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## Masters of engineering programs

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Here are the application deadlines: \* Early admission: March 1st for EU/EEA/Switzerland and non-EU/EEA citizens with a Norwegian national ID number \* Ordinary admission: April 15th for EU/EEA/Switzerland and non-EU/EEA citizens with a Norwegian national ID number Note that tuition fees vary depending on your country of origin, but students from the EU/EEA/EFTA pay only a semester fee. Innovative solutions in areas like green energy, machine design, and healthcare are crucial, requiring a multidisciplinary approach. This programme combines physics and mathematics to develop expertise in mechanics, thermodynamics, materials science, and more. The nine-course programme includes seven compulsory and two elective courses, with a 30-credit master's thesis. Students will engage in lectures, practical work, projects, presentations, and team-based activities. Upon completion, they can pursue careers as designer and analyst in solid or fluid mechanics, mechatronics, or robotics, as well as consultant roles in industry and government sectors. Engineers drive technological advancements and infrastructure development, shaping our daily lives. With their skills and experience, engineers are highly sought after and well-compensated. Early experiences with building and fixing things can lay the groundwork for a career in engineering, which offers a rewarding mix of science, creativity, and problem-solving. Getting a Master's Degree Can Be Key to Advancing in Engineering, but It Depends on Your Goals and Experience. A master's degree is usually necessary to move up in your chosen engineering field, but which type of degree you need depends on many factors, including your skills, experience, and what gets you excited about work. If computers are your thing, there are lots of computer-related master's degrees to choose from. If digging in the dirt is more your style, geological engineering might be the way to go. We've looked at 17 different types of master's degrees for engineers that could be a good fit for your talents. In this article, we'll explore what makes each one unique and which ones are right for you. One important thing to consider before looking into individual master's programs is the difference between a Master of Science in Engineering (MSE) and a Master of Engineering (MEng). Both degrees offer advanced training, but they approach engineering education from different angles. The MSE is more research-focused and can lead to further academic pursuits like a Ph.D., while the MEng is more practical and prepares students for professional employment with skills that are highly valued in industry. Aerospace engineers holding a master's degree can expect an average annual income ranging from \$134,600 to \$143,000, as reported by [Salary.com](#). Advanced degrees can be beneficial in securing higher-paid management and leadership roles within the industry. In contrast, agricultural and biological engineers focus on the natural world, utilizing engineering methods to improve environmental resources such as food, water, and air. This field offers a vibrant career path with critical importance in providing safe living conditions for the planet. Professionals in this area may work for corporations, think tanks, or governmental agencies, devising processes to enhance power supplies, machinery efficiency, and address pollution and environmental issues. Master's degrees in agricultural and biological engineering are available at major research universities across the US, and while a bachelor's degree is often sufficient for entry-level positions, pursuing a master's can lead to career advancement or research opportunities. Biomedical engineers combine biology and engineering principles to design medical equipment, devices, and software. This field offers a rewarding career choice for those with a benevolent spirit, with diverse workplaces including medical equipment manufacturers, research labs, and hospitals. Specializations within biomedical engineering include computer systems, genetics, and rehabilitation, with practical applications found in artificial limbs and medical equipment. In chemical engineering, professionals combine chemistry and engineering to design solutions for energy, food, and product manufacture, often focusing on environmental concerns. Chemical engineers work in various settings, including chemical plants, laboratories, and governmental research centers, earning a median income of \$108,540. While a master's degree may not be necessary, it can provide greater responsibilities and access to research and teaching opportunities. With approximately 1,700 chemical engineering master's degrees awarded annually, compared to around 32,000 chemical engineering jobs in the US, having an advanced degree can be beneficial in securing desirable positions within the industry. Civil Engineering Careers: A Look into Master's Degrees Are you fascinated by the world of civil engineering? You may have a natural talent for designing and building infrastructure projects. With various roles available in planning, design, construction, research, and education, civil engineering is a popular field that offers jobs in local, regional, and national levels. According to the BLS, civil engineers work on air, water, and sewage systems, as well as roads, bridges, buildings, and airports. However, the role comes with regulations and paperwork due to structural and environmental concerns. Pursuing a master's degree in civil engineering can be a great career move, especially for those looking to advance into management roles or separate themselves from the competition. With a high median annual income of \$119,560 as of May 2020, computer engineering is one of the highest-paid fields. Computer Science: A Growing Field Computer science engineers are experts in making