UNIVERSITY OF LIVERPOOL

MSc (Eng)

Sustainable Civil and Structural Engineering

Study mode	Duration
Full-time	12 months
Part-time	24 months

Apply by: **11 September 2026**
Starts on: **28 September 2026**

About this course

The Sustainable Civil and Structural Engineering MSc provides an opportunity for you to develop advanced specialist knowledge in structural engineering, understand how to address the increasing challenges for the industry and develop your skills for the working environment.

Introduction

Please note, if you're applying for January 2027 entry, your course welcome starts on 25 January 2027. Teaching starts on the 1 February 2027.

With the ever increasing environmental challenges, there is strong demand for civil and structural engineers who are practically-skilled in efficient design, green construction and sustainable development and who can play a central role in achieving sustainable adaptation to and mitigation of these challenges.

This MSc programme will help you to develop advanced knowledge and understanding of the novel, inter-disciplinary field of sustainable civil and environmental engineering. You will focus on resilient and sustainable structures and infrastructure, which are exposed to climate change effects as well as to natural disasters.

You will take part in research-led modules in civil and environmental engineering and acquire knowledge for innovative approaches for climate emergencies, low-carbon, sustainable and resilient materials and systems for next generation infrastructure. During the programme, you will interact with several other engineering disciplines and develop robust knowledge in risk analysis and uncertainty quantification.

Who is this course for?

Our MSc programme is designed for engineers, architects and physicists who intend to develop specialist skills and knowledge relevant to novel civil and environmental sustainable engineering disciplines.

What you'll learn

- Engineering design
- Computer aided design
- Sustainable structural materials
- Resilient civil engineering solutions
- Construction Management
- Problem-solving.

Accreditation

This degree is accredited by the Joint Board of Moderators (JBM) comprising of the Institution of Civil Engineers, Institution of Structural Engineers, Institute of Highway Engineers, the Chartered Institution of Highways and Transportation and the Permanent Way Institution on behalf of the Engineering Council as meeting the academic requirement for Further Learning for registration as a Chartered Engineer (CEng). To hold accredited qualifications for CEng registration, candidates must also hold a Bachelor (Hons) degree that has been accredited as partially meeting the academic requirement for registration as a Chartered Engineer (CEng).

See www.jbm.org.uk for further information.

Accreditation in detail

JBM

These programmes are accredited by the Joint Board of Moderators, which represents five major civil engineering institutions and accredits civil engineering programmes on behalf of the Engineering Council, which sets and maintains the standards for the engineering profession in the UK. The MEng degree is accredited as fully satisfying the educational base for a Chartered Engineer (CEng). The BEng degree is accredited as: (i) fully satisfying the educational base for an Incorporated Engineer (IEng) and (ii) partially satisfying the educational base for a Chartered Engineer (CEng). A programme of accredited further learning will be required to complete the educational base for CEng. See jbm.org.uk for further information and details of further learning programmes for CEng.

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Course content

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

Semester one

Your first semester will introduce you to theories, concepts and methods of modern geomechanics, industry innovation and employee practice, surface waves, nearshore morphological process and estuary processes, the advances in construction materials, and probability theory.

This course is available to start in September or January. If you choose to start in January, you'll undertake the Semester two modules first, from January to May. For full-time students, this will be followed by your research project over the summer and then your Semester one modules from September to January. On successful completion of the course, following a January start, you can expect to graduate at our summer graduation ceremonies.

Please note, UK students are exempt from Technical Writing for Engineers and should select Project Management instead. International students with strong English language skills can also be exempt from this module, subject to the Programme Director's approval.

Modules

Compulsory modules	Credits
ADVANCED GEOMECHANICS (CIVE420)	15
MATERIALS FOR DURABLE AND SUSTAINABLE CONSTRUCTION (CIVE401)	15
COASTAL AND ESTUARY PROCESSES (CIVE487)	15
RISK AND UNCERTAINTY: PROBABILITY THEORY (ENGG404)	7.5
APPLIED CONSTRUCTION MANAGEMENT (CIVE435)	7.5

Optional modules	Credits
TECHNICAL WRITING FOR ENGINEERS (ENGG596)	7.5

Programme details and modules listed are illustrative only and subject to change.

Semester two

In your second semester, you'll see how what you learn during this programmes directly links to project management in the construction industry. You'll also learn about structural optimisations, both classical and modern, and conceptual design of civil engineering structures, and structural behaviour and assessment.

You get the opportunity to work in groups to conduct a complete holistic design of a real-life engineering project, complete with experience interacting with clients, architects and consultants from different design backgrounds.

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Modules

Compulsory modules	Credits
ADVANCED CONSTRUCTION MANAGEMENT (CIVE445)	7.5
CAPSTONE: MULTIDISCIPLINARY PROJECT (CIVE462)	30
STRUCTURAL SYSTEMS (CIVE405)	15
STRUCTURAL OPTIMISATION (ENGG414)	7.5

Programme details and modules listed are illustrative only and subject to change.

Final project

Your summer research projects will focus on cutting edges analysis and design of novel and resilient infrastructure. To do so, you will have access to state-of-art experimental facilities in the structural and hydraulic laboratories which were recently refurbished.

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Modules

Compulsory modules	Credits
MSC(ENG) PROJECT (60 CREDITS) (ENGG660)	60

Programme details and modules listed are illustrative only and subject to change.

Teaching and assessment

How you'll learn

You will be taught through a mixture of lectures, tutorials, practical classes, problem classes, private study and supervised project work. In year one, lectures are supplemented by group tutorials and computing work is carried out in supervised practical classes.

