

Engineering Management MSc (Eng)

COURSE DETAILS

- Full-time: 12 months

KEY DATES

- Apply by: [29 August 2025](#)
 - Starts: 22 September 2025
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Course overview

Engineers are at the forefront of human progression, driving innovation and shaping our world. As our reliance on engineers to address major global problems grows, so does our need for outstanding people to lead the way. This master's degree (MSc) combines core engineering principles with management strategies, equipping you with skills in leadership, innovation, and strategic decision-making so you can guide organisations through complex engineering and business challenges.

INTRODUCTION

Our Engineering Management MSc bridges the gap between engineering and management, creating technically proficient, impactful leaders who can achieve business objectives and help others succeed in the process.

Through hands-on projects and case studies, you will develop critical skills in problem solving, communication, optimising systems and leading cross-functional teams while balancing innovation, cost and quality. The programme also emphasises strategic thinking and adaptability helping you develop the ability to make informed, data-driven decisions and to adapt to modern technologies, particularly those around digital/data science, carbon reduction and climate change resilience.

You will also gain a deeper understanding of the ethical considerations of engineering management, exploring issues around sustainability, inclusivity, confidentiality and integrity. We want to produce leaders committed to making the world of engineering a better place for all.

This is an exciting time to join this brand-new programme as the need for professional engineering managers is growing rapidly. You will graduate with a wide range of career

opportunities and will be equipped with the skills, knowledge and experience to make real-world, positive impact.

WHO IS THIS COURSE FOR?

This programme is ideal for engineers and scientists wanting to advance into managerial roles and drive innovation and efficiency in organisations.

Our MSc is for graduates with a good first degree in an engineering or related science subject including, but not limited to, Civil, Architectural and Environmental Engineering, Mechanical Engineering, Product Design Engineering, Aerospace Engineering, Automation Engineering, Chemical Engineering, Electronics and Electrical Engineering, Computer Science, Mathematics, Physics and Chemistry.

We also welcome applications from engineering professionals with extensive and relevant professional engineering experience, which will be assessed at interview.

WHAT YOU'LL LEARN

- Transferable skills in problem solving, critical analysis, teamwork and communication
- Modern management tools and insights, including industrial psychology and organisational behaviour
- Understanding fundamental techniques in engineering project, risk and cost management
- Methods and skills for making resilient and sustainable engineering decisions
- Entrepreneurial concepts, activities and challenges.

ACCREDITATION

As a new programme, our Engineering Management MSc is seeking and pending accreditation by the Institution of Engineering and Technology (IET). The programme aims to be fully accredited (subject to IET approval) as soon as the first cohort of MSc students has graduated.

Course content

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

SEMESTER ONE

In semester one you will learn the important core skills of planning, project and technical management of engineering operations and processes. The modules will build on your existing engineering knowledge, and you will develop exciting new skills in risk management, digital data science, sustainable engineering and climate change resilience.

COMPULSORY MODULES

UNCERTAINTY, RELIABILITY AND RISK 1 (ENGG304)

Credits: 7.5 / Semester: semester 1

This module covers broad aspects of uncertainty quantification methods, reliability analysis and risk assessment in engineering applications. It also provides understanding of statistical analysis of engineering data and computational methods for dealing with uncertainty in engineering problems.

PROJECT MANAGEMENT (MNGT502)

Credits: 7.5 / Semester: semester 1

Project Management is a core skill for professional engineers of all types and a sound education in this subject area is required by the professional accrediting bodies. The knowledge and skills developed in this module will equip students for their future UG project work and for their careers ahead.

This module teaches students the theory of fundamental techniques in project management, risk management, and cost management.

In this modules student undertake a group "virtual project" in which they undertake all stages of project management involved in a major construction projects. The five virtual project tasks require students to apply their theoretical learning; and they provide an opportunity to develop key professional skills.

PROFESSIONAL ENGINEERING MANAGEMENT AND LEADERSHIP (CIVE476)

Credits: 15 / Semester: semester 1

Being able to communicate clearly and effectively on complex technical matters is a vital skill for Professional Engineering Managers. They need to understand data, technical approaches and translate numerical and mathematical concepts into concise, understandable language. Effective communication is the key to good ethical, responsible leadership and understanding people, teams and personal skills/differences is a vital part of the engineering managers toolkit. Students will develop the skills needed to manage, evaluate and make informed, sound decisions on the effectiveness of teams and people, how to lead teams in a responsible, ethical and respectful manner and how to communicate complex technical matters to these teams.

