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Masters of science in engineering management

Skip to main content This degree combines management skills with advanced engineering technical knowledge and includes courses in business, law, cybersecurity, communications and more The UCLA online engineering graduate program is the best in the nation according to U.S. News & World Report Take classes 100% online, asynchronously in a part-time format designed for working professionals Start in either the fall or spring quarter Finish in just over two years on a part-time schedule Next Start Date Deadline Apply Now To learn more about the Online Master of Science in Engineering with Certificate of Specialization in Engineering Management, contact an enrollment specialist at (424) 443-7385 or fill out the form to download a free brochure. Businesses are evolving to meet new challenges such as accessible and affordable health care, quality education, responsible artificial intelligence and a sustainable environment. These organizations are recruiting engineering managers who meld technical capabilities with business acumen and who show a commitment to improving the quality of people's lives. No. 1 Best Online Master's in Engineering Programs— U.S. News & World Report No. 1 Public University— U.S. News & World Report No. 3 Best Colleges for Veterans— U.S. News & World Report This field focuses on best practices for applying organizational leadership processes and techniques to technology and systems projects. An engineering management degree prepares leaders for the responsibilities involved in planning, budgeting, supervising teams, scheduling, communication and maintaining safe conditions. See the curriculum page for more details about the specific knowledge and skills you can develop in our program. This degree offers fully online courses that can be accessed asynchronously from anywhere in the world. Students are required to meet regular deadlines for submitting assignments. For exams, MSOL students can take their exams anywhere in the world over a period of two days, but these exams must be completed in person. Students can either come to the UCLA campus during the official exam time or complete their exams at a local test center. Online application Official copies of transcripts from all previously attended colleges or universities Résumé Three professional or academic letters of recommendation Statement of purpose Personal statement GRE general score* TOEFL/IELTS test scores (international students only) Application fee** $135 for U.S. citizens and permanent residents/$155 all other applicants** *The GRE requirement may be waived for applicants who have highly competitive holistic portfolios, and such requests will be reviewed on a case-by-case basis. Contact an enrollment specialist for more information. **Application fee waivers are available for applicants who are current or former participants in certain programs or who demonstrate financial need. Contact an enrollment specialist for more information. Review our admissions page for more detailed information. The MSOL: ENGR MGMT program develops technical leadership skills that are in demand at innovative organizations in a variety of industries, including manufacturing, aerospace, chemical engineering and software development. Organizations depend on engineering managers to deliver projects that fulfill specifications at various scales while staying within budget and on schedule. Visit our FAQ page for more answers The online Master of Science in Engineering with Certificate of Specialization in Engineering Management (MSOL: ENGR MGMT) delivers UCLA's top-ranked graduate education in a flexible format designed for those working full time. By completing this UCLA online master's in engineering degree program with a built-in engineering management certificate, you will: Complete a rigorous curriculum that deepens the broad range of skills needed to excel as a leader in your organization, preparing you to apply technological solutions to global challenges and make thoughtful decisions with equity and diversity in mind Gain knowledge in business management and develop skills to effectively communicate with stakeholders by taking courses in areas such as business analytics, financial management and quality engineering Earn a coveted master's degree at the No. 1-ranked public university, learning from renowned multidisciplinary faculty members and industry experts Advance your career with an online degree program designed to support a diverse community and provide the same high-quality teaching and content as those offered through on-campus programs at UCLA Discover the curriculum This is a degree for the long term. Not only do students add relevant practical skills they can use at their current organizations, but they also develop their abilities as lifelong learners. They understand how to be strategic problem solvers who can identify new opportunities and stay innovative throughout their management careers. In a rapidly evolving technological landscape, leaders who are able to adapt will be the ones who will thrive. Thus, we are committed to expanding networking opportunities with thought leaders from top-notch technical organizations. The engineering management degree features a unique cross-campus collaboration where students learn from expert faculty in the UCLA Samueli School of Engineering as well as from other departments across the university.Meet our faculty "As organizations confront a constantly changing and ever-complex 21st-century business environment, we are seeing a fundamental shift in approaches toward leadership. Leaders now need to be effective within and across organizations, time zones, industries and across