

Industrial and Mechanical Engineering (B.Sc.)

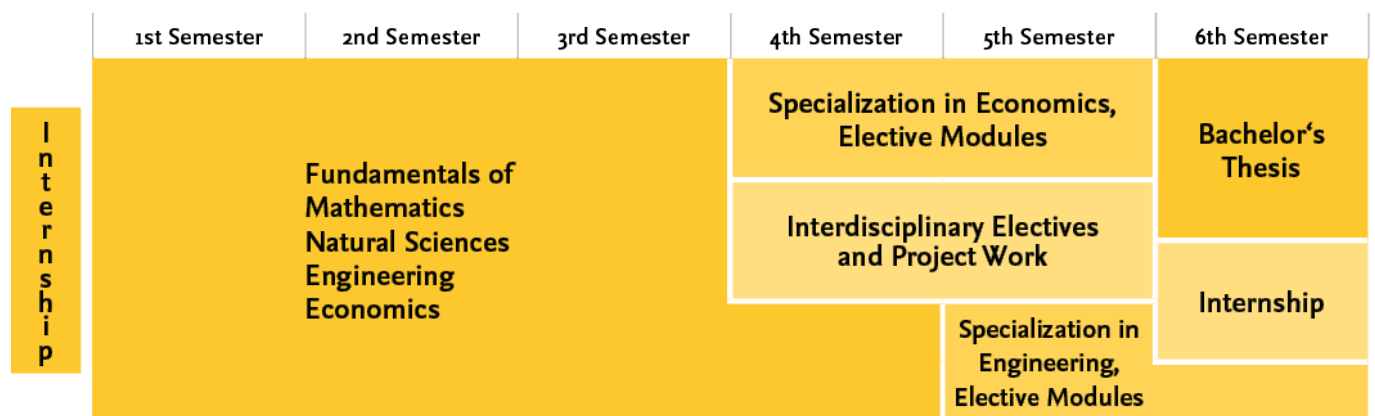
Information for students

This page contains information for students who **started their studies from winter semester 2014/15 up to and including summer semester 2022.**

Special documents and downloads for the study program, also for students who started their studies before winter semester 2012/13, can be found on the page [Documents](#).

Structure of the Bachelor's degree programme

The diagram below shows the structure of the course of studies. The [curriculum](#) contains a more detailed overview of the individual areas per semester. A complete, detailed description of the programme and all subjects can be found the [module handbook](#).



Structure of the Bachelor's programme Industrial and Mechanical Engineering

Fundamentals

Fundamentals are subjects that must be taken by all students in the course of study Industrial Engineering and Management Mechanical Engineering. They are divided into three groups:

- Mathematics
- Natural Sciences and Engineering
- Economics

These subjects create a broad foundation of knowledge on which the professional specialisation can subsequently be built.

Interdisciplinary Electives

The Interdisciplinary Electives consist of:

- the module *Quantitative Methods in Economic*
- one of the modules *Basics of Automatic Information Processing for Mechanical Engineering* **or** *Introduction to Programming (for non-Computer Scientists)* and
- the module *Interdisciplinary Profile Development Industrial and Mechanical Engineering*.

The module *Interdisciplinary Profile Development Industrial and Mechanical Engineering* (10 CP) consists of different components. The courses "Industrial Engineering" (4 CP), "Business Game" (2 CP), which comes from the field of economics, and "Lost in Antarctica" (2 CP) – an offer to learn how to do scientific work – must be taken. To acquire the remaining 2 CP, students can make use of the university's overall program for interdisciplinary qualification (pool model). Students can choose any course that ends with an examination event and is not part of their own Bachelor's programme, e.g. training of action-related skills or language courses. In addition to the pool model, the Faculty of Mechanical Engineering recommends [these courses](#) for the area of interdisciplinary profile development.

Internship

After completion of the pre-study internship, an engineering internship of 10 weeks must be proven during the Bachelor's degree programme. The internship guidelines provide more detailed information on the areas and duration of the internship:

[General Downloads](#)

The engineering internship gives you the opportunity to get to know the professional environment and the professional requirements for an engineer working in industry already during your studies.

[Internship](#)

Specialisation, Elective Modules

Until the end of the third semester, the course is the same for all students, with the exception of the module "Grundlagen in Wissenschaft und Technik für Wirtschaftsingenieure" (Fundamentals of Science and Technology for Industrial Engineers). At the beginning of the fourth semester, students set individual priorities for their course of study. The decision for the specialisations is thus usually made during the third semester at the latest: in **Engineering Sciences one specialisation is chosen**, in **Economics three specialisations are chosen**.

The following **specialisations** are offered in **Engineering Sciences**:

- General Mechanical Engineering
- Energy and Process Engineering
- Automotive Engineering
- Aerospace Engineering
- Material Sciences
- Mechatronics
- Production and Systems Engineering

Each of these specialisations is assigned its own module catalogue in the fifth and sixth semester. The modules are individually adapted to the respective focus profiles. Usually, four modules are selected from the range of modules offered in the area of specialisation.

In the field of **Economics** you can choose from the following **specialisations**:

- Decision support
- Service Management
- Financial Management
- Information Management
- Marketing
- Production and Logistics
- Law
- Company Accounting
- Economics

Bachelor's thesis

The Bachelor's programme is completed by the final module. This module includes the preparation of a written thesis, the **Bachelor's thesis** (12 CP) and a **presentation** (2 CP) of the results. The Bachelor's thesis should demonstrate the student's ability to write a scientific paper. In addition, this module trains the documentation and communication of scientific results and enables the students to successfully apply these working methods in their future field of work.

Service and advice

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