RESILIENT AND SUSTAINABLE ENGINEERING MANAGEMENT (CIVE477)

Credits: 15 / Semester: semester 1

Professional Engineering Managers need to understand risk, uncertainty and their mitigation measures in their everyday working environment, be it economic, operational or staff related. This module teaches students the theory, practice and application of techniques in resilience planning and management (e.g., adapting and mitigating against change and disruptors), sustainable engineering (e.g., whole life cycle/costing analysis, carbon/water footprint, waste streams and reduction, etc) and the tools to assess, evaluate and reflect on their suitability and efficiency. On completion of the module, students will be able to make informed and sound decisions on the resilience and sustainability of engineering solutions and the impact they have on engineering practices. This is a core skill for professional engineering managers, from all disciplines, and is vital for their future employment, careers and development to Chartership.

SUSTAINABLE DESIGN AND INFRASTRUCTURE MANAGEMENT (CIVE478)

Credits: 7.5 / Semester: semester 1

Sustainability and Management are areas of professionalism that are very important within engineering industries, the infrastructure sector and associated business areas. Both areas of professionalism are also emerging as new and exciting career paths for many graduate engineers. On completion of this module, students will understand a range of approaches to designing for climate change adaptation and net-zero carbon implementation, as well as appreciate diverse business management practices that promote modern methods of working plus 'smart' industry innovation. In addition, skills will be gained by students in career evaluation, market analysis, design appraisal, options review and project judgements, all linked to enhanced graduate employment and responsible decision-making as a professional engineer.

OPTIONAL MODULES

ADDITIVE MANUFACTURING (MNFG603)

Credits: 15 / Semester: semester 1

This module aligns our graduates with the market needs. The UK additive manufacturing market was valued at 0.54 billion pounds sterling in 2022 and is predicted to reach 2.01 billion pounds sterling by 2030, with a compound annual growth rate of 18.0% from 2023 to 2030.

ADVANCED MODERN MANAGEMENT (MNGT352)

Credits: 7.5 / Semester: semester 1

The Aims of this module are as follows:

To introduce the student to various aspects of advanced modern management.

To develop a knowledge and understanding of modern management tools.

To stimulate an appreciation of management and its importance in organisational success.

RISK AND UNCERTAINTY: PROBABILITY THEORY (ENGG404)

Credits: 7.5 / Semester: semester 1

This module develops understanding and appreciation of basic probability theory. It involves the quantification of uncertainties in input and models, their implementation, and the evaluation of the associated results in view of decision making. An introduction to numerical concepts will be provided. The methods shown in the module have a general applicability, which is demonstrated by examples and practical applications.

APPLIED CONSTRUCTION MANAGEMENT (CIVE435)

Credits: 7.5 / Semester: semester 1

Management linked to industry innovation and employee practice is an area of professionalism that is very important within the construction and wider built environment sector. It is also emerging as a distinctive and rewarding career path for many graduate civil engineers plus architectural engineers. On completion of this module, students will understand a range of approaches to project management implementation, diverse practices associated with modern methods of construction, as well as effective judgement-making of challenging tasks in complex real-life situations. It will both prepare graduates for professional development in civil engineering, as well as make them fully aware of multiple aspects of strategic, operational and lifecycle management as applied to this specific industrial sector.

Any optional modules listed above are illustrative only and may vary from year to year. Modules may be subject to minimum student numbers being achieved and staff availability. This means that the availability of specific optional modules cannot be guaranteed.

SEMESTER TWO

Semester two extends the core skills developed in semester one so that you develop a deeper, critical understanding of engineering management practices, digital engineering design, people leadership and team management. You will acquire the high-level skills needed to be an effective, professional engineering manager in the diverse, modern society we live in.

COMPULSORY MODULES

ENTERPRISE SKILLS AND PROJECT ECONOMICS (ENGG354)

Credits: 15 / Semester: semester 2

To introduce key concepts in developing a novel engineering system or solution idea; assessing the potential market; and identifying the capital and other resources required to exploit it. An exercise in formal economic analysis for a capital project will also be undertaken. Issues relating to EDI, ethics and security will be captured using groupwork and modern case studies.

DATA, PROCESSES AND DIGITAL DESIGN IN ENGINEERING MANAGEMENT (CIVE472)

Credits: 15 / Semester: semester 2

Professional Engineering Managers need to understand data, data handling/security and engineering-based digital systems/tools in their everyday working environment. Digital process and software are critical for engineering design, operations and projects and this module teaches students the theory, practice and application of these processes (e.g., which tools to use, the skills needed by teams, how to mitigate against change and disruptors) and, more importantly, their use/impact in engineering management (e.g., energy & hardware cost, data security, GDPR, legacy systems, etc). Students will develop the core skills needed to assess, evaluate and make informed, sound decisions on the applicability, use and longevity of data management systems and digital technology.

