

## PROGRAMME SPECIFICATION

---

### Bachelor of Science with Honours in Civil Engineering

<b>Awarding institution</b>	Liverpool John Moores University
<b>Teaching institution</b>	International College of Business and Technology
<b>JACS Code</b>	H200
<b>Programme Duration</b>	Full-Time: 1 Year, Part-Time: 18 Months
<b>Language of Programme</b>	All LJMU programmes are delivered and assessed in English
<b>Subject benchmark statement</b>	Engineering (2015)
<b>Programme accredited by</b>	
<b>Description of accreditation</b>	
<b>Validated target and alternative exit awards</b>	Bachelor of Science with Honours in Civil Engineering
<b>Link Tutor</b>	Alison Cotgrave

### Educational aims of the programme

To provide a well-balanced education which allows the student to achieve his/her full academic potential at first degree level and in doing so to facilitate the development of independent logical thought and judgement.

To enable the student to develop his/her intellectual, analytical and critical abilities in order that he/she might exercise those abilities within the disciplines that constitute Built Environment studies.

To produce a basis for general professional and management experience and to encourage a consciousness 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 life-long 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 widen access to the programmes by recognising and allowing credits for prior certificated learning

To develop skills to ensure that the graduate will operate within a sound Health and Safety framework as provided by the regulatory framework of the industry.

To develop awareness of all aspects of sustainability to ensure that graduates operate responsibly within their chosen discipline, and make positive choices in this context.

To provide a medium for Honours students to explore the potential of their acquired knowledge and to pursue those aspects which they find most stimulating.

To ensure that Civil and Structural Engineering students develop their own identity.

Civil and structural engineering graduates are concerned with the design of major construction projects, usually infrastructure work such as roads, tunnels and bridges and the structural design of all elements of residential and commercial buildings.

Graduates may gain employment in a design office where they will apply high level numeracy skills to practical design projects. Alternatively, they may gain employment with a contractor and manage the construction process for these types of work. They need detailed knowledge of structures, hydraulics, geotechnics and materials used in construction and additionally need management skills and knowledge.

### Target award Learning Outcomes - Bachelor of Science with Honours

*A student successfully completing the programme of study will have acquired the following subject knowledge*

*and understanding as well as skills and other attributes.*

*A student who is eligible for this award will be able to:*

1. Demonstrate their knowledge and understanding of essential facts, concepts, theories and principles of Civil Engineering, and its underpinning science and mathematics
2. Demonstrate their knowledge and understanding of historical, current and future developments and technologies within Civil Engineering
3. Apply a range of mathematical and statistical methods in the solution of civil engineering problems and demonstrate an understanding of their limitations
4. Demonstrate an understanding of concepts from a range of areas, and the ability to apply them effectively in civil engineering projects
5. Demonstrate an understanding of relevant codes of practice and the regulatory framework
6. Demonstrate an understanding of construction materials, including novel and innovative materials
7. Demonstrate their understanding of the International nature of Civil Engineering and apply this to the design and evaluation of civil engineering projects
8. Demonstrate an understanding of Building Information Management (BIM)
9. Demonstrate their knowledge and understanding of risk assessment and risk management methods
10. Apply advanced problem solving skills, technical knowledge and understanding, to establish rigorous and creative solutions that are fit for purpose for all aspects of a problem
11. Evaluate risk issues, including environmental and commercial risk
12. Demonstrate an extensive knowledge and understanding of management and business practices, and their limitations, and how these may be applied appropriately to strategic and tactical issues
13. Understand the requirement for engineering activities to promote sustainable development
14. Demonstrate an awareness of the framework of relevant legal and quality requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues
15. Identify and classify the performance of systems, and apply a systems approach to solving problems
16. Undertake and evaluate research and communicate the results of the research
17. Use a range of land surveying equipment effectively for setting out engineering works and for collecting site data for the production of engineering plans
18. Apply practical engineering skills acquired through, for example, work carried out in laboratories, to the design of civil engineering projects
19. Work effectively within a group to design, analyse and evaluate civil engineering projects
20. Demonstrate an understanding of current and developing civil engineering practice and some appreciation of likely new developments
21. Apply knowledge and understanding of a range of engineering materials and components to civil engineering design
22. Illustrate an understanding of client and user needs and the importance of considerations such as aesthetics
23. Evaluate the sustainability of a civil engineering project, and design effectively within the constraints of the 'triple bottom line' (social, environmental and economic)
24. Generate an innovative design for construction, products, systems, components or processes to fulfil new needs
25. Demonstrate an understanding of the need for a high level of professional and ethical conduct in civil engineering and a knowledge of professional codes of conduct
26. Demonstrate an ability to manage the design process and evaluate outcomes
27. Apply their skills in problem solving, communication, and working with others, as well as the effective use of general IT facilities and information retrieval skills
28. Demonstrate their understanding of the use of technical literature and other information sources
29. Demonstrate entrepreneurial competencies to include creativity, personal influence, personal branding and negotiation
30. Exercise initiative and ethical personal responsibility both as a leader and as a team member
31. Plan self-learning and improve performance, as the foundation for lifelong learning
32. Demonstrate an ability to work with limited or contradictory information