cultures." — Robert McCann, engineering management area director and an adjunct professor of management and operations MSOL: ENGR MGMT students have the opportunity to build an inclusive network. Upon graduating from the master's program, our students join a loyal alumni network that includes 42,000 engineering graduates and nearly 400,000 Bruins overall. Online students can also join affinity organizations such as the National Society of Black Engineers, Queer and Trans in STEM, the Society of Latinx Engineers and Scientists and the Society of Women Engineers. This degree is designed for those who are eager to take on more responsibility in their roles and want to have a greater impact on their organization. They are problem-solvers who are open to addressing challenges through collaborative, interdisciplinary approaches. The top industries seeking professionals with engineering management skills include: Manufacturing Professional, scientific and technical services Administrative and support Waste management and remediation services Information Finance and insurance Retail trade Wholesale trade Health care and social assistance Construction Accommodation and food services Explore our careers page for more information on potential career opportunities with a degree in engineering management. The MSEM programme equips leaders with engineering and management skills to drive innovation and manage complex projects with confidence. Perfect for aspiring leaders in technology. Why Choose Our Programme?Innovative Curriculum: Our cutting-edge curriculum combines advanced engineering principles with essential management strategies. You'll learn from industry experts and gain hands-on experience through real-world projects.Leadership Development: We focus on developing your leadership potential. You'll master the art of decision-making, strategic planning, and team management, preparing you to take on leadership roles in any engineering field.Professional Network: In today's interconnected world, being able to tap into a strong engineering professional network is crucial for career opportunities and success. Be connected to NTU's pool of engineering and business alumni and carve out a competitive edge for yourselves in expanding your professional network.Career Advancement: With a broadened skillset, graduates of our programme are highly sought after by top employers. You'll be equipped with the skills to excel in roles such as Engineering Manager, Project Manager, Data Analyst, Product Manager, Technology Analyst, and more. The admissions requirements for the MSEM are as follows:Eligibility: A Bachelor's degree with honours or its equivalent in Engineering, Science, Management, Economics or related discipline from an institution of recognised standing. This is a minimum requirement which does not guarantee admission; selection is on a competitive basis.English Requirement: TOEFL (internet-based test)> 85 or IELTS (academic)> 6.0 is required if your first language is not English. Applicants may be waived from this requirement if the applicant has completed the first degree taught entirely in English, situated in an English-speaking country, for example (non-exhaustive list) Australia, Canada, Hong Kong, India, New Zealand, Philippines, Singapore, United Kingdom, USA.The TOEFL/IELTS result is only valid for 2 years after the test and should be valid at the beginning of the application period.Work Experience: Candidates opting for the programme on part-time basis should preferably have 1 to 3 years of work experience after their first degree. Programme TitleMaster of Science in Engineering Management – MSc in Engineering ManagementPeriod of Candidature• Full Time: minimum 1 year, maximum 2 years• Part Time: minimum 1.5 year, maximum 3 years12 Courses (7 Core Courses, 2 Elective SpecialisationCourses, and 1 Capstone Course)Total AU Requirement 30 AUsFunding Self-funded Programme (Non-subsidised) Academic Unit Structure and RequirementEach 3-AUs course in the MSEM programme is of 39 hours in duration, which includes 30 hours face-to-face teaching and 9 hours online self-paced learning. Each 1.5-AUs course is of 19.5 hours in duration, which includes 15 hours face-to-face teaching and 4.5 hours online self-paced learning. The Capstone course is a 6-month project with 3 AUs and it is compulsory component of the MSEM programme.Core Courses (Complete all 7 courses)A.U.Strategic Management in Technology-based Organisations1.5Economic Analysis of Engineering Projects3.0Fundamentals of Engineering Management3.0Leadership and Management for Engineers1.5Law for Engineers1.5Design and System Thinking3.0Lab to Market: Technology Commercialisation1.5Sub-Total15Specialisation(Choose One)CoursesA.U. Managerial Analyticsand AIData Science and Analytics for Business Intelligence3Supply Chain Management and Analytics3Operations Management and Analytics3Marketing Analytics3 Project and Supply Chain ManagementFundamentals of Project Management3Project Budget and Cost Management 3Corporate Resource Planning and Operation Management3Supply Chain and Logistics Management3Subtotal12Capstone (Compulsory) A.U.Collaborative Engineering Project 3 Sub-Total3Industry Treks A.U.Industry Treks to leading engineering and technology local companiesNILTotal AU to graduate with MSc in Engineering Management30As per the guideline, a minimum of 12AU of the specialisation courses are required for the specialisation to be printed on transcript. The specialisations offered in the MSEM programme meet the criteria and hence specialisations shall to be shown on transcript.To graduate from the MSEM, students are required to achieve a minimum CGPA of 2.50.The courses in the Project Management specialisation and Supply Chain Engineering specialisations of