

## Overview

|                             |                                  |
|-----------------------------|----------------------------------|
| <b>Programme Code</b>       | 35788                            |
| <b>Programme Title</b>      | Civil Engineering                |
| <b>Awarding Institution</b> | Liverpool John Moores University |
| <b>Programme Type</b>       | Level 3/4/5 Qualification        |
| <b>Programme Leader</b>     | Edward Loffill                   |
| <b>Link Tutor(s)</b>        |                                  |

## Awards

| Award Type   | Award Description                 | Award Learning Outcomes     |
|--------------|-----------------------------------|-----------------------------|
| Target Award | Higher National Certificate - HNC | See Learning Outcomes Below |

|                              |  |
|------------------------------|--|
| <b>Alternate Award Names</b> |  |
|------------------------------|--|

## External Benchmarks

|                                    |                       |
|------------------------------------|-----------------------|
| <b>Subject Benchmark Statement</b> | UG-Engineering (2019) |
|------------------------------------|-----------------------|

## Programme Offering(s)

| Mode of Study, Mode of Delivery | Intake Month | Teaching Institution | Programme Length |
|---------------------------------|--------------|----------------------|------------------|
| Part-Time, Face to Face         | September    | LJMU Taught          | 2 Years          |

## Aims and Outcomes

### Educational Aims of the Programme

To provide a well-balanced education which allows the student to achieve their full academic potential at HNC level and in doing so to facilitate the development of independent logical thought and judgement. To enable the student to develop their intellectual, analytical and critical abilities in order that they might exercise those abilities within the disciplines which constitute Built Environment studies. To produce a basis for general professional experience and to encourage awareness of the professional, business and commercial environment. To facilitate the development of transferable and graduate employability skills and an awareness of the need to plan, develop and record lifelong learning. To provide the framework within which students can achieve the level of attainment, appropriate to their abilities in the context of the programme of study that provides recognition of that level. To provide a medium for students to explore the potential of their acquired knowledge and to pursue those aspects which they find most stimulating. To widen access to the programmes by recognising and allowing credits for credit transfer or the recognition of prior (experiential) learning - RP(E)L. Credit transfer or RPL is usually more straightforward providing the study maps against the learning outcomes of the modules / level of study.

### Learning Outcomes

| Code  | Description  |
|-------|--|
| PLO1  | Use appropriate mathematical methods.  |
| PLO2  | Apply codes of practice and the regulatory framework.  |
| PLO3  | Understand the requirements for safe operation.  |
| PLO4  | Demonstrate the ability to select and apply appropriate mathematical methods for modelling and analysing engineering problems.         |
| PLO5  | Use scientific principles in the development of proven engineering solutions to practical problems.                                    |
| PLO6  | Use scientific principles in the modelling and analysis of standard civil engineering structures, systems and processes.               |
| PLO7  | Demonstrate the ability to select and apply appropriate computer based methods for modelling and analysing civil engineering problems. |
| PLO8  | Demonstrate the ability to undertake elements of commercial and technical risk evaluation.   |
| PLO9  | Demonstrate the ability to produce solutions to problems through the application of engineering knowledge and understanding.           |
| PLO10 | Use appropriate mathematical methods for modelling and analysing civil engineering problems.   |
| PLO11 | Use relevant test and measurement equipment.   |
| PLO12 | Apply science appropriate to civil engineering.  |
| PLO13 | Carry out experimental laboratory work.  |
| PLO14 | Use engineering IT tools.  |
| PLO15 | Demonstrate the design of civil engineering structures and systems.  |
| PLO16 | Research for information for the development and appraisal of ideas.   |