33. Communicate effectively through the media of the written word, engineering drawings, clear use of mathematical notation, orally and through the effective use of IT.

34. Monitor and adjust a personal programme of work

## Teaching, Learning and Assessment

*The methods used to enable outcomes to be achieved and demonstrated are as follows:*

Lectures, tutorials, problem solving sessions, seminars, workshops, laboratory and computer sessions, off-site learning activities, participation in a group project.

Unseen examinations, assignments, preparation of reports, design tasks, workshops, peer review, computer-based exercises.

Lectures, tutorials, problem solving sessions, seminars, workshops, laboratory and computer sessions, off-site learning activities, participation in a group project.

Unseen examinations, assignments, preparation of reports, design tasks, workshops, peer review, computer-based exercises.

Lectures, tutorials, problem solving sessions, seminars, workshops, laboratory and computer sessions, off-site learning activities, participation in a group project and individual investigational/research project.

Unseen examinations, assignments, preparation of reports, design tasks, workshops, peer review, computer-based exercises.

Lectures, tutorials, problem solving sessions, seminars, workshops, laboratory and computer sessions, off-site learning activities, participation in a group project.

Unseen examinations, assignments, preparation of reports, design tasks, workshops, peer review, computer-based exercises.

## Programme structure - programme rules and modules

The programme has been developed for students who have successfully completed the HND in Civil Engineering from ICBT within 5 years of application. These students will be awarded 120 level 4 credits and 120 Level 5 credits via RPL before commencing level 6.

Entry to the programme is therefore at level 6 only for suitably qualified candidates.

At Level 4 students should be able to:

Demonstrate knowledge of the underlying concepts and principles associated with Civil Engineering and have an ability to evaluate and interpret these within the context of civil engineering and construction projects.

Additionally, they should demonstrate a knowledge of mathematics, structures, materials, infrastructure, surveying, geotechnics, hydraulics and design, in order to develop suitable arguments and make sound engineering judgements.

At level 5 student should be able to:

Demonstrate knowledge and critical understanding of the higher principles of Civil Engineering and have the ability to apply these principles outside areas and contexts in which they were originally studied. Additionally, they should demonstrate the main methods of enquiry and investigation using materials, surveying, transport, mathematics, geotechnics, water engineering and structures skills to solve problems in the field of Civil Engineering.

The full-time route will be a minimum of one year and a maximum of two years, the part-time route will be equivalent to one calendar year (1.5 academic years).

Level 6	Potential Awards on completion	Bachelor of Science with Honours
Core	Option	Award Requirements
<a href="#">6500CIVSL</a> ADVANCED MATERIALS AND CONSTRUCTION SITE MANAGEMENT (20 credits) <a href="#">6501CIVSL</a> INFRASTRUCTURE, HIGHWAYS DESIGN AND INNOVATION (20 credits) <a href="#">6502CIVSL</a> ADVANCED GEOTECHNICS AND DESIGN (20 credits)		120 core credits at level 6 0 option credits at level 6

<a href="#">6503CIVSL</a> STRUCTURAL DESIGN AND RISK MANAGEMENT (20 credits) <a href="#">6505CIVSL</a> RESEARCH PROJECT (40 credits)		
---	--	--

## Information about assessment regulations

All programmes leading to LJMU awards operate within the University's Academic Framework.  
<https://www.ljmu.ac.uk/about-us/public-information/academic-quality-and-regulations/academic-framework>

## Opportunities for work-related learning ( location and nature of activities)

The nature of this programme means that all assessments are based on real life case studies. ICBT will engage wherever possible with industry representatives to undertake visiting lectures to enhance the currency of the programme and to illustrate the relevancy of subjects in a Sri Lankan context. The significant amount of practical laboratory work is also an example of work related learning.