the MSEM are existing courses in the MSc in Project Management and MSc in Supply Chain Engineering programmes offered by MAE. MSEM students who choose these specialisations will sit with MAE students in the same classes of MSc in Project Management and MSc in Supply Chain Engineering.While the specialisations in MSEM might overlap with existing specialised programmes like the MSc in Project Management and MSc in Supply Chain Engineering programmes, the MSEM programme is clearly differentiated and serves complementary roles in the University's portfolio of PGCs.Distinct Audience and Career Goals: the MSEM equips students with a broad skill set to transition into managerial roles within engineering context. In contrast, the specialised MSc programmes prepare individuals seeking to deepen their expertise in specific fields.Curriculum Focus and Depth: The specialisations within the MSEM programme offer a broad overview of each area (e.g., Project Management, Supply Chain Engineering) as part of a wider engineering management education. In contrast, the specialised MSc programmes offer a deep dive into their respective fields, covering advanced topics, methodologies, and practices.Complementary rather than Competitive: The MSEM programme and the specialised MSc programmes serve complementary roles in the university's portfolio. While there may be some overlap in content, the depth, focus, and target audience of each programme are distinct, minimising the risk of cannibalization while meeting diverse market needs. Business/Technical Data AnalystProduct ManagerProject ManagerOperations and Supply Chain ManagerTechnology Analyst and ConsultantTechnology Commercialization or Technical Sales Manager Are you currently working in the engineering field and want to advance your career? Drexel University's Master's in Engineering Management online program is a perfect fit for an ambitious engineering professional like you. The convenient online format allows you to continue working full time while earning your degree. On top of that, you may take advantage of the many added benefits Drexel's College of Engineering provides – from its network of industry-experienced faculty, to its challenging and revamped curriculum, to its status as a Certified Graduate Program by the American Society of Engineering Management (ASEM). Equally important, as a graduate of this first-of-its-kind program, you will automatically qualify for the Certified Associate in Engineering Management (CAEM) without having to take the exam. Wondering whether you should get a masters in engineering management or an MBA? Read on to learn more about the differences between an MEM and MBA with Drexel Online. MS in Engineering Management Program Features When it comes to both higher education and engineering, longevity goes a long way. In 1959, Drexel was the very first institution in the country to launch a graduate engineering management degree. Since then, this well-established program has branched out into the online space, making its celebrated faculty and market-responsive curriculum available to a global audience of engineers and managers. In addition to being the oldest program of its kind, Drexel's Master's of Engineering Management boasts the following benefits to working engineering professionals: Experienced faculty comprised of successful professionals in the field Customizable curriculum that allows you to take electives from any engineering discipline Highly interactive online learning environment, designed to challenge and engage, while remaining convenient for working professionals Dual degree options and related certificates that enable you to earn two College of Engineering Master's degrees in fewer credits than if you earned the degrees separately Engineering Management (ASEM) which allows graduates of the program to automatically qualify for the Certified Associate in Engineering Management (CAEM) without having to take the exam Archived Webinar Online Open House: Engineering Management & Systems Engineering What is Engineering Management? The field of engineering management is ever-evolving. In today's engineering world, managers must have the right combination of leadership skills and practical engineering knowledge to make an impact in the field, both now and in the future. In addition to spearheading projects and supervising groups of fellow engineers, managers must be prepared to face everyday challenges with a well-rounded, foundational understanding of engineering, quantitative analysis, economics, and financial management. Earning a Master's in Engineering Management degree that covers all of these bases can help catapult you on to the next step in your career. How Do You Get a Master's Degree in Engineering Management? Engineers who want to utilize their technical skills while moving into a leadership position are prime candidates for the MS in Engineering Management. In order to be considered for the program, you should have earned a four-year bachelor's degree in engineering or sciences, preferably from an ABET accredited institution or equivalent. Additionally, relevant professional work experience is strongly recommended. When you enroll in the Master's in Engineering Management program, you must complete a total of 45 credits over the span of four 10-week quarters per year, including core coursework in four industry-specific areas, as well as an engineering management capstone and five electives. The Program Director will review any transfer credits up to 15 quarter credits from institutions you previously attended. What Can I Do with a Master's in Engineering Management? Drexel's Master's in Engineering Management is more than just a degree. It empowers you to advance into senior engineering positions such as consultant, manager, analyst, and entrepreneur. Drexel's veteran faculty will expose you to coursework in a plethora of fields, including: economics, financial management, strategy, engineering law, ethical issues, green engineering, sustainability, project management, quantitative analysis, R&D management, systems engineering and systems thinking, technology marketing, and business development. What Salary Will I Earn with a Master's in Engineering Management? The latest salary expectations for graduates of Drexel's Master's of Engineering Management range from $76,000-$135,000. Now is an exciting time to advance in the engineering field, as the Bureau of Labor and Statistics projects a 6% industry increase in career outlook by 2026.