

## **Industrial Engineering (B.Sc.)**

The programme qualifies students as industrial engineers with a broad interdisciplinary practical and theoretical knowledge, which is needed in different kinds of companies.

In the compulsory courses, students acquire a broad knowledge of business administration, marketing, economics, statistics, chemistry, energy management, mathematics and technology in production and service operations.

Students are skilled in investigating and analysing data related to management aspects of business administration (e.g. cost, capacity and performance analyses). In the field of marketing, they understand customer behaviour, learn about market segmentation and the development of marketing instruments (product, price, place, promotion).

They are also skilled in applied sciences, basic aspects of technology and engineering methods as well, and are able to support projects focusing on technical aspects. The utilisation of industrial equipment, such as factory floor machinery and robotics as well as internal factory and external supply chain logistics represent the scope of advanced courses and the students are trained in projects and case scenarios.

Besides a broad natural sciences knowledge base, hygiene management requires in-depth in-service training in hygiene and cleaning management/processes as well as related technologies in close cooperation with service and chemical/equipment production companies.

Students taking courses in energy economics and energy technologies acquire a broad knowledge covering all major aspects of energy supply and consumption. Students understand the important energy markets and their main determinates, including technical restrictions.

Applied computer sciences (e.g. handling of databases or usage of CAD) are trained in practice during the programme. The students gain a basic understanding of human factors and are familiar with general aspects of health and safety at work. General qualifications, such as leadership skills, project management and presentation techniques, are also acquired.

Depending on the selected fields of specialisation, graduates should have extended knowledge in one or two of the topics listed above.

The students complete their practical training in production, service operations or a research lab. Here, they conduct a project assignment lasting three months. With the submission of the Bachelor's thesis (processing time of two months) the students demonstrate their ability to apply basic scientific methods to solving a selected problem related to industrial engineering.