Your Master's Program

Department of Mechanical and Process Engineering
Profile
Perfect fit

You are...
- open-minded and curious
- respectful in dealing with others

You have...
- a Bachelor’s degree in engineering
- an excellent study performance record
- very good English skills

You want to...
- be welcomed as a bright young mind
- receive an exceptional education
- work in an interdisciplinary, international institution
- find innovative solutions for complex problems
- gather hands-on industry experience

We...
- are a top-ranking university in the heart of Europe
- let you talk to top scientists at eye-level
- foster a diverse and interdisciplinary environment
- lay the foundation for your career
The Department
Facts and figures

- Master’s students: 1,008
- Bachelor’s students: 1646
- Exchange students: 481
- Doctoral students: 936
- Professors: 40

Status: 2017
D-MAVT Master’s Programs
Choose your program

- Mechanical Engineering
- Process Engineering
- Micro and Nanosystems
- Robotics, Systems and Control
- Nuclear Engineering

- consecutive
- specialized
- partners

D-ITET
D-ITET
D-INFK
EPFL

Other Master’s programs
www.ethz.ch/master-programmes

APPLY NOW!
www.eapply.ethz.ch
Study Features
Good reasons to study at D-MAVT

- **Courses**: 49%
- **Project works**: 42%
- **Internship**: 9%

- **English** as language of instruction
- **Tutor** driven program
- **Individualized** curriculum

MORE INFO
www.mavt.ethz.ch/studies/master
## Study Structure

### How to reach your goal

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**Master of Science ETH***

90

*Master of Science in Nuclear Engineering: 4 semesters, 120 ECTS, 1st semester at EPFL

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**Cover image: 3D printed brain model**

Visualizing new possibilities of computational design and advanced 3D printing.

Engineering Design and Computing Laboratory
The Master in **Mechanical Engineering** provides in-depth knowledge of core areas in mechanical engineering, such as mechanics, thermodynamics, fluid dynamics, materials and manufacturing science, control systems, and product development.

**You will study**

- Energy, Flows and Processes
- Mechanics, Materials and Structures
- Micro and Nanosystems
- Robotics, Systems and Control
- Bioengineering
- Design, Product Development & Manufacturing
I investigate a new type of lightweight composite material.
The Master in Process Engineering prepares students to play a key role in the development of new materials, sustainable energy systems, technologies to mitigate climate change and to reduce pollution and processes for the food and pharmaceutical industries.

You will study

- Advanced Materials
- Micro and Nanosystems and Processes
- Particle Technology
- Separation Processes
- Sustainable Energy Systems
- Transport Processes and Reactions
Master of Science in Process Engineering

Further details online: www.master-process-engineering.ethz.ch
Products and systems are becoming increasingly complex, involving key technologies from multiple engineering disciplines. The program offers an interdisciplinary education including courses from mechanical engineering, electronics, materials sciences and physics.

You will study
- Devices and Systems
- Energy Conversion and Quantum Phenomena
- Material Surfaces and Properties
- Modeling and Simulation
Master of Science in Micro and Nanosystems

Further details online:
www.master-micronano.ethz.ch
Master of Science in Robotics, Systems and Control

The Master in **Robotics, Systems and Control** offers students a multidisciplinary education, allowing them to **develop innovative and intelligent products** and systems to meet today’s challenges: energy supply, environment, health and mobility.

You will study

- Robot Design, Modeling and Control
- Systems Engineering
- Physical Modeling and Simulation
- Optimization and Control
- Perception, Graphics, Virtual Reality
- Navigation and Path Planning
- Embedded and Distributed Computing
- Artificial Intelligence
Master of Science in Robotics, Systems and Control

Further details online:
www.master-robotics.ethz.ch
The Master in **Nuclear Engineering** trains engineers to harness nuclear fission for energy supply. Studies are **interdisciplinary**, ranging from neutron and reactor physics to thermo-fluid dynamics, power plant technology, reactor safety and materials science. The portfolio can be broadened to include nuclear fusion and nuclear technologies in medicine.

**You will study**

- Nuclear Reactor Physics and Technology
- Radiation Biology and Radiation Protection
- Nuclear Power Plant Safety and Decommissioning
- Fuel Cycle from Uranium Mining to Waste Disposal
- Integration of Nuclear Energy into Energy Systems
- Principles of Controlled Nuclear Fusion
- Nuclear Techniques in Medicine and Industry
I want to improve the safety and efficiency of nuclear power plants.

Lukas Robers
Institute of Energy Technology
Other ETH Master’s programs in partnership with D-MAVT

Specialized Master’s programs
- Biomedical Engineering
  master-biomed.ethz.ch
- Energy Science and Technology
  master-energy.ethz.ch
- Integrated Building Systems
  master-buildingsystems.ethz.ch

Other ETH Master’s programs
- Management, Technology and Economics
- Science, Technology and Policy
- Computational Biology and Bioinformatics
- Data Science
Vita Marina
Institute of Mechanical Systems
zurichheart.ethz.ch/hybridmembrane

« My Master in Mechanical Engineering prepared me for research on ventricular assist devices. »

Other ETH Master’s programs in partnership with D-MAVT

Further details online: www.mavt.ethz.ch/studies/master
ETH Zurich
Department of Mechanical and Process Engineering

Student Administration
ETH Zurich / D-MAVT
LEE K 208
Leonhardstrasse 21
8092 Zurich

Tel: +41 44 632 24 57
Mail: info@mavt.ethz.ch

Web: mavt.ethz.ch/student-administration
Bachelor of Science ETH (3 years)

Mechanical Engineering

Master of Science ETH (1.5 – 2 years)

Mechanical Engineering
Process Engineering
Micro and Nanosystems
Nuclear Engineering
Robotics, Systems and Control

Biomedical Engineering
Energy Science and Technology
Integrated Building Systems

Doctor of Science ETH (3 – 4 years)

Job market

MORE INFO

www.mavt.ethz.ch
Over 160 years of excellence in science and engineering

International graduate programs

Pioneering solutions to global challenges

90 patents and 200 inventions per year

More than 380 spin-offs since 1996

Albert Einstein studied and taught at ETH Zurich
«LIMES offers me great opportunities to expand my network and meet inspiring women.»

Angela Ketterer
LIMES member
Find out more

www.ethz.ch/en/campus
Leisure & Living

- Sport (ASVZ)
  asvz.ch
- Restaurants and Cafeterias
  gastro.ethz.ch
- Language Center
  www.sprachenzentrum.ethz.ch/en
- Cultural Events
  kulturstelle.ch
- Accommodation
  Housing Office
  wohnen.ethz.ch
  Shared apartments
  woko.ch
- Scholarships for Study and Living Costs
  ethz.ch/scholarships

Further questions?
ethz.ch/students/en/campus