# Programme Specification 2025-26

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| **1.** | **Programme title** | MSc Engineering Management |
| **2.** | **Awarding institution** | Middlesex University |
| **3a** | **Teaching institution** | 1 Middlesex University London |
| **3b** | **Language of study** | English |

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| **4a** | **Valid intake dates and mode of study** |

| Mode of Study | Cohort | Delivery Location | Duration |
|---|---|---|---|
| Full-time (FT) | Semester 1 | Hendon | 1 Years |
| Part-time (PT) | Semester 1 | Hendon | 2 Years |
| Full-time (FT) | Semester 1 | Dubai | 1 Years |
| Full-time (FT) | Semester 2 | Dubai | 1 Years |
| Part-time (PT) | Semester 1 | Dubai | 2 Years |
| Part-time (PT) | Semester 2 | Dubai | 2 Years |

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| **4c** | **Delivery method** | Distance Education, On Campus/Blended Learning |

| **5. Professional/Statutory/Regulatory body** (if applicable) |
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| Institution of Engineering Designers |

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| **6.** | **Apprenticeship Standard** (if applicable) | N/A |

| **7. Final qualification(s) available** |
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| **Target Award Title(s)** |
| MSc Engineering Management |
| **Exit Award Title(s)** |
| PGCert Engineering Management |
| PGDip Engineering Management |

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| **8. Academic year effective from** | 2025-26 |

| 9. Criteria for admission to the programme |
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| Applicants will be expected to have a good honours degree or equivalent in an engineering based discipline. Graduates from other related disciplines may also be admitted to the programme after interview. Preference will be given to graduates with industrial experience. In addition candidates will have such qualities as being creative, proactive and having a desire to engage with the curriculum, and be able to think as an individual but able to work in a team. Candidates should be able to show a keen interest in engineering in all its aspects.<br>It is strongly advised that the applicants address these in their personal statement in their application. Successful applicants must have competence in English language. For international applicants whose first language is not English the requirement is that they have IELTS 6.5 (with minimum 6.0 in each components) or an equivalent qualification recognised by Middlesex University. |

| 10. Aims of the programme |
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| The programme aims to:<br>The programme aspires to transform graduates into visionary leaders equipped with advanced knowledge and skills in Engineering Management, enabling them to drive innovation, optimize operations and lead engineering enterprises to success in competitive global markets.<br>A key feature of the programme is its group project module, where students collaborate on real-world projects that closely mirror industry scenarios. This hands-on experience empowers students to tackle complex challenges, apply engineering management principles in practical contexts and develop innovative solutions. By integrating real-world industry processes, cutting-edge tools and global best practices, the programme bridges the gap between academic learning and professional practice, fostering collaboration, leadership and communication skills. |

| 11. | Programme learning outcomes |
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| Programme - Knowledge and Understanding |
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| On completion of this programme the successful student will have a knowledge and understanding of: |
| **1.** Techniques for management of human and financial resources. |
| **2.** Critical awareness of the theory behind current management and business practices |
| **3.** Professional responsibilities including the global, social, ethical and environmental context of engineering. |
| **4.** Evaluation of methods and research for achieving optimal supply chains. |
| **5.** Project management methods such as evolutionary techniques and scheduling tools. |
| **6.** Process planning and improvement of product development |
| **7.** Risk assessment and risk management methods |
| **Programme - Skills** |
| On completion of this programme the successful student will be able to: |

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| **8.** Creatively solve engineering management problems. |
| **9.** Demonstrate critical thinking in order to solve real industrial problems posed to senior management. |
| **10.** Make a financial and human resource case for a particular course of action to solve a realistic management problem. |
| **11.** Select appropriate engineering management solutions. |
| **12.** Plan ahead and prioritise actions in open ended tasks that require leadership. |
| **13.** Validate and optimise business plans with full consideration of human and financial consequences |
| **14.** Use simulation to analyse and make business improvements |
| **15.** Design and implement engineering management systems to guarantee company success. |
| **16.** Communicate orally via professional presentations. |
| **17.** Handle engineering management problems that require numerate skills that would cause company failure if not solved correctly |

