

T.I.M.E DD MSc Eng programmes at DTU - Red flags

DTU course catalogue; <https://kurser.dtu.dk/search>

MSc programme name	Link to prerequisites	Red flags/points of attention
Applied Chemistry	https://www.dtu.dk/english/education/graduate/msc-programmes/applied-chemistry/prerequisites	A strong and broad background in Chemistry ref to: DTU courses #26124, #26222 and #26411.
Architectural Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/architectural-engineering/prerequisites	A strong background in math and physics. See more at prerequisite site under “other nationals”.
Autonomous Systems	https://www.dtu.dk/english/education/graduate/msc-programmes/autonomous-systems/prerequisites	Good qualifications in basic mathematics and physics and programming. It is also important to have experience with theoretical and experimental work.
Bioinformatics and Systems Biology	https://www.dtu.dk/english/education/graduate/msc-programmes/bioinformatics-and-systems-biology/prerequisites	It is an advantage that students have a solid knowledge of basic molecular biology and some knowledge of basic programming. Competences corresponding to: <ul style="list-style-type: none"> • At least 5 ECTS points basic molecular biology - 27002 Life Science • At least 5 ECTS points basic programming - 02631 Introduction to programming and data processing
Biomaterial Engineering for Medicine	https://www.dtu.dk/english/education/graduate/msc-programmes/biomaterial-engineering-for-medicine/prerequisites	Bachelors with degrees in chemistry, molecular biology, biotechnology, bionanotechnology and similar may be admitted provided that student can document 5 ECTS point of courses at the BSc level in each of these five competence areas: <ul style="list-style-type: none"> • Mathematics • Statistics • Chemistry • Physical Chemistry • Life science of Biochemistry
Biomedical Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/biomedical-engineering/prerequisites	Credits in the following six subject areas is necessary. Additionally, the bachelor’s project must be within biomedical engineering. <ul style="list-style-type: none"> • 10 ECTS Mathematics for technical sciences • 10 ECTS Physics for technical sciences • 5 ECTS Chemistry • 10 ECTS Human physiology, anatomy, cell biology • 5 ECTS Programming • 5 ECTS Statistics
Biotechnology	https://www.dtu.dk/english/education/graduate/msc-programmes/biotechnology/prerequisites	A broad range of competencies within the biotechnological field as well as competencies

		within chemistry and physics. A high level of mathematical competencies is also needed.
Business Analytics	https://www.dtu.dk/english/education/graduate/msc-programmes/business-analytics/prerequisites	Qualifications in mathematics, operations research (e.g., 42101 at DTU), programming (02105 Algorithms and Data Structures 1 (2022/2023) (dtu.dk) and statistics is required.
Chemical and Biochemical Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/chemical-and-biochemical-engineering/prerequisites	A strong, working knowledge of mathematics and natural sciences is a prerequisite. See prerequisite site.
Civil Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/civil-engineering/prerequisites	The required bachelor-level background for admission into the program includes: (i) mathematics; (ii) statistics; (iii) physics; (iv) chemistry; (v) computer programming; (vi) computational mechanics techniques, e.g., the finite element method; (vii) mechanics of materials, e.g., stress, strain, elasticity, plasticity, strength; (viii) mechanics of structures, e.g., beam theory, plate theory, forces and moments in frames, support types and reactions; (ix) soil mechanics and geotechnics; and (x) construction materials, e.g., Portland cement concrete (essential), steel (essential), asphalt concrete, wood, aluminium, and glass.
Communication Technologies and Systems Design	https://www.dtu.dk/english/education/graduate/msc-programmes/communication-technologies-and-system-design/prerequisites	Please see prerequisite site.
Computer Science and Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/computer-science-and-engineering/prerequisites	<p>Solid skills in mathematics and thorough knowledge of software development, including:</p> <ul style="list-style-type: none"> • Knowledge of at least one programming language and of general programming paradigms • Knowledge of the use of basic data structures for effective realization of algorithms • Experience with development of small and medium-sized programs <p>The student is expected to be generally capable of studying and using new programming languages. Please see prerequisite site.</p>
Design and Innovation Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/design-and-innovation/prerequisites	<p>The academic requirements are (1) at least one, better two or more, design projects and (2) courses that provide the applicant with the knowledge and skills that are achieved during the completion of a BSc in Design & Innovation at DTU. As a minimum this includes the following competences:</p> <ul style="list-style-type: none"> • systematic design methods