PATHFINDER PROJECT (CIVE474)

Credits: 15 / Semester: semester 2

Professional Engineering Managers need to be able to effectively manage projects, operations and teams in a multidisciplinary environment. This module teaches students the practice and application of project and engineering management techniques in a practice-based setting. It will provide students with the skills and competencies needed to discuss, analyse, critically evaluate engineering problems and provide reasoned judgement on new methodologies and techniques. The module will provide students with the skills, practice and feedback in developing/producing research evaluations, SWOT analyses, project dashboards, risk matrices, project progress/planning, critical and executive summaries. These are important skills for professional engineering managers and crucial for running engineering projects and operations.

PROFESSIONAL ENGINEERING MANAGEMENT AND LEADERSHIP – ADVANCED SKILLS (CIVE475)

Credits: 15 / Semester: semester 2

Being able to demonstrate effective leadership and manage complex, often difficult, situations are key skills for Professional Engineering Managers. Managers need to be able to convince staff and stakeholders that they are making sound critical judgements and communicate decisions that enhance the impact and reputation of the business. Students will develop the skills needed to manage, evaluate and make informed, sound decisions and defend complex technical findings. They will learn how to deliver impactful arguments and manage situations under difficult, contested conditions. They will experience the range of opinions and issues that face professional engineering managers and gain the important communication attributes needed for career development.

Any optional modules listed above are illustrative only and may vary from year to year. Modules may be subject to minimum student numbers being achieved and staff availability. This means that the availability of specific optional modules cannot be guaranteed.

FINAL PROJECT

In the summer, you will undertake the Final Project module in which you will work on an industry-based topic in a team setting that addresses an exciting, real-world engineering problem. Working in partnership with industry professionals and leading academic researchers, you will design, develop and manage the project using techniques and approaches that are highly sought after in industry.

COMPULSORY MODULES

FINAL PROJECT – ENGINEERING MANAGEMENT (CIVE473)

Credits: 60 / Semester: whole session

Professional Engineering Managers need to be able to independently lead and manage projects, operations and teams in a multidisciplinary engineering environment. This module provides students with the opportunity to plan, carry out and control a research-connected project at the forefront of their academic discipline and professional practice. The student will report the findings of the project in the form of an interim assessment report and a detailed final report, that will include a critical synthesis of the research literature, a risk, resilience and sustainability evaluation, a project dashboard, an executive summary and a critical evaluation of project's findings. The module will develop the critical analysis and evaluation skills that are vital for professional engineering managers and pivotal in career development and pathway to Chartership.

Any optional modules listed above are illustrative only and may vary from year to year. Modules may be subject to minimum student numbers being achieved and staff availability. This means that the availability of specific optional modules cannot be guaranteed.

HOW YOU'LL LEARN

You'll be taught through a combination of traditional lectures and practical classes, benefitting from research-led teaching and active learning methods. There will be a mixture of lectures, seminars, tutorials, laboratory-based practical work, demonstrations, problem-solving exercises, group projects and independent study.

HOW YOU'RE ASSESSED

You'll be assessed through a combination of written exams, class tests, presentations and coursework. The examinations take place at the end of each semester and typically take the form of an in-person written assignment, usually to be completed in a couple of hours. Coursework-based assignments include essays, reports, oral and graphical presentations, mini-project work, key skills exercises and a dissertation. Your dissertation is assessed through a combination of written reports and a presentation of your achievements.

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.

Careers and employability

Engineering Management graduates have excellent employment prospects and the demand for qualified professionals is growing each year. There has never been a more important time for organisations to have exceptional engineering leaders.

Career support from day one to graduation and beyond

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[Our Careers Studio and career coaches can provide tailored support for your future plans.](#)

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[From education to employment](#)

[Employability in your curriculum for a successful transition](#)

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Networking events

[Make meaningful connections with like-minded professionals](#)

YOUR FUTURE

The University of Liverpool is one of the most targeted universities by top employers, according to The Graduate Market 2024, High-Fliers Research. This means our graduates are in high demand and sought after by top employers worldwide.

The career opportunities in Engineering Management are vast. Qualifying with an Engineering Management MSc degree from Liverpool will equip you with the knowledge, skills and confidence to explore opportunities in many dynamic industries. Graduates find work in roles such as:

- Engineering Manager
- Operational Manager

- Project Manager
- Engineering Director
- Technical Consultant
- Business Analyst
- Systems Analyst
- Business Development Manager
- Quality Engineer and many more.

