

Civil Engineering

Programme Information

2022.01, Approved

Overview

Programme Code	36579
Programme Title	Civil Engineering
Awarding Institution	Liverpool John Moores University
Programme Type	Degree

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Bachelor of Engineering with Honours - BGH	N/A

Alternate Award Names	
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Partner Name	Partnership Type
Beaconhouse Group	Franchised

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
Part-Time, Distance Learning	September	Beaconhouse IC Islamabad	3 Year

Aims and Outcomes

Educational Aims of the Programme	<p>The MEng in Civil Engineering fulfils all the academic requirements for Chartered Engineer status. It is designed to develop a high level of technical expertise together with the leadership skills needed to practice successfully as a professional engineer in the modern international civil engineering environment. The knowledge and skills gained from this programme are designed to enable graduates to make an immediate contribution to their employers, and to enable them to achieve the highest positions within the civil engineering profession. The educational aims of the MEng in Civil Engineering are to:</p> <ol style="list-style-type: none"> 1. Provide a programme of study that fully meets the academic requirements for registration as a Chartered Engineer. 2. 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. 3. Enable the student to develop his/her intellectual, analytical and critical abilities in order that he/she might exercise those abilities within civil engineering. 4. Deliver an educational experience for the students which enables them to develop their knowledge of those scientific, mathematical and computational principles and methods relevant to civil engineering. 5. Develop the students' ability to apply engineering concepts and tools to the solution of civil engineering problems. 6. Facilitate the development of design capability, from the understanding of customer needs through to the development and evaluation of innovative designs. 7. Encourage and enable students to develop the full range of communication skills. 8. Enable students to solve technical and intellectual challenges within the field of civil engineering, taking into consideration business, social, ethical and sustainability issues. 9. Provide the opportunities for students to combine theory with practice through the practical application of engineering skills. 10. Provide graduates with a range of highly relevant transferable skills such as team working, problem solving, self-learning as a foundation for lifelong CPD, and the ability to exercise initiative and personal responsibility. 11. Provide students with an extended period of work experience at an approved partner that will complement their programme of study at LJMU. This will give the students the opportunity to develop professional skills relevant to their programme of study, as well as attitude and behaviours necessary for employment in a diverse and changing environment. 12. 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. 13. 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. 14. Encourage students to engage with the development of employability skills by completing a self-awareness statement.
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Learning Outcomes

Code	Number	Description
PLO1	1	Demonstrate their knowledge and understanding of essential facts, concepts, theories and principles of civil engineering, and its underpinning science and mathematics.
PLO2	2	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.
PLO3	3	Evaluate risk issues, including environmental and commercial risk.
PLO4	4	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.
PLO5	5	Demonstrate an understanding the requirement for engineering activities to promote sustainable development.
PLO6	6	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.
PLO7	7	Identify and classify the performance of systems, and apply a systems approach to solving complex problems.
PLO8	8	Undertake and evaluate research and communicate the results of the research.
PLO9	9	Use a range of land surveying equipment effectively for setting out engineering works and for collecting site data for the production of engineering plans.
PLO10	10	Apply practical engineering skills acquired through, for example, work carried out in laboratories, to the design of civil engineering projects.
PLO11	11	Work effectively within a group to design, analyse and evaluate civil engineering projects.
PLO12	12	Demonstrate their knowledge and understanding of historical, current and future developments and technologies within civil engineering.
PLO13	13	Demonstrate a thorough understanding of current and developing civil engineering practice and its limitations and some appreciation of likely new developments.
PLO14	14	Apply an extensive knowledge and understanding of a wide range of engineering materials and components to civil engineering design.
PLO15	15	Demonstrate a wide knowledge and comprehensive understanding of design processes and methodologies and the ability to apply and adapt them in unfamiliar situations.
PLO16	16	Illustrate an understanding of client and user needs and the importance of considerations such as aesthetics.
PLO17	17	Evaluate the sustainability of a civil engineering project, and design effectively within the constraints of the 'triple bottom line' (social, environmental and economic).
PLO18	18	Generate an innovative design for construction, products, systems, components or processes to fulfil new needs.
PLO19	19	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.
PLO20	20	Manage the design process and evaluate outcomes.
PLO21	21	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.
PLO22	22	Use technical literature and other information sources effectively.

