Master of Advanced Studies in Applied Technology (66 ECTS)

CAS 1: CAS in Applied Information Technology (CAS AIT)
- Foundations of programming
- Data science
- Data modeling & computer vision
- Applied information technology

CAS 2: CAS in 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

Year 1

CAS 4: CAS in Applied Technology: R&D and Innovation (CAS ARI)
- Fundamentals of R&D and innovation
- Innovation - what is and to what purpose de we need it?
- R&D: The engine of innovation
- The innovation ecosystem

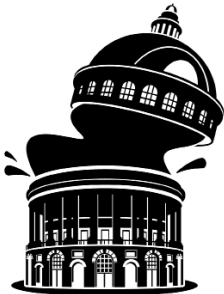### Experimental project

Master´s thesis

Year 2

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

ETH zürich | School for Continuing Education

MAS ETH in Applied Technology

Providing managers with science and technology qualifications for leadership positions

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MAS ETH in Applied Technology

The Master of Advanced Studies ETH in Applied Technology (MAS ETH 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.

Programme Description
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.

Structure and Format
The first year of the programme will train participants intensively on specific sets of technologies and provide them with supporting scientific fundamentals. Participans 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 organisation 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.

Classes are generally conducted in either a block format or blended learning format. Workload is ca. 750 to 900 hours per year including lectures, study time and performance assessments.

Target Group
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.

Objectives
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

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

Admission Requirements
A Master's degree acknowledged by ETH or an equivalent educational qualification plus relevant management experience after graduation.

› Tuition language: English

› Start: Every Autumn Semester (September)

› Application: 1 February–30 June and 1 September–1 December

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

› Programme fee: CHF 39,000

› **Programme Director**
Professor Ulrike Grossner, D-ITET

› **Programme Coordination**
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