Our graduates are also highly sought after in many other sectors and industries for their analytical, communications, management, business and IT skills.

In the United Kingdom, salaries for jobs in engineering management, range between £44,000 to £90,000. In China, the estimated total pay for an Engineering Manager is CN¥580,000 per year plus potential additional pay of cash bonus, commission, tips, and profit sharing. Engineering management jobs in India's burgeoning tech industry, have salaries ranging between ₹2,000,000 to ₹5,000,000.

(Source [Glassdoor](#))

In the United States, the salaries for engineering management roles range from \$113,000 to \$179,000 with the average around \$142,000 (plus potential bonuses, stock grants etc).

(Source [LeadDev](#))

THE AVERAGE ANNUAL SALARY FOR AN ENGINEERING MANAGER IS £72,513 IN THE UK.

Glassdoor, 2024

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	£13,300

International fees	
Full-time place, per year	£29,900

Fees stated are for the 2025-26 academic year.

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 fees and funding](#).

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.

SCHOLARSHIPS AND BURSARIES

We offer a range of scholarships and bursaries that could help pay your tuition and living expenses.

We've set the country or region your qualifications are from as United Kingdom. [Change it here](#)

- **[CHILEAN NATIONAL AGENCY FOR RESEARCH AND DEVELOPMENT \(ANID\) SCHOLARSHIP](#)**

- [International students](#)
- [Chile](#)

[If you're a Chilean student joining a master's degree, you could be eligible to apply for a 20% discount on your tuition fees with a Chilean National Agency for Research and Development \(ANID\) Scholarship. Scholarship.](#)

- **[CHEVENING SCHOLARSHIPS](#)**

- [International students](#)
- [Albania](#)
- [Algeria](#)
- [Anguilla](#)
- [Antigua and Barbuda](#)
- [Argentina](#)
- [Australia](#)
- [Azerbaijan](#)
- [Bangladesh](#)
- [Barbados](#)
- [Belize](#)
- [Bolivia](#)
- [Brazil](#)
- [British Virgin Islands](#)
- [Brunei](#)
- [Canada](#)
- [Cayman Islands](#)
- [Chile](#)
- [China](#)
- [Columbia](#)
- [Costa Rica](#)
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- [Libya](#)
- [Malaysia](#)
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- [Nigeria](#)
- [Pakistan](#)
- [Panama](#)
- [Paraguay](#)
- [Peru](#)
- [Philippines](#)
- [Russia](#)
- [Saint Kitts and Nevis](#)
- [Saint Lucia](#)
- [Saint Vincent and The Grenadines](#)
- [Serbia](#)
- [Singapore](#)
- [South Africa](#)
- [South Korea](#)
- [South Sudan](#)
- [Sri Lanka](#)
- [Sudan](#)
- [Taiwan](#)
- [Tanzania](#)
- [Thailand](#)
- [Trinidad and Tobago](#)
- [Turkey](#)
- [Turks and Caicos Islands](#)
- [Uganda](#)
- [Ukraine](#)
- [Uruguay](#)
- [Venezuela](#)
- [Vietnam](#)
- [Zimbabwe](#)

If you're an international student from an eligible country, joining a one-year master's course, you could be eligible to apply for a Chevening Scholarship. If your application is successful, you could expect to have your master's fees paid, up to a maximum of £18,000, and receive additional help with living costs.

CONSEJO NACIONAL DE CIENCIA Y TECNOLOGIA (CONACYT) AWARD

- [International students](#)
- [Mexico](#)

If you're a Mexican student joining a master's degree, you could be eligible to apply for a 30% discount on your tuition fees with a CONACyT Award.

FUND FOR THE DEVELOPMENT OF HUMAN RESOURCES (FIDERH) AWARD

- [International students](#)
- [Mexico](#)

If you're a Mexican student joining a master's degree and you're in receipt of a FIDERH graduate loan, you could be eligible to benefit from a 20% discount on your tuition fees with a FIDERH Award.

FUNED AWARD

- [International students](#)
- [Mexico](#)

If you're a Mexican student joining a master's degree and you're in receipt of a FUNED loan, you can apply to be considered for a 20% tuition fee discount. A total of up to 50 awards will be available to master's and PhD students per academic year.

HRH PRINCESS SIRINDHORN UNIVERSITY OF LIVERPOOL SCHOLARSHIP (THAILAND)

- [International students](#)
- [Thailand](#)

If you're a student from Thailand joining a one-year master's degree, you might be eligible to apply to have your tuition fees paid in full and receive help with living costs. One award is available and only students who are new to the University will be considered.