| **12. Teaching/learning methods** |
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| To achieve the programme learning outcomes, a range of delivery methods will be employed to cater to different learning styles and ensure comprehensive skill development. These methods will be a combination of both face-to-face and online learning activities to ensure flexibility and accessibility, while also encouraging engagement and independent learning. Face-to-face learning activities will include workshops and seminars, which will introduce key concepts and facilitate in-depth discussions. These sessions will encourage collaborative problem-solving, enabling students to engage with both peers and instructors. Through these activities, students will connect theoretical concepts with practical applications in real-world scenarios. Additionally, oral presentations will be integrated into modules, where students will present their assignments to the class, enhancing their communication skills and ability to defend their ideas. Collaborative team projects will also be scheduled, particularly in the later stages of the programme, to build teamwork and interpersonal skills, with a focus on project management and leadership.<br>Online learning activities will include real-time online sessions, designed to mirror face-to-face interactions. These sessions will provide opportunities for live feedback, discussions, and collaborative activities. Students will also participate in online team projects, working remotely on joint assignments, which will help them develop digital communication and project coordination skills. These online activities will support students in applying what they have learned while adapting to a digital workspace.<br>To ensure the delivery methods are inclusive and research-informed, several strategies will be adopted. The programme will incorporate diverse learning activities to cater to various learning styles, using digital tools and collaborative platforms to ensure accessibility for all students, including those with disabilities. Additionally, course content and assessments will reflect diverse perspectives and experiences. The teaching will be grounded in current research and best practices in the field, with teaching materials regularly updated to reflect the latest developments. Students will be encouraged to engage with cutting-edge research in their assignments, and research activities, including case studies and problem-based |

learning, will be integrated into the curriculum to enhance student engagement with real-world challenges.
Students will be encouraged to take responsibility for their own independent study, which will play a crucial role in their learning journey. Self-guided learning will be supported through access to various learning resources, including reading materials and key concept videos. Students will be encouraged to explore topics related to the course content and deepen their understanding through independent research and reflection. An online learning platform, such as MyMDX, will provide access to learning and teaching materials, discussion forums and interactive learning tools that support independent study. This platform will also facilitate the submission of assignments and the completion of self-reflection tasks to monitor progress. Independent study will also include preparing reports for assignments, where students will research relevant topics, analyse data, and produce their findings, further developing their research and report-writing skills.

Approx. number of timetabled hours per week (at each level of study, as appropriate), including on-campus and online hours FT - 12, PT - 6

Approx. number of hours of independent study per week (at each level of study, as appropriate) FT - 28, PT - 14

**13. Employability**

**13a Development of graduate competencies**

**13b Employability development**

Graduate competencies will be developed and articulated throughout the MSc Engineering Management programme through a combination of academic coursework and practical projects. Key competencies such as problem-solving, teamwork, and communication will be embedded in the programme via real-world projects, industry simulations, and guest speakers from industry professionals. The programme is designed to cultivate Leadership and Influence, Curiosity and Learning, Communication, Empathy, and Inclusion, Collaborative Innovation, Resilience and Adaptability, Problem Solving and Delivery, Technological Agility, and an Entrepreneurial Mindset to ensure graduates are fully prepared for dynamic engineering management roles.
Students will work on industry-integrated projects, where they will be tasked with projects sourced directly from industry. These projects will provide students with the opportunity to apply their theoretical knowledge in practical, real-world scenarios, enhancing their Problem Solving and Delivery, Technological Agility, and Collaborative Innovation skills. Through these projects, students will focus on developing critical skills such as problem-solving, project management, and communication, reinforcing their ability to lead, adapt, and innovate within complex engineering environments. This hands-on experience will allow them to connect their learning with actual industry practices and demands, developing Resilience and Adaptability in responding to real-world challenges.
The programme will also incorporate reflective practice and portfolio development. Students will engage in reflective activities and create a portfolio of their work, which will be assessed throughout the course. This portfolio will enable students to track their progress, gain insights into their learning journey, and articulate their competencies in both academic and industry contexts. By reflecting on their experiences, students will better understand their strengths and areas for development, supporting their Curiosity and Learning, Leadership and Influence, and Entrepreneurial Mindset.
Industry experts will be invited to share their expertise and real-world experiences through

interactive sessions and case studies, providing students with valuable insights into how their academic learning applies in the workplace. These sessions will also create opportunities for students to discuss current industry trends and challenges, fostering Communication, Empathy, and Inclusion by encouraging diverse perspectives and collaborative thinking. By engaging with professionals, students will gain a deeper understanding of the evolving needs of the industry, ensuring that the programme remains aligned with real-world demands and prepares students for successful careers in engineering management.

Employability services play a critical role in supporting MSc Engineering Management (MSc EM) students in their career progression by providing tailored services and opportunities to develop their employability. These services are closely aligned with the programme's focus on bridging academic knowledge with real-world application, ensuring students are well-prepared to excel in engineering management roles.

Employability Skills and Training: MSc EM students benefit from workshops designed to develop essential skills in project management, leadership, and strategic decision-making, aligning with the programme's objectives. Additional training in CV writing, interview preparation, and personal branding equips students with the tools to confidently present their expertise to potential employers.

