

Civil Engineering

Programme Information

2022.01, Approved

Overview

Programme Code	25019
Programme Title	Civil Engineering
Awarding Institution	Liverpool John Moores University
Programme Type	Integrated Masters

Awards

Award Type	Award Description	Award Learning Outcomes
Alternative Exit	Certificate of Higher Education - CHE	Demonstrate a sound knowledge of the basic concepts of Civil Engineering related subjects and have learned how to take different approaches to solving problems. Demonstrate a sound knowledge of the basic concepts of Civil Engineering related subjects and have learned how to take different approaches to solving problems.
Target Award	Master of Engineering (SW) - SMG	N/A

Alternate Award Names	
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External Benchmarks

Subject Benchmark Statement	UG-Engineering (2019)
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Accreditation

Programme Accredited by

PSRB Name	Type of Accreditation	Valid From Date	Valid To Date	Additional notes
Institution of Civil Engineers (ICE)	Accredited by Institution of Civil Engineers (ICE) on behalf of the Engineering Council for the purposes of fully meeting the academic requirement for registration as an Incorporated Engineer and partially meeting the academic requirement for registration as a Chartered Engineer.			

Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length Programme Length Unit
Sandwich Year Out, Face to Face	September	LJMU Taught	5 Years
Sandwich Year Out, Face to Face	September	LJMU Taught	4 Years

Aims and Outcomes

Educational Aims of the Programme	<p>To provide a well-balanced education which allows the student to achieve his/her full academic potential 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 Civil Engineering. To produce a basis for general professional experience and to develop a critical understanding 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 offer the student the opportunity for applying knowledge and understanding in the workplace via a placement year. 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 widen access to the programmes by recognising and allowing credits for prior certificated learning and/or prior experiential learning (APL/APEL), or by credit transfer. 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 critical awareness of all aspects of sustainability to ensure that graduates operate responsibly within their chosen discipline, and make positive choices in this context. To ensure that Civil Engineering students develop their own identity. Civil Engineering graduates are concerned with the design of major construction projects, usually infrastructure work such as roads, tunnels and bridges. Civil Engineering graduates can choose to work in a design office where they will apply high level numeracy skills to practical design projects. Alternatively, they may choose to work for a contractor and manage the construction process for these types of work. They need detailed knowledge and understanding of structures, hydraulics, geotechnics and materials used in construction. They need to have skills such as setting out, land surveying and computer aided design. To encourage students to fully engage with the World of Work programme, including World of Work Skills Certificate and, as a first step towards this, to complete Bronze (Self Awareness) Statement.</p>
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Learning Outcomes

Code	Number	Description
PLO1	1	Apply appropriate mathematical methods.
PLO2	2	Apply codes of practice and the regulatory framework.
PLO3	3	Undertake management and application of safe systems of work and evaluation of these systems.
PLO4	4	Select and apply appropriate mathematical methods for modelling and analysing civil engineering problems.
PLO5	5	Use scientific principles in the development of engineering solutions to practical problems of a non-routine nature.
PLO6	6	Use scientific principles in the modelling and analysis of civil engineering structures, systems, and processes.
PLO7	7	Select and evaluate appropriate computer based methods for modelling and analysing engineering problems.
PLO8	8	Produce solutions to problems through synthesis of ideas from a wide range of sources.
PLO9	9	Undertake elements of technical and commercial risk evaluation.
PLO10	10	Act responsibly in the achievement of the `triple bottom line' (social, economic and environmental) outcomes.
PLO11	11	Produce solutions to problems through the application of engineering knowledge and understanding.
PLO12	12	Understand the scientific principles underpinning Civil Engineering.
PLO13	13	Undertake and evaluate research and develop and communicate ideas.
PLO14	14	Use appropriate mathematical methods for modelling and analysing civil engineering problems.
PLO15	15	Use relevant testing and measurement equipment safely.
PLO16	16	Undertake experimental laboratory and field work.
PLO17	17	Use engineering IT tools.
PLO18	18	Design civil engineering structures, processes and systems.
PLO19	19	Take an appropriate role in commercial and industrial situations.
PLO20	20	Undertake practical testing of design ideas in laboratory or through simulation to generate data for technical analysis and critical evaluation.
PLO21	21	Research for information to develop and critically appraise ideas.
PLO22	22	Apply Project Management techniques.
PLO23	23	Make appropriate use of the principles of ITC relevant to Civil Engineering.
PLO24	24	Analyse data effectively.
PLO25	25	Present of data in a variety of ways.
PLO26	26	Use scientific evidence based methods in the solution of problems.
PLO27	27	Use general and specific ICT tools effectively.

