MSc ETH MTEC

The ETH Master of Science in Management, Technology, and Economics

A Wise Connection.
Welcome to ETH Zürich.
“The combination of natural sciences, technology, management, and economics is a unique feature of D-MTEC. The department truly combines academic excellence and a strong engagement with practice. As a result, D-MTEC students bring sound theoretical knowledge of practical applications as well as a good sense for economic relevance to the the firms they join and get things done.”

Dr Markus R. Neuhaus
Former Chairman of the Board of Directors, PwC, Switzerland

About ETH Zurich

ETH Zurich – the Swiss Federal Institute of Technology – was founded in 1855 and has long been recognised as a global leader in research and education. Excellent conditions for learning and research, state-of-the-art facilities on two campuses in Zurich, and an attractive urban environment provide an ideal setting for some of the brightest minds in the world. Currently more than 23,000 students from over 120 countries are enrolled at ETH Zurich, including more than 4,000 doctoral students.

ETH Zurich offers more than 20 different 3-year Bachelor’s programmes. Each of these is followed by a consecutive Master’s programme of one-and-a-half or two years’ duration. In addition, specialised Master’s programmes offer the opportunity to focus on interdisciplinary or emerging subject fields. Master’s programme graduates wishing to pursue a career in research can continue on to doctoral programmes.

About the Department of Management, Technology, and Economics

ETH Zurich comprises 16 departments. The facilities of the Department of Management, Technology, and Economics (D-MTEC) are located right in the heart of Zurich near the historic ETH main building. More than 20 professors, about 100 postdocs and senior researchers, and 150 doctoral candidates represent a wide range of research areas and support about 400 MSc and MAS students. Apart from our highly competitive Master of Science (MSc) programme, the department offers various continuing education programmes, and provides extensive service teaching for ETH as a whole. In addition, D-MTEC offers doctoral programmes with a focus on economics, management, risk, and innovation.

D-MTEC appears in several international university rankings. In the 2021 Times Higher Education World University Rankings, it is ranked 12th worldwide in the subject area of business and economics. Our faculty combines scholarly excellence and a constant engagement with practice. D-MTEC delivers methodological as well as specialised practical expertise in management, economics, innovation, sustainability, system dynamics and risk. Much of our research and teaching aims at improving the understanding of the role of technology in society, industry, organisations, and the lives of individuals.

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About the MSc Programme

The MSc ETH MTEC is a four-semester, full-time programme for ambitious students who hold Bachelor’s degrees in engineering or the natural sciences.

The programme delivers comprehensive training in management and economics. Building on our students’ knowledge in engineering and the natural sciences, we provide a solid foundation for developing systemic solutions to complex professional challenges. D-MTEC alumni add value to organisations by building bridges between departments, disciplines, and cultures.

Cross-sector collaboration and entrepreneurial thinking are critical components of business leadership in the new millennium. Our programme takes pride in having strong contacts and frequent interaction with key decision makers in business and public governance.

The annual Entrepreneurial Leadership Seminar offers students the opportunity of to work on a real-life case involving strategy, innovation, and leadership in close collaboration with the top management of an outstanding company. Our voluntary Mentoring Programme connects students with D-MTEC alumni and industry experts. An international student body with a wide range of backgrounds, peer-to-peer learning, study visits, and an industrial internship are part of the MSc MTEC experience and prepare students to take on leadership positions in industrial, consulting, and technology-intensive organisations.
Basic Features

120 credit points (CP) are required to earn a Master of Science in Management, Technology, and Economics (MSc ETH MTEC). According to the European Credit Transfer System (ECTS), each credit point corresponds to approximately 25-30 hours of work. Generally, the programme takes four semesters to be completed. In most cases, classroom course work is completed in the first three semesters of the programme. The programme typically finishes with a 6-month Master’s thesis project, often in cooperation with an industry partner or at one of our worldwide partner universities.

Topics for Master’s theses can be found on the websites of the programme-associated institutes and chairs:
www.mtec.ethz.ch/the-department/chairs-centres-institutes
Curriculum Structure

Core Courses (> 51 CP)
These courses provide a strong foundation in six skill areas of management and economics (see p. 6).

Elective Courses (> 10 CP)
You can choose complementary electives from the Course Catalogue of D-MTEC.

Supplementary Courses (> 12 CP)
These courses aim to deepen knowledge acquired during your Bachelor’s studies in the areas of engineering and/or the natural sciences.

Industrial Internship (6 CP)
The internship lasts at least 10 weeks and can be completed either before or during the Master’s programme.

Freely Selectable Courses (11 CP)
You can choose from a range of additional core, elective, and supplementary courses.

Master’s Thesis (30 CP)
It is possible to write both practice- or research-oriented Master’s theses in cooperation with industrial partners or abroad.

“D-MTEC offers a unique combination of courses, allowing you to study both technology and its impacts on business, the economy and our society. The programme provides you with a strong foundation for careers in management, entrepreneurship, risk and economics and an education that is highly sought after in the modern business world. Central to the MSc MTEC programme are its top-class education, a thorough analytic approach and a cohort of international students with very diverse backgrounds.”

Dominik Demetz
MSc ETH MTEC Student
OBIS President
“In my studies at D-MTEC I could complement my technical background with strong business capabilities. The combination of analytical skills together with fundamental knowledge about systems thinking and entrepreneurship allowed me to understand the emergence of new business opportunities and the interplay of technical, social, and market dynamics. Such skills were fundamental for starting my career and building up start-up companies.”

