MSc ETH MTEC
The ETH Master of Science in Management, Technology and Economics
A Wise Connection.
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 and an attractive urban environment provide an ideal setting for some of the brightest minds internationally. ETH Zurich is academic home to more than 19,000 students from over 120 countries; at least 4,000 of these are doctoral students.

ETH Zurich offers 23 different three-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 to doctoral programmes.
Welcome to ETH Zurich

About the Department of Management, Technology and Economics

ETH Zurich comprises 16 departments. The facilities of D-MTEC – the Department of Management, Technology and Economics – are located right in the heart of Zurich near the historic ETH main building. 24 professors, over 100 post-docs and senior scientists and over 200 assistants and doctoral students 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 we offer a Master of Advanced Studies (MAS) programme, a Master of Business Administration (MBA) with an emphasis on Supply Chain Management as well as two Certificate of Advanced Studies (CAS) programmes in public governance. In addition D-MTEC offers doctoral programmes with a focus on economics, management, risk and innovation.

About the MSc Programme

The MSc ETH MTEC is a four-semester full-time programme attracting ambitious students with a Bachelor’s degree in engineering or natural sciences.

The programme delivers comprehensive training in management and economics. By building on students’ extensive knowledge of engineering and natural sciences, the MSc provides a solid foundation for developing systemic solutions to complex professional challenges. 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 entrepreneurial leaders in business and society. For example, our Executive-in-Residence scheme provides students with direct access to the corporate world. Most courses include highly qualified guest lecturers. An international student population, study visits and industrial placements are part of the MSc MTEC experience and prepare students to take on leadership positions in industrial, consulting and technology-intensive organisations.

Our faculty combines scholarly excellence and a constant engagement with practise. MTEC delivers methodological as well as specialised practical expertise in the areas of economics, product design, innovation, human resources, sustainability, entrepreneurship, marketing, logistics, organisational change, negotiation and leadership. The exploration of technology in organisations, society and economics is a focal point of the MSc ETH MTEC programme.

“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 practise. As a result, MTEC students bring sound theoretical knowledge with the practical applications and a good sense for economic relevance to get things done at the firm.”

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

120 credit points are required to obtain 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 MSc takes 4 semesters to be completed. In most cases, the 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.html →

Curriculum Structure

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

Elective Courses (>10 ECTS)
Students can choose complementary electives from the course catalogue of D-MTEC and other ETH departments.

Supplementary Courses (>12 ECTS)
These courses aim to deepen the knowledge in the areas of engineering and/or natural sciences acquired during the Bachelor’s studies.
**Industrial Placement (6 ECTS)**
The industrial placement lasts at least 10 weeks and can be undertaken either before or during the Master’s programme.

**Freely Selectable Courses (11 ECTS)**
Students can choose from a range of additional core-, elective or supplementary courses.

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

«After my Bachelor in engineering, the Master’s degree at D-MTEC allowed me to broaden my perspective. The combination of down-to-earth management know-how and high level research helped me to develop a profound understanding of Management, Technology and Economics. I also learned to deal with different business logics and how to build bridges between business partners and stakeholders – a capability that turned out to be of utmost importance in my current job.»

Nicola Blum
D-MTEC Alumna
Programme Director at Impact Hub Zurich, Switzerland
Develop Your Skills

Six 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; entrepreneurship and new ventures; business excellence; leadership; job and organisational design; work and health; organisational development; human-technology interaction.

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

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

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

**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.

**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 see: [www.courses.ethz.ch](http://www.courses.ethz.ch)

«Within my studies at MTEC I could complement my technical background with strong business capabilities. The combination of analytical skills together with fundamental knowledge on 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 startup companies.»