Key study skills, presentation skills and group work start in first-year tutorials and are developed within each module of the MSc programme. The emphasis in most modules is on the development of problem-solving skills along with team-working, which are regarded very highly by employers. Project supervision is on a

one-to-one basis and it will help to develop in-depth knowledge for the use of new materials, systems and advanced technologies to face tomorrow challenges.

How you're assessed

Most modules are assessed by final examinations (lasting either two or three hours) in January or May, but many have an element of coursework assessment too. This might be through homework or class tests.

You will undertake a final research project which will make up 60 credits.

Liverpool Hallmarks

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

The Liverpool Curriculum framework sets out our distinctive approach to education. Our teaching staff support our students to develop academic knowledge, skills, and understanding alongside our **graduate attributes**:

- Digital fluency
- Confidence
- Global citizenship

Our curriculum is characterised by the three **Liverpool Hallmarks**:

- Research-connected teaching
- Active learning
- Authentic assessment

All this is underpinned by our core value of **inclusivity** and commitment to providing a curriculum that is accessible to all students.

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Careers and employability

We equip our students for rewarding careers and our graduates have found jobs in a wide range of industries and organisations, both in the UK and abroad. Programmes include a strong practical element and incorporate the latest academic and industry research, enabling you to work effectively at the forefront of engineering.

This course has the added value of combining professional skills sets in both structural engineering and sustainability, broadening your access to career opportunities. Graduates from this programme will develop skills in design, implementation, assessment and reporting of innovative, environmentally-compliant, sustainable engineering projects, making them suitable for employment in a range of roles with:

- Clients
- Contractors
- Consultants
- Regulators
- Policymakers at all levels.

Career support from day one to graduation and beyond

Career planning

From education to employment

Networking events

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Fees and funding

Your tuition fees, funding your studies, and other costs to consider.

Tuition fees

UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)

Full-time place, per year - £14,000
Part-time place, per year - £7,000

International fees

Full-time place, per year - £34,000
Part-time place, per year - £17,000

Tuition fees are for the academic year 2026/27.

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support.

- You can pay your tuition fees in instalments.
- All or part of your tuition fees can be funded by external sponsorship.
- International applicants who accept an offer of a place will need to pay a tuition fee deposit.

If you're a UK national, or have settled status in the UK, you may be eligible to apply for a Postgraduate Loan worth up to £12,167 to help with course fees and living costs. **Learn more about paying for your studies**.

Additional costs

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This could include buying a laptop, books, or stationery.

Find out more about the additional study costs that may apply to this course.

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Entry requirements

The qualifications and exam results you'll need to apply for this course.

Postgraduate entry requirements

We accept a 2:2 honours degree from a UK university, or an equivalent academic qualification from a similar non-UK institution. This degree should be in Civil Engineering or Structural Engineering only.

Previous relevant industry experience is a strong advantage. All applications will be considered on individual merits.

International qualifications

Select your country or region to view specific entry requirements.

Many countries have a different education system to that of the UK, meaning your qualifications may not meet our entry requirements. Completing your Foundation Certificate, such as that offered by the University of Liverpool International College, means you're guaranteed a place on your chosen course.

English language requirements

You'll need to demonstrate competence in the use of English language, unless you're from a majority English speaking country.

We accept a variety of international language tests and country-specific qualifications.

International applicants who do not meet the minimum required standard of English language can complete one of our Pre-Sessional English courses to achieve the required level.

IELTS

6.5 overall, with no component below 6.0

TOEFL iBT

If you took a TOEFL test on or before 20 January 2026, you'll need 88 overall, with minimum scores of listening 19, writing 19, reading 19 and speaking 20. If you took a TOEFL test from 21 January 2026 onwards, when a new scoring system was introduced, you'll need 4.5 overall, with 4 or above in all components. TOEFL Home Edition not accepted.

Duolingo English Test

125 overall, with writing not less than 125, speaking and reading not less than 115, and listening not below 110. For academic year 2025/26 only, we will also accept the production, literacy, comprehension and conversation score set: 120 overall, with no component below 105.

Pearson PTE Academic

61 overall, with no component below 59

LanguageCert Academic

70 overall, with no skill below 65

PSI Skills for English

B2 Pass with Merit in all bands

INDIA Standard XII

National Curriculum (CBSE/ISC) - 75% and above in English. Accepted State Boards - 80% and above in English.

WAEC

C6 or above

Pre-sessional English

Do you need to complete a Pre-sessional English course to meet the English language requirements for this course?

The length of Pre-sessional English course you'll need to take depends on your current level of English language ability.

Pre-sessional English in detail

If you don't meet our English language requirements, we can use your most recent IELTS score, or the equivalent score in selected other English language tests, to determine the length of Pre-sessional English course you require.

Use the table below to check the course length you're likely to require for your current English language ability and see whether the course is available on campus or online.

Your most recent IELTS score	Pre-sessional English course length	On campus or online
6.0 overall, with writing at 6.0 and no component below 5.5	6 weeks	On campus or online
5.5 overall, with writing at 5.5 and no component below 5.0	10 weeks	On campus or online
5.5 overall, with no more than one component at 5.0	12 weeks	Online
5.5 overall, with no component below 5.0	20 weeks	On campus
5.0 overall, with no more than one component at 4.5	30 weeks	On campus
4.5 overall, with no more than one component at 4.0	40 weeks	On campus

If you've completed an alternative English language test to IELTS, we may be able to use this to assess your English language ability and determine the Pre-sessional English course length you require.

Please see our guide to Pre-sessional English entry requirements for IELTS 6.5 overall, with no component below 6.0, for further details.

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