Programme Specification Document

Approved, 2022.02

Overview

Programme Code	36214
Programme Title	Civil Engineering
Awarding Institution	Liverpool John Moores University
Programme Type	Masters
Programme Leader	Tina Marolt Cebasek
Link Tutor(s)	Tina Marolt Cebasek

Partner Name	Partnership Type
International College of Business and Technology	Franchised

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Master of Science - MS	See Learning Outcomes Below
Alternative Exit	Postgraduate Diploma - PD	Apply advanced theoretical concepts, analytical tools and empirical methods within the field of civil engineering. Develop a critical awareness of management principles, including professional, ethical, risk and safety responsibilities, and apply appropriate techniques to achieve, promote, and measure, sustainable construction. Critically evaluate design and operation within the context of both regulation and current developments in civil engineering. Apply appropriate mathematical models to both design and analysis. Integrate the civil engineer's professional, ethical and legal responsibilities, including global aspects, in design and construction. Communicate effectively with professionals working within fields related to civil engineering. Take responsibility for personal and professional career development. Manage civil engineering projects, and develop management strategies. Create and innovate both in design, and in the solution of problems. Work effectively both independently and in teams. Make effective use of reflective learning, CPD and metacognition to improve performance.

Alternate Award Names	

External Benchmarks

Subject Benchmark Statement	PGT-Engineering (2020)

Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Part-Time, Face to Face	March	ICBT, Colombo	24 Months
Part-Time, Face to Face	September	ICBT, Colombo	24 Months

Aims and Outcomes

Educational Aims of the Programme

The overall aim of the programme is to produce postgraduates who are able to develop into Chartered Engineers via additional industrial experience and who are able to play a significant role as professional civil engineers. It aims to develop the skills needed by those who will take lead roles within the civil engineering profession. In particular it aims to provide a route for a student with a BEng or BSc in Civil or Structural Engineering to fulfil the learning requirements while working towards Chartered Engineer status. The specific aims of the programme are: 1) To produce postgraduates who have a thorough understanding of civil engineering and a critical awareness of the current issues in the field, informed by the latest research. 2) To encourage students to develop their conceptual understanding of civil engineering to evaluate the latest research and design methodologies, and to develop their own methodologies. 3) To develop the students' awareness of the ethical issues of civil engineering and their responsibilities with regard to sustainable construction. 4) To offer experience in the planning and execution of an extended research project in the form of a dissertation. 5) To provide opportunities for students to develop subject specific skills, practical skills, cognitive skills and a range of high level transferable skills.

Learning Outcomes

Code	Description
PLO1	Apply advanced theoretical concepts, analytical tools and empirical methods within the field of civil engineering.
PLO2	Use engineering principles in the resolution of practical problems.
PLO3	Undertake risk evaluation.
PLO4	Set clear objectives, assemble information from a variety of sources, analyse such data and form logical conclusions.
PLO5	Collect and analyse data; selecting and using appropriate methodologies.
PLO6	Critically evaluate research, published work and other evidence.

Code	Description
PLO7	Communicate effectively with professionals working within fields related to civil engineering.
PLO8	Undertake design and practical testing of research and design ideas in a laboratory or in the field to develop valuable data for analysis and critical evaluation and the evaluation of novel ideas.
PLO9	Take responsibility for personal and professional career development.
PLO10	Manage civil engineering projects, and develop management strategies.
PLO11	Use scientific evidence-based and risk assessed methods in design and management processes.
PLO12	Apply appropriate techniques to achieve, and measure, sustainable construction.
PLO13	Communicate effectively through the media of the written word, the spoken word, and through drawing with both specialist and non-specialist audiences.
PLO14	Work effectively both independently and in teams.
PLO15	Create and innovate in the design process.
PLO16	Understand own limitations and have the ability to discern when help is required.
PLO17	Make effective use of reflective learning, CPD and metacognition to improve performance.
PLO18	Develop appropriate research techniques, including the setting of research questions, an understanding of statistical analysis, and knowledge of measurement methods.
PLO19	Develop a critical awareness of management principles, including professional, ethical and safety responsibilities.
PLO20	Promote sustainable development and critically evaluate the sustainability of both design and operation.
PLO21	Critically evaluate design and operation within the context of both regulation and current developments in civil engineering.
PLO22	Apply appropriate mathematical models to both design and analysis.
PLO23	Integrate the civil engineer's professional, ethical and legal responsibilities, including global aspects, in design and construction.
PLO24	Select and apply appropriate analytical tools for solving and/or modelling relevant problems.

