

### Summary Information

|                     |   |
|---------------------|---|
| Module Code         | 4540NCCG                                |
| Formal Module Title | Construction Technology                 |
| Owning School       | Civil Engineering and Built Environment |
| Career              | Undergraduate                           |
| Credits             | 20                                      |
| Academic level      | FHEQ Level 4                            |
| Grading Schema      | 40                                      |

### Teaching Responsibility

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

### Partner Teaching Institution

|                                |
|--------------------------------|
| Institution Name               |
| Nelson and Colne College Group |

### Learning Methods

| Learning Method Type | Hours |
|----------------------|-------|
| Lecture              | 48    |

### Module Offering(s)

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

|            |     |                                     |          |
|------------|-----|-------------------------------------|----------|
| SEP_NS-PAR | PAR | September (Non-standard start date) | 12 Weeks |
|------------|-----|-------------------------------------|----------|

## Aims and Outcomes

|      |  |
|------|--|
| Aims | This module will introduce the different technologies used for construction from planning to completion. It will generate an understanding of the different characteristics and design considerations to be considered when selecting the most suitable technological solution. Students will consider adaptations and recycling, and give consideration to the environmental impact of construction projects. On successful completion of this module students will be able to analyse situations and select appropriate construction technology. |
|------|--|

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

### Learning Outcomes

| Code | Number | Description   |
|------|--------|---|
| MLO1 | 1      | Explain construction technology terminology   |
| MLO2 | 2      | Identify different techniques used to construct substructures and superstructures and review their function and design selection criteria |
| MLO3 | 3      | Describe the different types of technology used in the support of buildings   |
| MLO4 | 4      | Illustrate the supply and distribution of building services   |

## Module Content

|                        |   |
|------------------------|---|
| Outline Syllabus       | Types of construction activity: Low, medium and high-rise buildings, domestic buildings, commercial buildings<br>Construction technology terminology<br>Construction information: Drawings, specification, schedules, CAD, Building Information Modelling (BIM).<br>Sustainability: Supply chain Lifecycle<br>Pre-design studies: Desk-top, Site Reconnaissance, Direct Soil Investigation techniques.<br>Substructure functions and design considerations: Different methods for gathering disturbed and undisturbed samples, influence of soil type, loads and trees on foundation design, Types of foundations<br>Types of superstructure<br>Walls, Roofs & Floors<br>Site remediation and de-watering<br>Substructure works: Basement construction: steel sheet piling, concrete diaphragm walls, coffer dams, caissons, culverts.<br>Superstructure works: Reinforced concrete work: formwork, reinforcement, fabrication, concrete, steel.<br>Primary service supply<br>Services distribution<br>Services accommodation |
| Module Overview        |   |
| Additional Information |   |

## Assessments

| Assignment Category | Assessment Name | Weight | Exam/Test Length (hours) | Module Learning Outcome Mapping |
|---------------------|-----------------|--------|--------------------------|---------------------------------|
| Test                | Online Test     | 50     | 1.5                      | MLO1, MLO2                      |
| Report              | Assignment      | 50     | 0                        | MLO3, MLO4                      |

## Module Contacts

Module Leader

| Contact Name    | Applies to all offerings | Offerings |
|-----------------|--------------------------|-----------|
| Fiona Borthwick | Yes                      | N/A       |

**Partner Module Team**

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