computers work efficiently and effectively. They design programs to process data through complex algorithms looking for commonalities and differences in decision-making. With its wide range of applications in manufacturing and financial services, as well as emerging areas like robotics and retail services, computer science is a growing field with outstanding prospects for growth and upward career movement. Master's degrees in computer science provide advanced theory in computer languages, software development, and cybersecurity. Cyber-physical Systems: A New Frontier Cyber-physical systems (CPS) engineering is a relatively new field that combines physical and computational elements to create intelligent systems. With the increasing demand for CPS, this field offers exciting opportunities for those looking to innovate and advance their careers. Field of Cyber-Physical Systems (CPS) is emerging as an interdisciplinary area which leverages Internet of Things (IoT) and industrial internet (II) to design interconnected devices and systems in manufacturing, computer technology, and various sectors. These systems utilize networks to integrate with critical infrastructures, home utilities, appliances, robots, autonomous vehicles, environmental sensor networks, traffic control, and smart toys. Materials engineers study properties and structures of various substances to create new materials meeting specific requirements. They focus on metals, ceramics, plastics, composites, nanomaterials, and other substances to develop innovative materials for applications like computer semiconductors, carbon fiber reinforced plastics, ion batteries, and nanotechnology. Education plays a significant role in solving complex problems related to product design and manufacturing, impacting software engineers and systems engineers equally. Software engineers develop programs for everyday use or advanced tasks, while systems engineers manage the overall system, including hardware and software. To work as a software engineer, a bachelor's degree is required, but a master's may increase pay by over \$20,000 annually and open up new opportunities. Systems engineering involves designing, managing, and operating complex systems, which can include computer hardware and software. A master's in systems engineering can help specialize in areas like control, cognitive systems, or safety engineering. Textile engineers work with polymers, fibers, and textiles to improve their quality and efficiency in manufacturing. They are highly specialized and use chemistry, industrial design, computer science, and molecular synthesis. A master's program in textile engineering can lead to research, teaching, or government roles. Ultimately, the right master's degree in engineering depends on individual aptitude for science and mathematics, as well as a passion for solving complex problems. Many fields overlap, providing flexibility for taking on various roles in technology-related industries or scientific specialties. To maximize career advancement and salary potential in engineering, consider pursuing advanced degrees like bachelor's and master's programs that enable simultaneous BS and MS earning. Ultimately, goals dictate whether a master's is necessary for research or management positions. Some high-tech fields require only a master's degree for success. Engineers drive technological progress and are well-compensated for their skills. Their impact on society earns them top-tier jobs in private companies and government agencies. Early childhood experiences with building and tinkering lay groundwork for future careers. Formal education builds upon these foundations, with undergraduate programs introducing advanced concepts. Many engineers require a master's degree to advance, depending on individual circumstances. A range of computer-related and other specialized degrees are available for those interested. Geological engineering may be a good fit for those who enjoy hands-on work. A survey of 17 engineering master's degrees will discuss program differences and help determine the best fit. Higher-paying management jobs often favor technical specializations offered by Master of Engineering (MEng) degrees over research-oriented Master of Science in Engineering (MSE). MEng programs focus on practical applications, providing advanced training for professional employment. Most MEng programs conclude with a practical project, taking around one to two years to complete. MEng graduates typically join or continue in the workforce, seeking management positions or increased earning potential. In contrast, Master's degrees in aerospace, agricultural and biological engineering, and biomedical engineering offer varying career paths. Aerospace engineers design and operate aircraft, missiles, and space vehicles, with median annual salaries ranging from \$118,610 to \$143,000. Biomedical engineers combine biology and engineering to create medical equipment, devices, and software, working to improve healthcare. Agricultural and biological engineers work in the natural world, using engineering methods to study and improve environmental resources, including food, water, and air. Master's degrees in this field can lead to management-level positions or research opportunities, with median annual salaries around \$90,000. These programs cater to different interests and career goals, providing advanced training for professional employment. The biomedical engineering field combines medical expertise with technological innovation to create artificial limbs, medical equipment, and biomedical waste management solutions. Professionals can specialize in computer systems, genetics, biochemical engineering, or rehabilitation. A master's degree can lead to greater responsibilities and opportunities in research, teaching, or medical science careers. Chemical engineers merge chemistry and engineering to design solutions for energy, food, drugs, and consumer products. They work