		<ul style="list-style-type: none"> • accomplishment of a design or product development project • industrial design • socio-technical analysis and design demonstrating interaction with users • mechanics and materials • foundation in natural sciences, including mathematics, statistics, programming, physics, chemistry and biology. <p>Please see prerequisite site.</p>
Earth and Space Physics and Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/earth-and-space-physics-and-engineering/prerequisites	<p>Applicants should possess good qualifications in basic mathematics and physics, including electromagnetics, thermodynamics, astrophysics, geophysics, basic electric circuit theory, and mathematical and numerical methods.</p> <p>Please see more specific requirements at the prerequisite site!</p>
Electrical Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/electrical-engineering/prerequisites	<p>Good qualifications in basic mathematics and physics as well as in electrical, electronic and electromagnetic technology. It is recommended that applicants are acquainted with signal processing, programming and control. Experience with theoretical and experimental work is important.</p>
Engineering Acoustics	https://www.dtu.dk/english/education/graduate/msc-programmes/engineering-acoustics/prerequisites	<p>Please see prerequisite site.</p>
Engineering Lights	https://www.dtu.dk/english/education/graduate/msc-programmes/engineering-light/prerequisites	<p>The student must be able to document basic knowledge within optics and photonics corresponding to having completed the curriculum within one of the following DTU courses:</p> <p>34020 Optics and photonics and 34021 Introduction to optics and photonics.</p>
Engineering Physics	https://www.dtu.dk/english/education/graduate/msc-programmes/engineering-physics/prerequisites	<p>Please see prerequisite site.</p>
Environmental Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/environmental-engineering/prerequisites	<p>the applicant must either A) demonstrate strong skills in the field of environmental engineering equal to 45 ECTS (university level), for example environmental processes, environmental microbiology, resource engineering, hydraulics & hydrology, geochemistry, environmental chemistry, quantitative environmental management, water engineering, or B) in other ways demonstrate strong ability and potential to thrive in MSc Environmental Engineering studies.</p> <p>Please also see the prerequisite site.</p>
Food Technology	https://www.dtu.dk/english/education/graduate/msc-programmes/food-technology/prerequisites	<p>Please see prerequisite site.</p>

Human-Centered Artificial Intelligence	https://www.dtu.dk/english/education/graduate/msc-programmes/human-centered-artificial-intelligence/prerequisites	We expect applicants to document that they master <i>at least one programming language</i> , have <i>solid skills in engineering math</i> and a <i>strong interest in the technologies</i> underlying either web and social interaction, computer graphics, data science, machine learning or human-centred computing. Please also see prerequisite site.
Industrial Engineering and Management	https://www.dtu.dk/english/education/graduate/msc-programmes/industrial-engineering-and-management/prerequisites	5 ECTS in Operations Research, 5 ECTS in Economics, and 5 ECTS in Management/Project Management. Please also see the prerequisite site.
Materials and Manufacturing Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/materials-and-manufacturing-engineering/prerequisites	The academic requirement for the MSc Eng programme is a basic course corresponding to at least 5 ECTS in Materials Science and Technology, including metals, polymers and ceramics. Examples for courses from DTU, which fulfill this requirement, are listed below: 41659 Materials science for mechanical engineers, 41680 Introduction to advanced materials, 41681 Materials science, 41684 Materials technology.
Mathematical Modelling and Computation	https://www.dtu.dk/english/education/graduate/msc-programmes/mathematical-modelling-and-computation/prerequisites	Applicants must be able to document that they possess qualifications in mathematics, mathematical modelling, and scientific computing corresponding to at least 45 ECTS credits. Coursework in mathematics corresponding to at least 01005/01006/01016 <i>Advanced Engineering Mathematics 1</i> (20 ECTS) and 01035/01025/01034/01037 <i>Advanced Engineering Mathematics 2</i> (5 ECTS) is required. A strong working knowledge at the bachelor level of the following subjects is a prerequisite for the central courses of the MSc programme: please see prerequisite site.
Mechanical Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/mechanical-engineering/prerequisites	Please see prerequisite site under “other Nationals”
Ocean Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/ocean-engineering/prerequisites	The evaluation of applications emphasizes courses in chemistry, physics, mathematics, ecology and environmental engineering / sciences. It is recommended that the students use some of their electives to obtain knowledge related to some aspect of ocean sciences and technologies e.g., fisheries, marine ecosystems, offshore construction or oceanography.
Pharmaceutical Design and Engineering	https://www.dtu.dk/english/education/graduate/msc-programmes/pharmaceutical-design-and-engineering/prerequisites	The applicants should have a strong working knowledge of biological and chemical natural sciences as well as clear evidence of applied mathematics related skills (e.g. mathematics

		linked to engineering, biostatistics, physical chemistry etc.).
Sustainable Energy Systems	https://www.dtu.dk/english/education/graduate/msc-programmes/sustainable-energy-systems/prerequisites	Please see prerequisite site.
Sustainable Energy Technologies	https://www.dtu.dk/english/education/graduate/msc-programmes/sustainable-energy-technologies/prerequisites	Please see prerequisite site.
Sustainable Fisheries and Aquaculture	https://www.dtu.dk/english/education/graduate/msc-programmes/sustainable-fisheries-and-aquaculture/prerequisites	Candidates with other bachelor degrees (both Danish and foreign) are welcome to apply provided their BSc study contains the necessary prerequisite knowledge for MSc study. The evaluation of applications emphasizes courses in biology, chemistry, physics, mathematics and environmental engineering / sciences.
Wind Energy		All applicants must have mathematical qualifications equivalent to the DTU courses: 01035 Advanced Engineering Mathematics 2, 01037 Advanced Engineering Mathematics 2 (Summer University), and 62735 Advanced Mathematics for diploma Electro Technology.