* Architectural and Engineering Manager Chemical Processes Engineer *Data from Wanted Analytics, Occupational Search, 2018 Related Program Graduate Certificate in Engineering Management Graduate Minors Interested in specializing in a particular engineering-related discipline? Drexel has a number of Graduate Minors that can be taken online along with your Master's degree. Drexel University offers a variety of Graduate Minors that can be added to any master's degree program.State restrictions may apply to some programs. This program is organized into four 10-week quarters per year (as opposed to the traditional two semester system) which means you can take more courses in a shorter time period. One semester credit is equivalent to 1.5 quarter credits. You can transfer up to 15 quarter credits from your institution, pending review from the Program Director. EGMT 501 Leading and Managing Technical Workers 3.0 EGMT 502 Analysis and Decision Methods for Technical Managers 3.0 EGMT 504 Design Thinking for Engineering Communications 3.0 EGMT 581 Human Relations and Organizational Behavior 3.0 EGMT 571 Engineering Statistics 3.0 EGMT 572 Statistical Data Analysis * 3.0 EGMT 573 Operations Research 3.0 EGMT 531 Engineering Economic Evaluation & Analysis 3.0 EGMT 535 Financial Management 3.0 EGMT 692 Engineering Management Capstone 3.0 Advanced Financial Management for Engineers Systems Thinking for Leaders Marketing: Identifying Customer Needs New Product Conceptualization, Justification, and Implementation Value Creation through New Product Development Sustainable Business Practices for Engineers Engineering Project Management Project Planning, Scheduling, and Control Global Engineering Project Management Visual System Mapping Systems Engineering Management Systems Engineering Analysis Modeling, Simulation and Other Tools Ethics & Business Practices for Engineers Engineering Law Systems Engineering Process Systems Engineering Tools Global Sustainment and Integrated Logistics Integrated Risk Management Engineering Supply Chain Systems Systems Reliability Engineering Systems Reliability, Availability, & Maintainability Analysis Statistical Modeling & Experimental Design Systems Engineering Design Systems Architecture Development Software Systems Engineering Systems Integration and Test Total Credits 45.0 *EGMT 572 Statistical Data Analysis requires as a prerequisite EGMT 571 Managerial Statistics or approval from the program administration to complete a waiver and request to take then pass the STAT Placement Exam in place of EGMT 571. If approved for the waiver of EGMT 571, you will be eligible to complete an upper level course substitution to satisfy the degree requirements. **You may also select electives from other disciplines outside of Engineering Management with prior approval from your advisor. View Course Descriptions A four-year bachelor's degree in engineering or sciences, preferably from an ABET accredited institution or equivalent Cumulative undergraduate GPA of 3.0 or above Relevant professional work experience is strongly recommended Strong applicants not meeting all of the above requirements will be considered on a case-by-case basis With multiple ways to submit documents, Drexel makes it easy to complete your application. Learn more by visiting our Completing Your Application Guide. A completed application Official transcripts from all universities or colleges and other post-secondary educational institutions (including trade schools) attended Two letters of recommendation (at least one professional) In an essay of 500-750 words, please answer the following questions: Why do you wish to pursue the MS in Engineering Management? Why do you believe you will succeed in the program? Resume Additional requirements for International Students Transfer Credits You may transfer up to 15 quarter credits from an accredited institution, regardless of whether you completed a master's degree. Transfer credit decisions are made on a case-by-case basis. Please contact the Engineering Management program at 215.895.2354 for more information. For the academic year 2024-2025, students enrolled in an online graduate academic program will be charged a graduate online program fee of $125 per year. This program is eligible for Financial Aid. Special tuition rates available for Drexel University Alumni, Military members, and members of our Partner Organizations These rates apply only to new online students and students being readmitted. Tuition rates are subject to increase with the start of each academic year in the fall term. All students must contact applyDUonline@drexel.edu within the first two weeks of the term to request tuition savings for which they qualify. Special rates cannot be combined. If you qualify for more than one special rate, you'll be given the one with the largest savings. When receiving special tuition plans with Drexel University Online, you may not combine them with other tuition benefits that may be available from Drexel University. 2024-2025 Academic Year