Programme Specification Document

Approved, 2022.05

Overview

Programme Code	36746
Programme Title	Civil Engineering
Awarding Institution	Liverpool John Moores University
Programme Type	Masters
Programme Leader	
Link Tutor(s)	Edward Loffill

Partner Name	Partnership Type
Unicaf	Supported Distance Learning

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.
Alternative Exit	Postgraduate Certificate - PC	Engage with advanced levels of theory and practice in relation to the academic discipline of Civil Engineering. Demonstrate knowledge and an awareness of essential facts, concepts, theories and principles of civil engineering, and its underpinning science and mathematics. They must have an appreciation of the wider multidisciplinary engineering context and its underlying principles. Demonstrate appropriate levels of critical analysis, reflection and contextual awareness in focused areas of study and use engineering principles in the development of solutions to practical problems. Communicate effectively through the media of the written word, the spoken word, and through drawing with both specialist and non-specialist audiences.

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, Distance Learning	April	Unicaf	5 Years
Part-Time, Distance Learning	August	Unicaf	5 Years
Part-Time, Distance Learning	December	Unicaf	5 Years
Part-Time, Distance Learning	February	Unicaf	5 Years
Part-Time, Distance Learning	January	Unicaf	5 Years
Part-Time, Distance Learning	July	Unicaf	5 Years
Part-Time, Distance Learning	June	Unicaf	5 Years
Part-Time, Distance Learning	March	Unicaf	5 Years
Part-Time, Distance Learning	May	Unicaf	5 Years
Part-Time, Distance Learning	November	Unicaf	5 Years
Part-Time, Distance Learning	October	Unicaf	5 Years
Part-Time, Distance Learning	September	Unicaf	5 Years

Aims and Outcomes

Educational Aims of the Programme

The overall aim of the programme is to produce postgraduates who are able to develop into Engineers, 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. 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	Apply appropriate techniques to achieve, and measure, sustainable construction
PLO3	Develop appropriate research techniques, including the setting of research questions, an understanding of statistical analysis, and knowledge of measurement methods.
PLO4	Develop a critical awareness of management principles, including professional, ethical and safety responsibilities.
PLO5	Promote sustainable development and critically evaluate the sustainability of both design and operation.
PLO6	Critically evaluate design and operation within the context of both regulation and current developments in civil engineering.
PLO7	Apply appropriate mathematical models to both design and analysis
PLO8	Integrate the civil engineer's professional, ethical and legal responsibilities, including global aspects, in design and construction.
PLO9	Select and apply appropriate analytical tools for solving and/or modelling relevant problems.
PLO10	Use engineering principles in the development of solutions to practical problems.
PLO11	Undertake risk evaluation.
PLO12	Set clear objectives, assemble information from a variety of sources, analyse such data and form logical conclusions.
PLO13	Collect and analyse data; selecting and using appropriate methodologies.
PLO14	Critically evaluate research, published work and other evidence.

Code	Description
PLO15	Communicate effectively with professionals working within fields related to civil engineering
PLO16	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.
PLO17	Take responsibility for personal and professional career development.
PLO18	Manage civil engineering projects, and develop management strategies.
PLO19	Use scientific evidence-based and risk assessed methods in the solution of problems.
PLO20	Communicate effectively through the media of the written word, the spoken word, and through drawing with both specialist and non-specialist audiences.
PLO21	Work effectively both independently and in teams.
PLO22	Create and innovate both in design, and in the solution of problems.
PLO23	Understand own limitations and have the ability to discern when help is required.

Programme Structure

Programme Structure Description

Students will register for one module at a time and must complete the whole programme within 5 years.
The Postgraduate Diploma and Postgraduate Certificate are alternative exit awards. A total of 60 credits is required for a PG Certificate and 120 credits for a PG Diploma (excluding the dissertation).
For all Masters students Research Methods must be passed prior to the submission of the Dissertation or Research Project.

Programme Structure - 180 credit points	
Level 7 - 180 credit points	
Level 7 Core - 180 credit points	CORE
[MODULE] 7500UCEPG Advanced Structural Design and Bridge Engineering Approved 2022.01 - 20 credit points	
[MODULE] 7501UCEPG Applied Finite Element Analysis Approved 2022.01 - 20 credit points	
[MODULE] 7502UCEPG Energy and Carbon Management Approved 2022.01 - 20 credit points	
[MODULE] 7505BEGP Sustainable Construction and Innovation Approved 2022.01 - 20 credit points	
[MODULE] 7504UCEPG Water and Wastewater Treatment Approved 2022.01 - 20 credit points	
[MODULE] 7509BEGP Research Methods Approved 2022.01 - 20 credit points	
[MODULE] 7506UCEPG Research Project Approved 2022.01 - 60 credit points	
Level 7 Optional - No credit points	OPTIONAL

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

Approved variance from Academic Framework Regulations

Variance
Students will be eligible for a Final Module Attempt (FMA) once they have failed the first and referral attempt of a module. Students will not have to wait until all the assessment opportunities from the taught element of the programme have been exhausted. (approved 03/11/2022)

Teaching, Learning and Assessment

The methods used to enable outcomes to be achieved and demonstrated are as follows:
Acquisition of knowledge is achieved mainly through online lectures, seminars and problem solving activities. Students are expected and encouraged to take an active role in their learning through online debates, and discussions. 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 assignments and the dissertation.
Intellectual skills are developed through online interactive activities 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 assignments, and the dissertation report.
Professional skills are developed throughout the programme mainly through online discussions, interactive activities and the dissertation.
The assessment of professional skills is mainly through written assignments.
Transferable skills are taught throughout the programme, in all learning activities.
Transferable skills are assessed throughout the range of assessment methods (written and assignments, quizzes and the dissertation).

Opportunities for work related learning

To put the students' learning into appropriate vocational contexts project modules are based on real projects.

Entry Requirements

Type	Description
Alternative qualifications considered	Applicants with an unclassified degree, international equivalent or Level 5 qualification in a relevant subject area along with evidence of experiential learning in a relevant industry may be considered. Other qualifications to be of similar academic level may also be considered.
Undergraduate degree	A UK Honours degree or international equivalent in a relevant subject with a minimum 2:2 classification.
Relevant work experience	A professional qualification of equivalent standing and/or such relevant professional experience as deemed appropriate by the Department.