| <b>Code</b> | <b>Description</b>   |
|-------------|--|
| PLO17       | Demonstrate the ability to operate in commerce and industry in a range of situations, individually and as part of a team.            |
| PLO18       | Undertake project management.  |
| PLO19       | Demonstrate the manipulation and sorting of data.  |
| PLO20       | Present data in a variety of ways.   |
| PLO21       | Use scientific evidence based methods in the solution of problems.   |
| PLO22       | Use general IT tools.  |
| PLO23       | Demonstrate principles of ITC relevant to civil engineering.   |
| PLO24       | Use creativity and innovation in problem solving.  |
| PLO25       | Work with limited or contradictory information.  |
| PLO26       | Demonstrate effective communication.   |
| PLO27       | Engage in life-long learning.  |
| PLO28       | Use an engineering approach to the solution of problems.   |
| PLO29       | Demonstrate time and resource management.  |
| PLO30       | Engage in teamwork and demonstrate leadership.   |
| PLO31       | Have an awareness of climate change and the role Civil Engineers will play in mitigating it.   |
| PLO32       | Apply general principles of design.  |
| PLO33       | Demonstrate civil engineering design.  |
| PLO34       | Understand the characteristics of engineering materials and construction materials.  |
| PLO35       | Apply management and business practice.  |
| PLO36       | Recognise the moral and ethical issues of construction, sustainability, the environment, and scientific enquiry and experimentation. |
| PLO37       | Demonstrate civil engineering practice.  |

## Programme Structure

### Programme Structure Description

The Higher National Certificate (HNC) is currently offered on a part-time basis. The part-time programme is normally of two years duration. On successful completion of the HNC students will be eligible to apply for entry at level 5 to one of the civil engineering degree programmes offered by LJMU. Year one will comprise 4400CIVH DESIGN PRINCIPLES (20 credits), 4403CIVH SCIENCE MATERIALS AND APPLIED MATHEMATICS (20 credits) & 4405CIVH STRUCTURAL ANALYSIS AND DESIGN (20 credits) Year two will comprise 4401CIVH ENGINEERING GEOLOGY AND SOIL MECHANICS (20 credits), 4402CIVH HYDRAULICS GROUP PROJECT (20 credits) & 4404CIVH SITE SURVEYING PROCEDURES (20 credits)

| Structure - 120 credit points   |          |
|---|----------|
| Level 4 - 120 credit points   |          |
| Level 4 Core - 120 credit points  | OPTIONAL |
| [MODULE] 4400CIVH Design Principles Approved 2022.01 - 20 credit points                         |          |
| [MODULE] 4401CIVH Engineering Geology and Soil Mechanics Approved 2022.02 - 20 credit points    |          |
| [MODULE] 4402CIVH Hydraulics Group Project Approved 2022.03 - 20 credit points                  |          |
| [MODULE] 4403CIVH Science Materials and Applied Mathematics Approved 2022.01 - 20 credit points |          |
| [MODULE] 4404CIVH Site Surveying Procedures Approved 2022.01 - 20 credit points                 |          |
| [MODULE] 4405CIVH Structural Analysis and Design Approved 2022.01 - 20 credit points            |          |

Module specifications may be accessed at <https://proformas.ljmu.ac.uk/Default.aspx>

## Teaching, Learning and Assessment

Lectures, tutorials, problem solving sessions, seminars, workshops, laboratory and computer sessions, off-site learning activities, participation in group projects and individual investigational work. Unseen examinations, assignments, preparation of reports, design tasks, oral presentations, workshops, peer review, computer-based exercises.

## Opportunities for work related learning

The Hydraulics Group Project and Site Surveying Procedures modules will introduce students to work related learning activities in civil engineering. During the programme of study students will attend site visits and there will be off-site learning activities relevant for a career as a civil engineer.

## Entry Requirements

| Type                             | Description   |
|----------------------------------|---|
| Other international requirements | Overseas student applicants must have the equivalent qualifications as UK students. In addition they must have achieved an IELTS score of at least 6. |
| A levels                         | 80 UCAS points.   |

|       |                               |
|-------|-------------------------------|
| BTECs | Diploma and Extended Diploma. |
|-------|-------------------------------|