

Master of Advanced Studies ETH in Applied Technology

A new programme providing managers with science and technology qualifications for leadership positions



The Master of Advanced Studies ETH in Applied Technology (MAS AT) is intended for experienced managers with limited or single science backgrounds who need a better understanding of applied science and technology in order to take on greater leadership roles in their technology based company or industry.

The value of this unique programme lies in its clear focus on explaining the interdisciplinary application of technology in modern industry and enabling leaders to address difficult business problems with technology. MAS AT graduates will have the scientific fundamentals and innovation skills to collaborate with and lead a broad range of technical experts and interdisciplinary teams.

MAS in Applied Technology

Target Audience

The programme is designed for

- Experienced managers
- Working in technology based industries
- With limited or single science backgrounds

The target audience specifically includes managers from Finance, Marketing, Legal, Strategy and similar departments.

Learning goals

Successful graduates will be able to:

- recognise technology-based opportunities for innovation,
- understand the barriers to applying technology successfully,
- communicate with technical experts and groups using more precise and targeted language,
- collaborate effectively on interdisciplinary projects, and
- better manage and lead technical staff.

Career Prospects

Graduates of the MAS AT program will have the science and technology qualifications to take on higher leadership roles in their company and industry.

Admission Requirements

A Master's level university degree recognised by ETH Zurich and several years of managerial experience.

Study language: 100% English

Format: 2 year, part time
2-day blocks every other week

Start: Every September

Cost: 39'000 CHF*

Application: January 1–May 31 (Application outside that period possible on request)

Information: www.mas-at.ethz.ch

*Books and materials not included. Individual CAS can be followed without enrolment in the MAS at a cost of 8'500 CHF. See website for more details.

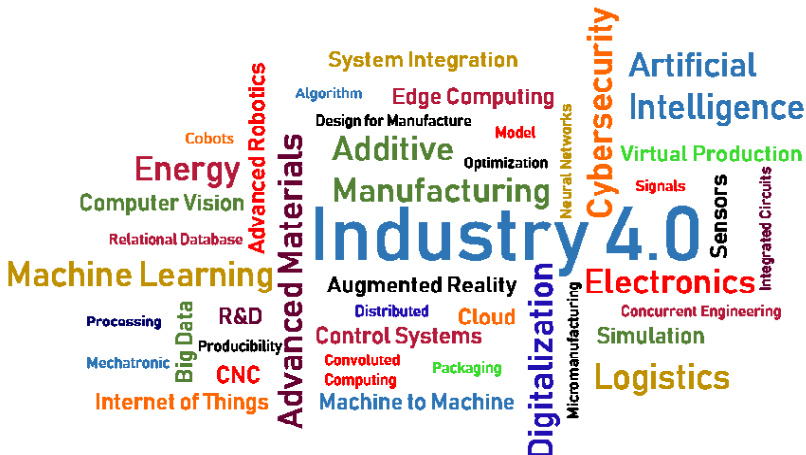
Programme Content

The MAS in Applied Technology attaches particular importance to interdisciplinary and innovative approaches to learning and promoting cross-industry networking. The interactive methods encourage cooperation and in-depth discussions and thus create optimal conditions for a beneficial exchange of experiences among the participants.

The first year of the programme will train participants intensively on specific sets of technologies and provide them with supporting scientific fundamentals. All MAS participants are required to complete the first two CAS. To finish the year, participants select one of the available CAS 3 options based on their preferred area of technological focus.

The second year shifts focus to understanding the research and development (R&D) process and developing relevant innovation skills. CAS 4 provides training on R&D organization and processes as well as how to lead interdisciplinary and cross-functional technology projects. This fourth CAS also prepares participants for the experimental project and Master's thesis.

The experimental project gives an opportunity to explore a particular technology in more detail and a better appreciation for the issues routinely encountered during applied technology projects. To finish the programme, participants prepare an independent Master's thesis in order to further consolidate the knowledge and skills developed during the MAS.



Master of Advanced Studies in Applied Technology (66 ECTS)

CAS 1: Applied Information Technology (CAS AIT)

- Foundations of Programming
- Data Science
- Data Modeling and Computer Vision
- Applied Information Technology

CAS 2: Applied Manufacturing Technology (CAS AMT)

- Materials Selection
- Manufacturing Processes
- Production Systems
- Product Design & Producibility

CAS 3: Applied Technology (AT) Elective *

CAS in Applied Technology in Energy (CAS ATE)

- Energy Fundamentals
- Energy Storage
- Electric Power Grid Systems
- Practical Applications in Energy

CAS in Applied Technology in Electronics & Digitization (CAS AED)

- Fundamentals of Semiconductors and Electronics
- Semiconductor Devices and Applications
- Integrated Circuits (ICs)
- Complex Electronic Systems

CAS 4: Applied Technology: R&D and Innovation (CAS ARI)

- Fundamentals of R&D and Innovation
- Innovation - What is and to what purpose do we need it?
- R & D: The Engine of Innovation
- The Innovation Ecosystem

Experimental Project

Master's Thesis

Year 1

Year 2

* Participants select one elective CAS as a focus area of study.

Contact

MAS ETH in Applied Technology

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