Peter Stein
D-MTEC Alumnus
Co-Founder / VP R&D Ava AG, Switzerland
A World-Class Faculty

Michael Ambühl
Chair of Negotiation and Conflict Management

Antoine Bommier
Chair of Integrative Risk Management and Economics

Lucas Bretschger
Chair of Economics / Resource Economics

Stefano Brusoni
Chair of Technology and Innovation Management

Bart Clarysse
Chair of Entrepreneurship

Peter Egger
Chair of Applied Economics: Innovation and Internationalisation

Massimo Filippini
Chair of Energy and Public Economics

Robert Finger
Chair of Agricultural Economics and Policy

Elgar Fleisch
Chair of Information Management

Hans Gersbach
Chair of Macroeconomics: Innovation and Policy

Gudela Grote
Chair of Work and Organizational Psychology

Volker Hoffmann
Chair of Sustainability and Technology

Marko Köthenbürger
Chair of Public Economics

Wanda Mimra
Chair of Risk and Insurance Economics

Torbjörn Netland
Chair of Production and Operations Management

Sebastian Rausch
Chair of Economics / Energy Economics

Petra Schmid
Chair of Organizational Behavior

Paul Schönsleben
Chair of Logistics, Operations and Supply Chain Management

Frank Schweitzer
Chair of Systems Design

Didier Sornette
Chair of Entrepreneurial Risks

Jan-Egbert Sturm
Chair of Applied Macroeconomics

Georg von Krogh
Chair of Strategic Management and Innovation

Florian von Wangenheim
Chair of Technology Marketing

Stephan Wagner
Chair of Logistics Management

«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 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.»

Prof. Dr. Gudela Grote
Chair of Work and Organizational Psychology at D-MTEC
International Mobility

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. Within the MTEC Master’s studies, up to 30 credit points can be acquired by engaging in international exchange programmes.


«During my MTEC industry placement in Shanghai I had the opportunity to develop a Sales Performance Dashboard for the Asian business of GF Agie Charmilles. During these four months I was not only facing the challenging Chinese economy but learned a lot about cultural diversity and international business dynamics.»

Rea Schegg
D-MTEC Alumna
Strategic Planner at GF Machining Solutions, Switzerland

«ETH MTEC has 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 with one of Switzerland’s largest fresh food distributors and had the amazing opportunity to complete my Master’s thesis abroad at Harvard University with leaders in the field of 3D printing. Combined with strong academics, these experiences have been the highlight of my studies and instrumental in providing me with a set of skills preparing me for the future.»

Michael Eriksson
D-MTEC Graduate 2017
Student Life

A Great Place to Study

Zurich is consistently rated as one of the best places to live in the world. The city is situated on the beautiful lake of 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 night-life. 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 available at the Language Center of UZH and ETH Zurich:
www.sprachenzentrum.uzh.ch →

Detailed information for international Master’s students:
www.ethz.ch/en/studies.html →

For immigration and visa issues please consult:
www.ethz.ch/en/studies/international-immigration-housing.html →

The ETH Experience

ETH student associations such as the Organisation of Business and Industrial Engineering Students (OBIS) are strong partners in creating 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/Living in Zurich.html →

Brochures on every topic of life in Zurich:
www.welcome.zh.ch →
Join the MSc ETH MTEC

How to Apply

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

Details on qualifying Bachelor’s degrees and additional requirements:
www.ethz.ch/en/studies/registration-application/master/application.html →

Application deadlines and details on admission:
www.admission.ethz.ch →

Tuition and Cost of Living

The tuition fee is 580 Swiss Francs per semester. However, students need to budget about 21,000 Swiss Francs (19,000 Euro) per year for living in Zurich (accommodation, subsistence, health insurance, etc.). A very limited number of scholarships are available for applicants with outstanding academic records.
www.ethz.ch/en/studies/financial.html →

Continuing with Doctoral Studies?

Excellent MSc students may consider continuing their studies towards a Doctoral degree. Applications should be made directly to a professor at D-MTEC.

Additional information on admissions to doctoral studies:
www.ethz.ch/en/doctorate.html →

“Arriving from Oxford, I was struck by the amazing infrastructure that is provided here. There are few limits to what you can do, and extremely strong support for anything you want to do. This research environment paired with wonderful skiing and swimming opportunities close-by is world class.”

Dr. Julian Köbel
D-MTEC PhD Alumnus
Postdoctoral Researcher at MIT Sloan School of Management, USA

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Dr. Julian Köbel
D-MTEC PhD Alumnus
Postdoctoral Researcher at MIT Sloan School of Management, USA
Our Vision Is...

... to understand, shape and relate the interactions between technology, organisations and society and their impact on the sustainable use of natural and human resources.

Contact

If you have any questions, visit our website or send us an email. Thank you.
www.mtec.ethz.ch

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