

Infrastructure

Module Information

2022.01, Approved

Summary Information

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| Module Code | 4502CVQR |
| Formal Module Title | Infrastructure |
| Owning School | Civil Engineering and Built Environment |
| Career | Undergraduate |
| Credits | 10 |
| Academic level | FHEQ Level 4 |
| 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 |
| Oryx Universal College WLL |

Learning Methods

| Learning Method Type | Hours |
|----------------------|-------|
| Lecture | 22 |
| Tutorial | 6 |
| Workshop | 6 |

Module Offering(s)

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

Aims and Outcomes

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| Aims | To introduce students to infrastructure and to explain the interlinking between the various forms of infrastructure. To introduce the students to a systems approach to solving complex engineering problems. To introduce the planning, design, construction and operational activities required for civil engineering infrastructure & associated works. |
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After completing the module the student should be able to:

Learning Outcomes

| Code | Number | Description |
|------|--------|---|
| MLO1 | 1 | Explain the importance of sustainable infrastructure |
| MLO2 | 2 | Apply a systems approach to solving complex infrastructure problems |
| MLO3 | 3 | Apply the principal features of project planning including the methods available for programming construction works. |
| MLO4 | 4 | Demonstrate an understanding of relevant health and safety legislation, the hazards arising from construction activities and of the means of managing them through preventative design and protective measures. |
| MLO5 | 5 | Demonstrate an understanding of civil engineering technology, practices and processes. |

Module Content

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| Outline Syllabus | What is infrastructure? Case studies of different forms of infrastructure, including road, rail, water, wastewater. Sustainability, definition and application Systems approach, Multiple cause diagrams Project definition, Client types; clients' requirements; briefing: time, cost, quality and functional objectives; external influences: environmental issues. Procurement arrangement options and documentation: Contractual arrangements. Approaches to obtaining tenders. Procurement route selection: Simple selection procedure Construction methods, sequences and resources used in civil engineering projects. Use of suitable Health & Safety legislation, particularly CDM regulations, principal provisions; Safe systems of work; Work method statements, risk assessments and safety method statements. Use of computer software to produce construction programmes. |
| Module Overview | |
| Additional Information | This module introduces students to infrastructure, partly through the use of case studies. They are also introduced to sustainability, and to the importance of sustainable infrastructure. They are also introduced to the management of infrastructure projects. |

Assessments

| Assignment Category | Assessment Name | Weight | Exam/Test Length (hours) | Module Learning Outcome Mapping |
|---------------------|-----------------|--------|--------------------------|---------------------------------|
| Exam | Examination | 100 | 1.5 | MLO1, MLO2, MLO3, MLO4, MLO5 |

Module Contacts

Module Leader

| Contact Name | Applies to all offerings | Offerings |
|---------------|--------------------------|-----------|
| Khalid Hashim | Yes | N/A |

Partner Module Team

| Contact Name | Applies to all offerings | Offerings |
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