JOHN LENNON MEMORIAL SCHOLARSHIP

- [Home students](#)

If you're a UK student, either born in or with strong family connections to Merseyside, you could be eligible to apply for a fee discount of up to £4,500. You'll need to demonstrate an active interest in global, community and environmental issues to be considered.

JUVENTUDES GTO SCHOLARSHIP

- [International students](#)

- [Mexico](#)

[If you're a resident of the state of Guanajuato in Mexico joining a master's degree, you could be eligible for a 10% discount on your tuition fees with a JuventudEsGto Scholarship.](#)

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KAPLAN DIGITAL PATHWAYS EXCELLENCE SCHOLARSHIP

- [International students](#)

[Completed a Kaplan Digital Pathways Pre-Master's? We're offering a £5,000 fee discount off the first year of master's study for a maximum of two high achieving students joining one of our non-clinical master's courses from an online Kaplan Pre-Master's programme.](#)

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MARSHALL SCHOLARSHIP

- [International students](#)
- [United States](#)

[If you're a USA student joining an eligible master's with us, you could be eligible to apply for a Marshall Scholarship. If your application is successful, your master's tuition fees will be paid in full. One Marshall Scholarship for master's study is available in each academic year.](#)

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POSTGRADUATE OPPORTUNITY BURSARY

- [Home students](#)

[If you're a UK University of Liverpool graduate joining a master's degree with us, you could be eligible to receive £3,000 off your tuition fees. You must have graduated in the last two years and received a widening access scholarship during your undergraduate studies.](#)

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SPORT LIVERPOOL PERFORMANCE PROGRAMME

- [Home and international students](#)

[Apply to receive tailored training support to enhance your sporting performance. Our athlete support package includes a range of benefits, from bespoke strength and conditioning training to physiotherapy sessions and one-to-one nutritional advice.](#)

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THE AZIZ FOUNDATION SCHOLARSHIP

- [Home students](#)

[If you're a British Muslim, active within a Muslim community and dedicated to bringing positive change to society, you could apply to potentially have the full cost of your master's tuition fees covered by an Aziz Foundation Scholarship.](#)

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TURKISH MINISTRY OF EDUCATION SCHOLARSHIP

- [International students](#)
- [Turkey](#)

[If you're a Turkish student joining a master's degree, you could be eligible to apply for a 20% discount on your tuition fees with a Turkish Ministry of Education Scholarship.](#)

- **UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE EXCELLENCE SCHOLARSHIP**

- [International students](#)

- [Completed a Pre-Master's at University of Liverpool International College \(UoLIC\)? We're offering a £5,000 fee discount off the first year of master's study to some of the highest achieving students joining one of our non-clinical master's courses from UoLIC.](#)

- **UNIVERSITY OF LIVERPOOL INTERNATIONAL COLLEGE IMPACT PROGRESSION SCHOLARSHIPS**

- [International students](#)

- [If you're a University of Liverpool International College student awarded a Kaplan Impact Scholarship, we'll also consider you for an Impact Progression Scholarship. If selected, you'll receive a fee discount worth £3,000 off the first year of your master's course.](#)

- **VICE-CHANCELLOR'S INTERNATIONAL ATTAINMENT SCHOLARSHIP FOR MAINLAND CHINA**

- [International students](#)

- [China](#)

- [Are you a high-achieving graduate from the People's Republic of China with a degree from a Chinese university? You could be eligible to apply for a £5,000 fee discount if you're joining an eligible master's course. Up to 15 eligible students will receive this scholarship.](#)

Entry requirements

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

Your qualification	Requirements About our typical entry requirements
GCSE	4/C in English and 4/C in Mathematics
Postgraduate entry requirements	<p>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 an engineering or science related subject, including (but not limited to): Civil Engineering, Architectural and Environmental Engineering, Chemical Engineering, Mechanical Engineering, Product Design Engineering, Aerospace Engineering, Automation Engineering, Electronics and Electrical Engineering, Computer Science, Mathematics, Physics and Chemistry.</p> <p>We will also consider applications from engineering professionals with extensive, relevant work experience, which will be assessed at interview.</p> <p>In exceptional circumstances, we will consider students graduating from a UK university with a 2:2 degree in a related non-engineering/science degree with links to engineering or management. Including, but not limited to, Business Management, Geography and Environmental Sciences.</p>
International qualifications	<p>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.</p>

THE ORIGINAL

REDBRICK

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