Personalised 1:1 Support for the MSc EM Cohort: Tailored guidance is provided to MSc EM students to address their specific career goals in engineering management. This includes career coaching to explore roles such as project managers, supply chain managers, or operations directors, ensuring alignment with their aspirations and the skills gained during the programme.

Employer Engagement, Vacancy Sourcing, and Advocacy: Employability services collaborate with industry partners to connect MSc EM students with job opportunities, internships, and placements that match their skills in engineering management. The emphasis on industry engagement aligns with the programme's practical focus, including real-world projects and placements.

Workshops with Industry Experts: Guest speakers and panels featuring professionals from engineering and management sectors provide MSc EM students with insights into industry trends, emerging technologies, and global challenges. This complements the programme's integration of industry practices and prepares students for leadership roles.

Career Fairs and Networking Events: MSc EM students can network with employers from sectors such as construction, manufacturing, renewable energy, and technology. These events align with the programme's focus on preparing graduates for diverse roles in global markets.

Access to an Online Careers Portal: MSc EM students can access job postings, employer profiles, and sector-specific resources tailored to engineering management. The portal also offers tools to prepare for job applications and track employment opportunities globally.

Through these initiatives, Employability services support MSc Engineering Management students in translating their advanced knowledge, technical expertise and practical experience into rewarding careers. This integrated approach ensures that graduates are confident, industry-ready, and equipped to take on leadership roles in engineering management worldwide

**13c Placement and work experience opportunities (if applicable)**

N/A

**13d Future careers / progression**

Graduates of the MSc Engineering Management programme are well-prepared to excel in a variety of engineering leadership roles, thanks to a curriculum designed to bridge advanced technical knowledge with essential management skills. The programme's modules, including Financial Management in Engineering, Human Resource Management in Engineering, Engineering Simulation, Logistics and Supply Chains, and Engineering Project

Management, are tailored to provide students with the tools to navigate both the technical and strategic challenges faced by modern engineering organizations. These areas of focus ensure that graduates can lead projects, manage teams, and contribute to innovation while considering sustainability and ethical practices in their decision-making processes.
Alumni from the programme have built successful careers in industries such as construction, renewable energy, manufacturing, and technology, stepping into roles like engineering project managers, supply chain managers, and operations directors. The in-depth study of financial management and human resource strategies equips graduates to make informed, effective decisions, while the Engineering Simulation module empowers them with the ability to apply modeling and simulation techniques to improve engineering systems. Additionally, the Logistics and Supply Chains module ensures students are capable of optimizing material flow, production, and distribution within complex systems.
The Engineering Project Management module prepares students to manage the lifecycle of projects, from initial planning and budgeting to execution and delivery. This emphasis on project management, combined with hands-on experience through real-world industry projects, enables graduates to navigate the complexities of large-scale engineering projects with confidence.
An added advantage of the MSc Engineering Management programme is its accreditation by the Institution of Engineering Designers (IED). This accreditation sets a clear path for students to pursue Chartered Engineer (CEng) status, enhancing their career prospects and affirming their commitment to high engineering standards. This distinction, paired with the programme's focus on leadership and problem-solving, ensures that graduates are not only prepared for immediate career success but also positioned as future leaders in the engineering field.
In addition to these career-ready skills, the programme's integration with the university's Careers and Employability Service ensures that graduates have the continued support they need to stay competitive in a rapidly evolving job market. This ongoing guidance helps alumni remain at the forefront of engineering innovation, whether they enter the workforce directly or pursue further academic opportunities in emerging fields such as smart technologies and sustainable engineering practices.

## 14. Assessment methods

Students' knowledge and understanding is assessed by project work, hands-on-tasks, coursework, presentations and the group project report. Formative threshold tests will be used to assess competence in stage techniques on a pass/fail basis with opportunity to retake at any time before the end of the module.

Students' skills are assessed by coursework comprising of individual mini-projects, assignments, group and individual presentations and team projects.

## 15. Programme Structure (level of study, modules, credits and progression requirements)

Structure is indicative for Part-time routes.

Students must take all of the compulsory modules and choose following programme requirements from the optional modules.