## Criteria for admission

### Higher national diploma

The standard entry requirement for students to enter the programme is that they have successfully completed the Higher National Diploma in Civil Engineering at ICBT which is validated by Cardiff Metropolitan University.

For students that have taken a break from their studies, the progression opportunity for HND in Civil Engineering validated by Edexcel Pearson onto the BSc Civil Engineering delivered by either the Colombo or Kandy Campus is to be permitted.

The ICBT HND in Civil Engineering will be suitably mapped to Levels 4 and 5 of the BEng(Hons) Civil Engineering programme (35019) for the purposes of recognition and RPL claims.

### Other

In addition, students must have an IELTS score of at least 6 or equivalent. Students can achieve this equivalence if they have passed GCSE level English and successfully pass the English language interview which will take place before enrolment.

Applicants that have studied an HND in Civil Engineering at other colleges in Sri Lanka will be allowed entry to the programme if their qualification is deemed to be equivalent and will be suitably mapped to Levels 4 and 5 of the BEng(Hons) Civil Engineering programme (35019) for the purposes of recognition and RPL claims. All students must also have a supportive reference from the programme leader for the HND Civil Engineering at ICBT.

## External Quality Benchmarks

All programmes leading to LJMU awards have been designed and approved in accordance with the UK Quality Code for Higher Education, including the Framework for Higher Education Qualifications in the UK (FHEQ) and subject benchmark statements where applicable.

The University is subject to periodic review of its quality and standards by the Quality Assurance Agency (QAA). Published review reports are available on the QAA website at [www.qaa.ac.uk](http://www.qaa.ac.uk)

Programmes which are professionally accredited are reviewed by professional, statutory and regulatory bodies (PSRBs) and such programmes must meet the competencies/standards of those PSRBs.

## Support for students and their learning

The University aims to provide students with access to appropriate and timely information, support and guidance to ensure that they are able to benefit fully from their time at LJMU. All students are assigned a Personal Tutor to provide academic support and when necessary signpost students to the appropriate University support services.

Students are able to access a range of professional services including:

- Advice on practical aspects of study and how to use these opportunities to support and enhance their personal and academic development. This includes support for placements and careers guidance.
- Student Advice and Wellbeing Services provide students with advice, support and information, particularly

in the areas of: student funding and financial matters, disability, advice and support to international students, study support, accommodation, health, wellbeing and counselling.

- Students studying for an LJMU award at a partner organisation will have access to local support services

## **Methods for evaluating and improving the quality and standards of teaching and learning**

### **Student Feedback and Evaluation**

The University uses the results of student feedback from internal and external student surveys (such as module evaluations, the NSS and PTES), module evaluation questionnaires and meetings with student representatives to improve the quality of programmes.

### **Staff development**

The quality of teaching is assured through staff review and staff development in learning, teaching and assessment.

### **Internal Review**

All programmes are reviewed annually and periodically, informed by a range of data and feedback, to ensure quality and standards of programmes and to make improvements to programmes.

### **External Examining**

External examiners are appointed to programmes to assess whether:

- the University is maintaining the threshold academic standards set for awards in accordance with the FHEQ and applicable subject benchmark statements
- the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with University policies and regulations
- the academic standards are comparable with those in other UK higher education institutions of which external examiners have experience
- the achievement of students are comparable with those in other UK higher education institutions of which the external examiners have experience

and to provide informative comment and recommendations on:

- good practice and innovation relating to learning, teaching and assessment observed by external examiners
- opportunities to enhance the quality of the learning opportunities provided to students

### **Please note:**

*This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content, teaching, learning and assessment methods of each module can be found in module and programme guides.*