PLO28	28	Undertake creative problem solving.
PLO29	29	Work with limited or contradictory information.
PLO30	30	Communicate effectively.
PLO31	31	Undertake life long learning.
PLO32	32	Apply the engineering approach to the solution of problems.
PLO33	33	Apply time and resource management.
PLO34	34	Apply the general principles of design.
PLO35	35	Demonstrate awareness of needs of others, and creation of good working relationships; teamwork and leadership.
PLO36	36	Evaluate CPD outcomes.
PLO37	37	Design within civil engineering.
PLO38	38	Understand the characteristics of engineering materials and construction materials.
PLO39	39	Manage, using commercial considerations, Civil Engineering projects.
PLO40	40	Recognise the moral and ethical issues of construction, sustainability, the environment, and scientific enquiry and experimentation.
PLO41	41	Apply effective project implementation within Civil Engineering Practice.

Course Structure

Programme Structure Description

The programme is offered on a full-time, part-time and sandwich basis. Entry to the course can be at level 4, 5 or 6 for suitably qualified candidates. For students on a sandwich course the industrial training year takes place at the end of level 5. Employment on industrial placement must be for a minimum of 48 weeks with an approved civil engineering company or organisation. Each student is allocated an industrial training tutor, who visits the work place and monitors their progress. Progression to level 6, for sandwich students, is dependent on submission of an acceptable industrial training report. For part-time students attendance is normally for one full day per week, plus a number of individual days of full time attendance for laboratory and off-site learning activities as determined by the Programme Leader. Credit must be attained from all the core modules detailed to achieve the MEng (Hons) Civil Engineering. Students who do not attain credit from all the modules may be eligible for alternative exit awards. In line with the requirements of the professional body, compensation may normally only be applied for a maximum of 20 credits.

Programme Structure - No credit points

Teaching, Learning and Assessment

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/research project. Unseen examinations, assignments, preparation of reports, design tasks, oral presentations, workshops, peer review, computer-based exercises, work placement reports.
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Opportunities for work related learning

Opportunities for work related learning
The industrial training year provides a work based learning opportunity for students studying the programme in sandwich mode. The programme has active links with industry and involves employers in the industrial projects at each level of the programme. Real world case studies are used wherever possible.

Entry Requirements

Type	Description
NVQ	HNC/HND (Cognate) Level 4 Entry: Pass Level 5 Entry: Pass with Merits in 96 credits from level 5 modules.
A levels	Level 4: 128 UCAS points: Minimum Two A2 levels
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.
International Baccalaureate	24 IB points
Alternative qualifications considered	Foundation degree Level 5 entry: Foundation Degree in Civil Engineering with a final award mark of at least 65%. BSc in Civil Engineering Level 6 entry: Appropriate degree in Civil Engineering from an approved institution, with a mean mark of at least 60% in the final year. Progression from JMU B.Eng. in Civil Engineering Level 6 entry: available for JMU students who have completed level 5 JMU B.Eng. in Civil Engineering with a capped mean mark from all level 5 modules of at least 55%.

Programme Contacts

Programme Leader

Contact Name
Denise Lee

Link Tutor

Contact Name