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| Non-compensatable modules are noted below. |

| **Available Pathways** |
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| Not Applicable |

**Year 1**

**Year 1 Level 7 FT and PT**

| Code | Type | Module Title | Credits at FHEQ Level |
|---|---|---|---|
| PDE4232 | Compulsory | Financial Management in Engineering 2025-26 | 15 at Level 7 |
| PDE4911 | Compulsory | Engineering Project Management 2025-26 | 30 at Level 7 |
| PDE4241 | Compulsory | Engineering Management Group Project 2025-26 | 60 at Level 7 |
| PDE4233 | Compulsory | Human Resource Management in Engineering 2025-26 | 15 at Level 7 |
| PDE4910 | Compulsory | Logistics and Supply Chains 2025-26 | 30 at Level 7 |
| PDE4905 | Compulsory | Engineering Simulation 2025-26 | 30 at Level 7 |

**Year 2**

**Year 2 Level 7 PT**

| Code | Type | Module Title | Credits at FHEQ Level |
|---|---|---|---|
| PDE4910 | Compulsory | Logistics and Supply Chains 2026-27 | 30 at Level 7 |
| PDE4905 | Compulsory | Engineering Simulation 2026-27 | 30 at Level 7 |
| PDE4241 | Compulsory | Engineering Management Group Project 2026-27 | 60 at Level 7 |

*Please refer to your programme page on the website re availability of option modules

| **16. Programme-specific support for learning** |
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| Meeting the learning outcomes of this programme requires active participation in the subject and the development of autonomous practice in meeting objectives. Supporting this level of active participation and autonomous practice is achieved via regular weekly tutorial contact with academic staff, productive and informed support from technical staff and the use of online, resource-based learning materials where appropriate. The subject provides extensive facilities where students can engage with their coursework assignments in a supported and productive environment. |

| **17. HECos code(s)** | 100089: Management Studies |
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| 17. HECos code(s) | 100184: General Or Integrated Engineering |
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| 18. Relevant QAA subject benchmark(s) | |
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| 19. University Regulations |
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| This programme will run in line with general University Regulations: Policies \| Middlesex University<br><br>This programme will run in line with general University Regulations:<br>Middlesex University regulations |

| 20. Reference points |
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| • QAA Engineering subject benchmark statement (2019)<br>• QAA Business and Management benchmark statement (2015)<br>• QAA Master's Degree Characteristics Statement (2020)<br>• QAA Framework for Higher Education Qualifications in England, Wales and Northern Ireland<br>• Middlesex University Regulations<br>• Middlesex University Learning and Quality Enhancement Handbook<br>• Chartered Engineer and Incorporated Engineer Standard, Engineering Council UK, 2020 • UK Standard for Professional Engineering Competence;<br>• The Accreditation of Higher Education Programmes, Engineering Council UK, 2020;<br>• IED Engineering Design Specific Learning Outcomes for EC(UK)Accredited Degree Programmes. |

| 21. Other information *(if applicable)* |
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Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve if they take full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the rest of your programme handbook and the university regulations.

**Curriculum map for MSc Engineering Management / MSc Engineering Management with Professional Placement (15 months) / MSc Engineering Management with Professional Placement (24 months)**
Programme Learning Outcomes

## Knowledge and Understanding

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| A1 | Application of a comprehensive knowledge of relevant subject principles (engineering, statistics, mathematics, management) to the solution of complex problems in engineering management. |
| A2 | Formulation and critical analysis complex engineering management systems leading to conclusions and recommendations. |
| A3 | Design of solutions for complex problems that demonstrate some originality to address stakeholder needs (user, business, societal, environmental, cultural, diversity, inclusion, etc.), as well as complying with constraints such as commercial, legal, professional and industry standards. |

## Skills

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| B1 | Select and apply computational and analytical techniques to model complex problems related to engineering management. |
| B2 | Carry out technical literature reviews and critically evaluation of these to solve complex problems related to the programme. |
| B3 | Evaluate the business, environmental and societal impact of solutions to complex problems and the management of their impact by considering using Product Lifecycle Management approaches, including Product Data management and Application Lifecyle Management. |
| B4 | Work effectively as a reflective practitioner as a member of a team as well as an individual and assess own and team performance. |
| B5 | Communicate complex technical and academic content effectively in both oral and written forms to a technical and non-technical audience. |

***Programme learning outcomes -*** *Highest level achieved by graduates*

| A1 | A2 | A3 | B1 | B2 | B3 | B4 | B5 |
|---|---|---|---|---|---|---|---|
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

**Mapping by level of study and module**

| **Module Title** | **Module Code by Level of study** | A 1 | A 2 | A 3 | B 1 | B 2 | B 3 | B 4 | B 5 |
|---|---|---|---|---|---|---|---|---|---|
| **Level of study (year)** | | | | | | | | | |
| Financial Management in Engineering | PDE4232 | | | | | | X | X | |
| Human Resource Management in Engineering | PDE4233 | | | X | X | X | X | X | |
| Engineering Simulation | PDE4905 | X | X | X | X | X | | X | X |
| Logistics and Supply Chains | PDE4910 | X | | X | X | X | X | X | |
| Engineering Project Management | PDE4911 | X | X | X | X | X | X | X | |
| Engineering Management Group Project | PDE4241 | X | X | X | | | X | X | X |