

MASTER OF SCIENCE ETH IN CIVIL ENGINEERING

Qualification profile

Graduates of this study programme have gained the following professional knowledge:

- consolidated professional knowledge in the majors chosen,
- in-depth knowledge of the majors chosen and/or a broad knowledge of additional optional subjects,
- specialised knowledge consolidated by working on two projects and preparing a Master's thesis.

Graduates of this study programme have developed the professional skills to:

- obtain the necessary basic information efficiently to develop appropriate solutions,
- independent development of scientific methods and mathematical models in the field of civil engineering sciences and safe application thereof,
- recognise and account for uncertainties during the process of finding solutions,
- analyse novel and complex problems and deliver solutions that fulfil the existing basic conditions,
- plan and design technically safe, ecologically and economically balanced solutions that fulfil the demands of society and politics,
- develop new application areas for procedures within the field of civil engineering.

Graduates of this study programme have gained the general competence to:

- update continuously and independently their personal scientific and technical knowledge, and apply new know-how professionally to real-world problems,
- apply modern project management methods, subdivide complex tasks according to the situation and solve them in a team,
- effectively use IT technologies derived from civil engineering disciplines to collect and transfer data, to process and evaluate data for planning, designing and presenting a task,
- work together with professionals from related disciplines such as Geology, Architecture, Mechanical and Electrical Engineering, Environmental Science, Law and Economy,
- communicate the results of their work in written and oral form in an understandable way to both experts and laypersons,
- take over a leadership function at a later stage,
- to find solutions actively within a societal, economical and environmental framework.