at chemical plants, laboratories, manufacturing facilities, governmental research centers, and energy companies. With a median income of \$108,540, according to the Bureau of Labor Statistics (BLS), they are among the highest-paid engineering disciplines. The need for a master's degree in chemical engineering is uncertain. The BLS reports that there are approximately 32,000 chemical engineering jobs in the US, while American universities award about 1,700 master's degrees annually. It appears that many good jobs may be available to those holding master's degrees. Civil engineers design and build infrastructure projects and systems in public and private sectors. Their work includes planning, designing, constructing, researching, and educating on various systems such as airports, bridges, buildings, dams, roads, tunnels, water supply, and sewage treatment. The role is highly involved in architecture, construction, and systems design at local, regional, and national levels. A master's degree in civil engineering can be beneficial for those looking to pursue engineering management roles or separate themselves from the competition. Computer engineering is one of the highest paying fields with a median annual income of \$119,560 as of May 2020. It's a growing field with opportunities for management-level jobs and research. A master's degree in computer engineering can be beneficial for those looking to advance their careers or get involved in research. Engineering Disciplines Offer Competitive Salaries and Job Opportunities According to the BLS, engineering disciplines offer a median income of \$100,830. Advancement into management roles at larger corporations is competitive, with a graduate degree always being noteworthy on an engineer's resume. Environmental Engineers Can Make a Difference Those passionate about environmental issues can find fulfillment in this field. It combines engineering principles with sciences like biology and chemistry to develop new systems for waste disposal and pollution management. Government agencies and energy companies are increasingly hiring environmental engineers due to growing concerns about climate change and contaminated landscapes. A Master's Degree Can Boost Career Advancement For those seeking management roles, research, or teaching opportunities, an advanced degree in environmental science can be beneficial. Geological and Mining Engineers Extract Resources Efficiently Geological and mining engineering is a niche field that requires efficiency and safety when extracting metals, oil, and coal from the ground. Only a few schools offer master's degrees in this area, often with related degrees like civil or environmental engineering being acceptable for entry-level positions. Materials Science Creates New Materials The study of materials science involves understanding the properties and structures of various substances to create new materials meeting specific requirements. Examples include computer semiconductors, carbon fiber reinforced plastics, ion batteries, and nanotechnology. While not always a requirement, higher education can significantly boost a materials engineer's resume. Mechanical Engineers Design and Develop Mechanical engineers work with mechanical systems, including cell phones, cars, refrigerators, and computers. It is one of the most popular engineering specializations due to its portability and wide range of applications. Network Engineers Design Computer Systems Network engineers connect computers to ensure smooth operations and are highly paid with median salaries reaching \$121,730 annually. Product design and manufacture engineering involves using CAD design and robotics to accelerate innovations, with additive manufacturing being a growing area. Software engineers develop programs for everyday use and specialty systems, often working with network engineers. To advance in software engineering, a master's degree can increase pay by over \$20,000 annually and provide opportunities to become a Chief Technology Officer or Cyber Security Manager. Systems engineering is a methodical approach for designing and managing systems, which can include computer hardware and software. Systems engineers work in various industries, including manufacturing, technology, and transportation. A master's degree in systems engineering can help specialize in areas like control, cognitive systems, safety, or reliability management. Textile engineering is a specialized field that involves working with polymers, fibers, and textiles to enhance their quality and efficiency during production. It's an extension of mechanical engineering, focusing on the manipulation of fibers, yarns, fabrics, and finishes. Textile engineers combine knowledge from chemistry, industrial design, computer science, and molecular synthesis to develop innovative materials. According to Career Trend, textile engineers can be found in various settings, including factories, design studios, chemical companies, and firms that produce biomedical materials, composites, or sports textiles. Some may spend their careers researching complex materials in laboratories. Pursuing a master's degree in textile engineering can lead to research or teaching positions at the government level. If you have a strong aptitude for science and mathematics and enjoy solving complex problems, a career in engineering might be suitable. Most engineers start with a bachelor's program, which exposes them to various specialties, including textile engineering. However, many master's degrees in engineering offer flexibility in terms of roles and industries, making it essential to consider your goals before choosing a degree path. Ultimately, deciding between a bachelor's and a master's degree depends on your career aspirations. If you aim to advance into management positions or engage in research, obtaining a master's is beneficial. Additionally, some advanced technologies require a master's degree for proper training.