PLO23	23	Apply a range of mathematical and statistical methods in the solution of civil engineering problems and demonstrate an understanding of their limitations.
PLO24	24	Demonstrate entrepreneurial competencies to include creativity, personal influence, personal branding and negotiation.
PLO25	25	Exercise initiative and ethical personal responsibility both as a leader and as a team member.
PLO26	26	Plan self-learning and improve performance, as the foundation for lifelong learning.
PLO27	27	Work with limited or contradictory information.
PLO28	28	Communicate effectively through the media of the written word, engineering drawings, clear use of mathematical notation, orally and through the effective use of IT.
PLO29	29	Monitor and adjust a personal programme of work.
PLO30	30	Demonstrate an understanding of concepts from a range of areas including some outside engineering, and the ability to apply them effectively in civil engineering projects.
PLO31	31	Demonstrate an understanding of relevant codes of practice and the regulatory framework.
PLO32	32	Demonstrate an understanding of construction materials, including novel and innovative materials.
PLO33	33	Demonstrate their understanding of the international nature of civil engineering and apply this to the design and evaluation of civil engineering projects.
PLO34	34	Demonstrate an understanding of Building Information Management (BIM).
PLO35	35	Demonstrate their knowledge and understanding of risk assessment and risk management methods.

Course Structure

Programme Structure Description	<p>The programme is offered in full-time and full-time sandwich attendance modes. Entry to the programme is normally at level 4 for suitably qualified candidates. The programme will offer the opportunity of 60 credits of study abroad at Level 5. Students will be enrolled on a 480 credit (or 600 credit, if combined with a placement year or a study abroad year) honours with study abroad programme. A 60 credit Level 5 study abroad module, 5300CIVSA will normally replace the semester 2 modules on the standard programme. This study abroad should cover the same learning outcomes as the modules being replaced. The modules to be studied in the host institution must be agreed in advance. The Level 5 mean for the final award mark will be calculated based upon the 120 credits at Level 5 (or 240 credits, if combined with a placement year or a study abroad year). Students have the option to undertake a placement year. The placement year, module 5200CIVSW, will follow Level 5 and students will be enrolled on a 600 credit honours sandwich programme. The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5. Students not undertaking a placement year are registered on the non Sandwich version of the programme and will have the opportunity of an additional study year abroad following Level 5. Students will be enrolled on a 600 credit honours (with study abroad) programme. Of those 600 credits, 120 will be taken via a Level 5 study abroad module 5200CIVSA. The modules to be studied in the host institution must be agreed in advance. The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5.</p>
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Approved variance from Academic Framework Regulations

Variance
There is an approved variance for this programme: Level 7 Engineering Design Project module is approved as a 60 credit module, and it is approved to run year long.

Teaching, Learning and Assessment

Teaching, Learning and Assessment	<p>Lectures, tutorials, problem solving sessions, seminars, workshops, laboratory and computer sessions, off-site learning activities (including a surveying field course), participation in a group projects. Case studies from industry practitioners, and the use of real examples from within civil engineering add to the student knowledge and understanding. Specific work based modules will require the students to analyse and comment on their own work experiences and the techniques and practices to which they are exposed. The main vehicle for the skills development will be through the projects which involves verbal and visual presentations to a panel of experts, backing up by written reports. Unseen examinations, open book examinations, assignments, preparation of reports, design tasks, oral presentations, Visual presentations, workshops, peer review, computer-based exercises, work placement reports. Lectures, tutorials, problem solving sessions, seminars, workshops, laboratory and computer sessions, off-site learning activities, participation in a group projects. Unseen examinations, open-book examinations, assignments, preparation of reports, design tasks, oral presentations, visual presentations, workshops, peer review, computer-based exercises, work placement reports. Lectures, tutorials, problem solving sessions, workshops, laboratory and computer sessions, off-site learning activities, participation in group projects and individual investigational/research project. The major vehicles for practical skills are laboratory work, field work including the surveying field course week, and the research project at level 6. Unseen examinations, assignments, preparation of reports, design tasks, oral presentations, workshops, peer review, computer-based exercises, work placement reports. Assessment of field work and laboratory work also includes practical tests in situ. 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, oral presentations, workshops, peer review, computer-based exercises, work placement reports. Tracking of key skills and civil engineering attainments.</p>
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Opportunities for work related learning

Opportunities for work related learning
<p>To put the students' learning into appropriate vocational contexts project modules at all levels are assessed in realistic, industrially relevant contexts. At each level of the course students participate in cross disciplinary project modules and a major design project in the final year, mentored by industry, develops this further. The full-time course is offered in Sandwich mode so that after two years of study, students may elect to work in a design and/or consultancy practice or with a contractor for a one year placement. This would afford students the opportunity to contextualise their theoretical learning in a real life working environment.</p>

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

Programme Contacts

Programme Leader

Contact Name

Link Tutor

Contact Name

Monower Sadique