Programme Structure

Programme Structure Description

The course of study will normally be completed in 2 years (part-time). The Postgraduate Diploma and Postgraduate Certificate are alternative exit awards and do not recruit directly. A total of 60 credits is required for a PG Certificate and 120 credits for a PG Diploma (excluding the dissertation). 7501PGSL Research Methodology must be passed prior to the submission of the project dissertation (7502PGSL Research Project). Part-time: this means 2 years with the Research Project taken in the second year of study. I.e. part-time year one: 7500PGSL Sustainable and Lean Principles within Construction, 7503PGSL Energy Management, 7504PGSL Water and Wastewater Treatment, 7505PGSL Pavement, Highways and Transport Engineering, and 7506PGSL Design and Construction of Transport Infrastructure or 7507PGSL Structural and Earthquake Engineering – total 100 credits. Part-time year two: 7501PGSL Research Methodology and 7502PGSL Research Project – total 80 credits.

Programme Structure - 180 credit points	
Level 7 - 180 credit points	
Level 7 Core - 160 credit points	CORE
[MODULE] 7500PGSL Sustainable and Lean Principles Within Construction Approved 2022.01 - 20 credit points	
[MODULE] 7501PGSL Research Methodology Approved 2022.01 - 20 credit points	
[MODULE] 7502PGSL Research Project Approved 2022.01 - 60 credit points	
[MODULE] 7503PGSL Energy Management Approved 2022.01 - 20 credit points	
[MODULE] 7504PGSL Water and Wastewater Treatment Approved 2022.01 - 20 credit points	
[MODULE] 7505PGSL Pavement, Highways and Transport Engineering Approved 2022.01 - 20 credit points	
Level 7 Optional - 20 credit points	OPTIONAL
[MODULE] 7506PGSL Design and Construction of Transport Infrastructure Approved 2022.01 - 20 credit points	
[MODULE] 7507PGSL Structural and Earthquake Engineering Approved 2022.01 - 20 credit points	

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

Teaching, Learning and Assessment

Acquisition of knowledge is achieved mainly through lectures, seminars and problem solving sessions. Students are expected and encouraged to take an active role in their learning through debates, discussions and student led presentations. Site visits and laboratory sessions supplement these. Students are encouraged to attend professional body talks and visits. The assessments are designed as part of the learning process, and both individual and group feedback on the assignments adds to their knowledge base. Assessment of the knowledge base is through a combination of written examinations, assignments, presentations and the dissertation. Intellectual skills are developed through interactive seminars and lectures of the taught modules, and through case studies and assignments. These skills are further developed in the dissertation module, which is supplemented by the teaching of these skills in the Research Methodology module. The skills of critical evaluation are an integral part of most assessments, and feedback on these assessments is an integral part of the learning process. Intellectual skills are assessed through a combination of written examinations, assignments, and the dissertation report. Professional skills are developed throughout the programme mainly through class discussion, interactive seminars, the dissertation, and professional body activities. The assessment of professional skills is mainly through assignments and presentations, but it is also assessed to a lesser degree in the written examinations. Transferable skills are taught throughout the programme, in all learning activities. Assessment Transferable skills are assessed throughout the range of assessment methods (written examinations, assignments, oral presentations and the dissertation).

Opportunities for work related learning

To put the students' learning into appropriate vocational contexts project modules are based on real life projects where appropriate. This reinforces the links with industry for both full and part-time students. This is particularly the case for the use of standard testing equipment used both within the laboratories and in the field. Most students will have experienced work placements or will be in employment prior to undertaking the programme.

Entry Requirements

Type	Description
Other international requirements	International applicants: Equivalent qualifications plus minimum IELTS score of 6.5 with a minimum of 5.5 in any sub-category. Applicants who have studied and successfully achieved a UK degree within 24 months of the start of the MSc are exempt from this requirement.
Alternative qualifications considered	An Honours degree in a relevant subject with a minimum 2:2 classification or a professional qualification of equivalent standing and/or such relevant professional experience as deemed appropriate by LJMU.