

BACHELOR OF SCIENCE ETH IN CIVIL ENGINEERING

Qualification profile

Students who have completed this study programme have gained theoretical and methodical basic knowledge in the following fields, ranging from mathematics and natural sciences through to key engineering subjects:

- Mathematics, Physics, Chemistry and Geology,
- Information Technology, Mechanics, Hydraulics, Hydrology, Systems Engineering, Geodetic Metrology Business Administration, Basic Legal Education,
- Structural Analysis, Structural Engineering, Geotechnical Engineering, Hydraulic Engineering, Urban Water Management, Transportation and Traffic Engineering, Construction Techniques, Material Sciences.

Students who have completed this study programme will have developed the professional skills to:

- analyse a problem and seek solutions using mathematical, natural science and engineering principles in a structured and efficient way,
- provide and assess, systematically, the essential basic information necessary for working out possible solutions,
- understand and apply appropriate scientific methods and models in the field of civil engineering,
- consider uncertainties with respect to model assumptions and implementation of risk and safety concepts,
- recognise interactions between the main disciplines of civil engineering,
- apply IT technologies derived from civil engineering disciplines effectively,
- deal in a project orientated way with practical questions, as part of an individual assignment.

Students who have completed this study programme will have gained the general competence to:

- update their personal scientific and technical knowledge continuously and independently,
- think in spatial terms and understand complex geometrical structures,
- work on tasks in a team,
- present technical information in an understandable way to both experts and laypersons,
- to place their work within a societal, economical and environmental context.