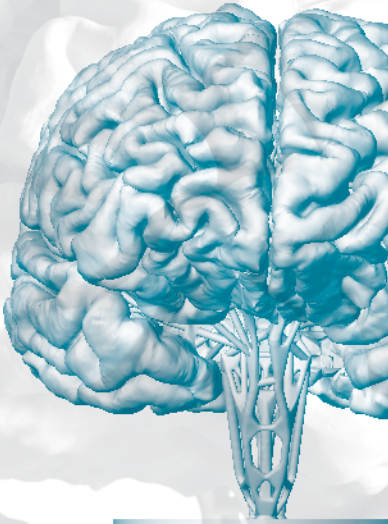
Master's Programs

D MAVT

ETH zürich

Department of Mechanical and Process Engineering

Your Master's Program



D MAVT

ETH zürich

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

1008
Master's students

1646
Bachelor's students

481
Doctoral students

446
Exchange students

936
Staff members

40
Professors

Status: 2017

D-MAVT Master's Programs
Choose your program

Mechanical Engineering		
Process Engineering		
Micro and Nanosystems	D-ITET	
Robotics, Systems and Control	D-ITET	D-INFK
Nuclear Engineering	EPFL	

consecutive specialized partners

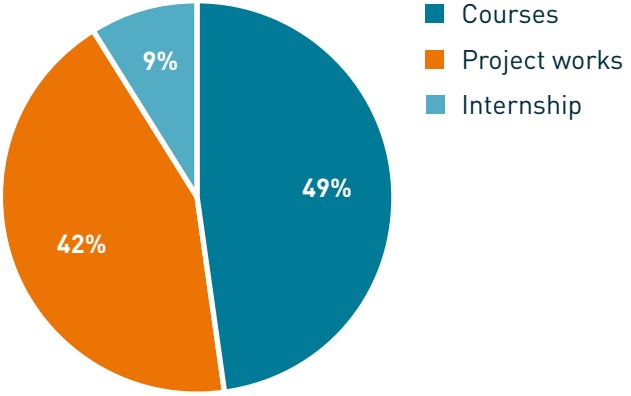
Other Master's programs
www.ethz.ch/master-programmes

APPLY NOW!

www.eapply.ethz.ch

Study Features

Good reasons to study at D-MAVT



- **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

1st Semester	2nd Semester	3rd Semester	ECTS
Core Courses			36
Multidisciplinary Courses			6
Science in Perspective			2
Industrial Internship			8
	Semester Project		8
		Master's Thesis	30
Master of Science ETH*			**90**

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

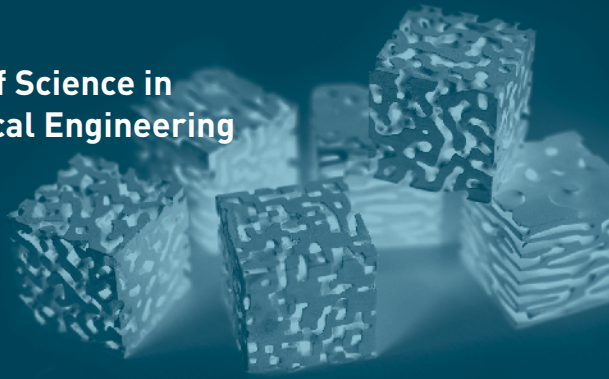
Cover image: 3D printed brain model
Visualizing new possibilities of computational design and advanced 3D printing.

Engineering Design and Computing Laboratory

ETH zürich

D MAVT

Master of Science in Mechanical Engineering



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

Master of Science in Mechanical Engineering

Further details online:
www.master-mechanical-engineering.ethz.ch

Tamara Weissenbach
Institute of Mechanical Systems

«I investigate a new type of lightweight composite material.»

ETH zürich

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Master of Science in Process Engineering

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

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Master of Science in Micro and Nanosystems

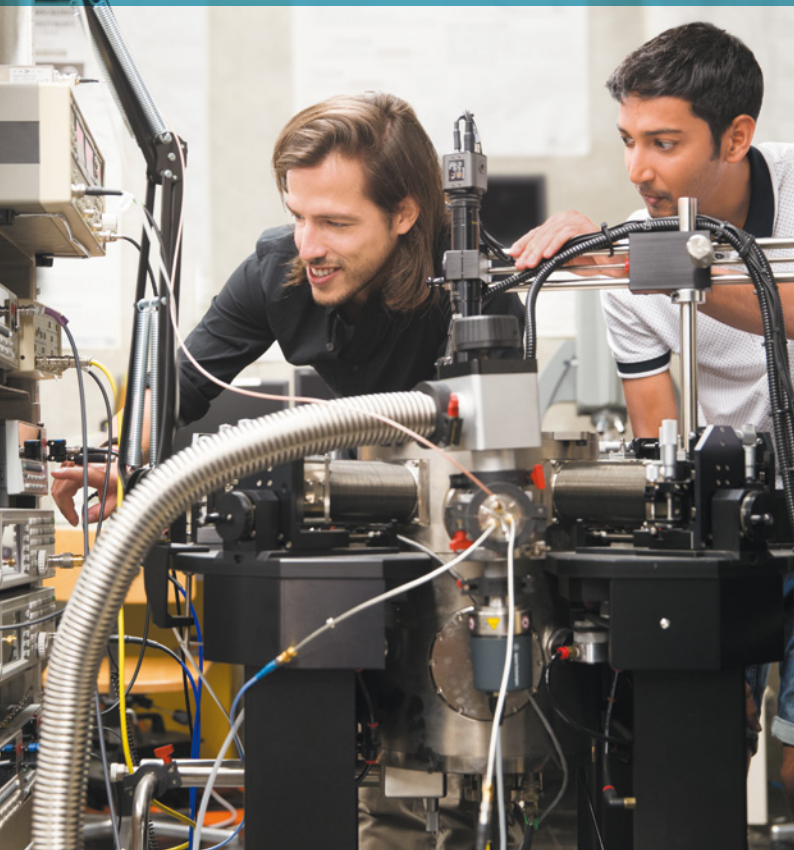
Products and systems are becoming increasingly complex, involving key technologies from multiple engineering disciplines. The program offers an **interdisciplinary education** including courses from mechanical engineering, electronics, materials sciences and physics.