Peter Stein
MSc ETH MTEC Alumnus
Head of Venture Architects at Sparrow Ventures

Develop Your Skills

Skill Areas

MSc ETH MTEC students acquire a comprehensive set of knowledge in six skill areas:

General Management and Human Resource Management
Responsibilities, functions, and organisation of a company; strategic management; business excellence; leadership; job and organisational design; work and health; organisational development; human-technology interaction.

Strategy, Markets, and Technology
Innovative product, service, and process design; concepts and methods of strategic management; corporate sustainability; technology transfer; process management; innovation marketing; management of innovation projects; entrepreneurship; cooperative innovation and co-creation.

Information Management and Operations Management
Design, control, and further development of value-adding systems and processes in companies and company networks; supply chain management; logistics management; planning and control of business performance; management and processing of information; design and implementation of information systems.

Quantitative and Qualitative Methods for Solving Complex Problems
Methods for dealing with complex situations; complex systems and organisational dynamics; operations research methods; empirical research methods; basics of project management.

Micro and Macroeconomics
Energy economics; resource economics; innovation economics and technical change; dynamic economic theory; sustainable development; global economic interdependencies; applied macroeconomics; business cycle research.

Financial Management
Managerial economics aspects of business activities; balance and profit calculation; investment appraisal; cost calculation; profitability and liquidity; financial and entrepreneurial risks.

For individual courses please consider our website and the ETH Course Catalogue:
www.mtec.ethz.ch/programme-elements  |  www.vvz.ethz.ch
At D-MTEC we systematically translate the results of our research into our teaching. Complementary inputs from practice and from our students with their highly diverse disciplinary and cultural backgrounds also contribute to a far-reaching learning experience. This co-creative approach to developing expertise in and outside the classroom is rewarding for both our students and our faculty.

Professor Gudela Grote
Chair of Work and Organizational Psychology at D-MTEC
Global Relations

The Department of Management, Technology, and Economics strongly supports the international mobility of its Master’s students. As a member of the IDEA League, UNITECH, and the IARU International Alliance of Research Universities, ETH provides unique international exchange opportunities. Up to 30 credit points can be earned toward the MSc by engaging in international exchange programmes.

"Having made this incredible D-MTEC journey allowed me to choose from among several career paths, which is typical for D-MTEC graduates. These opportunities included working as a data scientist in the finance industry, teaming up with other fellows to start my own venture, working as a strategy and analytics consultant or joining a tech company in Silicon Valley."

Lukas Falcke
MSc ETH MTEC Alumnus
Research Associate and PhD Candidate University of St Gallen

"D-MTEC provided me with the ideal platform to design my own curriculum and pursue my passion for business and technology. During my time at ETH, I developed new technologies with Walt Disney Imagineering, led a digital transformation at one of Switzerland’s largest fresh food distributors, and had the amazing opportunity to complete my Master’s thesis abroad with leaders in the field of 3D printing at Harvard University. These experiences were the highlight of my studies and, combined with the strong academic programme, were instrumental in providing me with a set of skills preparing me for the future."

Michael Eriksson
MSc ETH MTEC Alumnus
Associate Bain Capital
A Great Place to Study

Zurich is consistently rated as one of the best places in the world to live. The city is situated on beautiful Lake Zurich with the Alps less than an hour away.

The city of Zurich provides a clean and safe environment, has an excellent public transportation system, and a high standard of living.

The city has an international flair and offers many cultural activities as well as a vibrant nightlife. Most Swiss are multilingual and English is often the language of choice.

Although German is not required for the Master’s programme, some knowledge will make navigating the city and the university easier. Free language courses for students are offered at the Language Center of UZH and ETH Zurich:

www.sprachenzentrum.uzh.ch

For immigration and visa issues please consult:

www.ethz.ch/en/studies/international-immigration-housing

The ETH Experience

ETH student associations such as the Organisation of Business and Industrial Engineering Students (OBIS) are strong partners in your education beyond the classroom.

ETH Zurich itself offers a wide variety of sports, music, recreational, and continuing education opportunities. An overview can be found at:

www.ethz.ch/en/campus

Brochures on every topic of life in Zurich:

www.zh.ch/welcome

Student Life
Join the MSc ETH MTEC

How to Apply
The MSc ETH in Management, Technology, and Economics welcomes applications from students holding a Bachelor’s degree in fields such as engineering, physics, mathematics, computer science, technology, and other natural sciences from an internationally recognised university.

Tuition and Cost of Living
The tuition fee is 799 Swiss Francs per semester. However, students need to budget about 21,000 Swiss Francs (19,000 Euros) per year for living in Zurich (accommodation, meals, health insurance, etc.). A limited number of scholarships are available for applicants with outstanding academic records.

Details on qualifying Bachelor’s degrees and additional requirements as well as application deadlines and details on admission:
www.ethz.ch/en/studies/master/application

Details on scholarships at D-MTEC
www.mtec.ethz.ch/studies/admission/excellence-scholarship

“...is not only about classes; it also offers contact to industry through guest lectures and numerous on-campus events. Moreover, I found the diverse backgrounds of students, both in terms of education and nationality, particularly enriching.”

Anna Saur
MSc ETH MTEC Alumna
Sales & Operations Planning Lead bei On