deck, precast concrete and in-situ concrete. Suspended Ceilings, Access Floors and Internal Partitions. • Services – Heating Ventilation and Air conditioning plant to industrial and commercial buildings. Electrical installations to industrial and commercial buildings. Lifts and escalators installation. Firefighting and suppression systems to multi storey buildings. Pumped systems of water supply to multi storey buildings. |
| Module Overview | |
| Additional Information | Provides an advanced knowledge of construction technology through more complex building types and systems. Students are able to explore construction technology through more analytical methods. The concept of services is also introduced. |

Assessments

| Assignment Category | Assessment Name | Weight | Exam/Test Length (hours) | Module Learning Outcome Mapping |
|---------------------|-----------------|--------|--------------------------|---------------------------------|
| Report | AS1 | 50 | 0 | MLO2, MLO4, MLO5 |

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|------|-----|----|---|---------------------------|
| Test | AS2 | 50 | 0 | MLO1, MLO3, MLO4, MLO5 |
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Module Contacts

Module Leader

| Contact Name | Applies to all offerings | Offerings |
|--------------|--------------------------|-----------|
| Tom Hogarth | Yes | N/A |

Partner Module Team

| Contact Name | Applies to all offerings | Offerings |
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