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



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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

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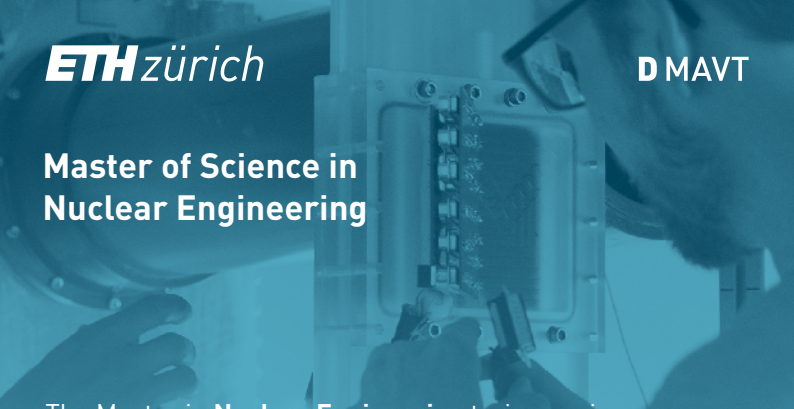
Master of Science in Nuclear Engineering



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

Master of Science in Nuclear Engineering

Further details online:
www.master-nuclear.ethz.ch

Lukas Robers
Institute of
Energy Technology

«I want to improve the safety and efficiency of nuclear power plants.»

ETH zürich

D MAVT

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

CONTACT US

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Web: mavt.ethz.ch/
student-administration

D-MAVT
Study structure

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

ETH zürich D MAVT

THIS IS ETH ZURICH

- 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

ETH Zurich
Facts & figures

20 000 Students

39% International Master's students

12 Nationalities

179 Labs

2 Campuses

505 Professors

21 Nobel Laureates

42 Languages

5900 Teaching and research staff

Status: 2017

ETH zürich

D MAVT

WORK HARD
PLAY HARD

AMIV
Mechanical and Electrical
Engineer Student Association

amiv.ethz.ch
amiv_eth
amiv.ethz

LIMES
Ladies In Mechanical and
Electrical Studies

amiv.ethz.ch/limes
limes.amiv

ETH zürich D MAVT

ETH Zurich Zentrum
Campus and city

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

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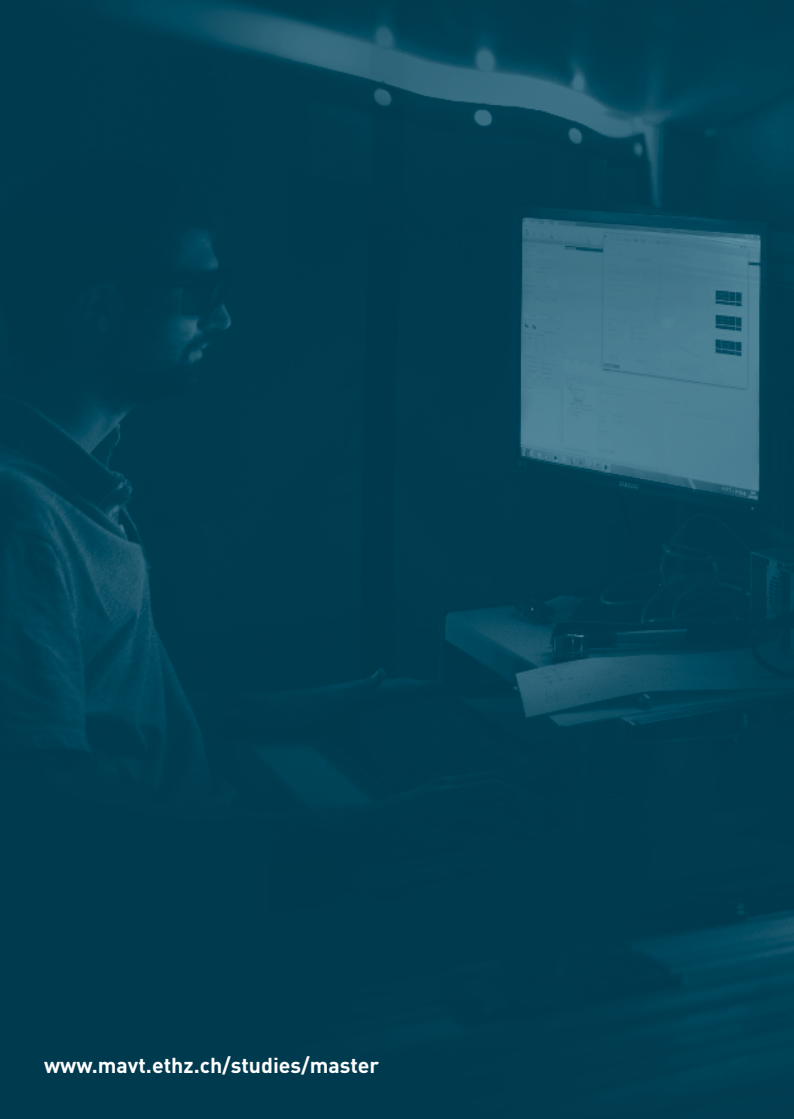

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