



## Mechanical Engineering - Bachelor of Engineering -

### YOUR PROFESSIONAL ENVIRONMENT

The mechanical engineering and automotive industries are the biggest business sectors of Germany, and the one with the greatest export activity. Mechanical engineers work in the sectors automotive engineering, prime mover plants and power supply or production engineering. Further possible activity areas are agricultural and construction machines, biomedical engineering, paper milling and printing machines, materials science and testing, plastics technology, process engineering and environmental technology.

The design and use of state-of-the-art machines requires profound knowledge in design and technology. Besides, recent knowledge of other disciplines such as Electrical Engineering, Chemistry, Computer Science or Marketing is required, too. Mechanical engineers therefore work in an interdisciplinary manner, and on the following sectors, to name but a few:

- Development and design
- Projecting and planning of whole plants
- Production planning
- Quality management
- Safety technology and environmental protection

### JOB PROSPECTS

Current surveys show that graduates of Mechanical Engineering continue to be in high demand as in the past few years. Moreover new tasks have surfaced in particularly in the service sector, such as environmental protection, power generation from renewable energy sources, and software development, providing new attractive activity areas. Successful graduation from a mechanical engineering course will offer the best career prospects, be it in any region in Germany or abroad.

### PERSONAL REQUIREMENTS

For studying Mechanical Engineering you will need a certain enthusiasm for technology, imagination for mechanical processes and an interest in mathematics and physics.

### HOW THE STUDIES ARE ORGANISED

The Basic Studies Period (semesters 1 and 2) mainly focuses on fundamentals from technology and the natural sciences.

The Advanced Studies Period (semesters 3 to 7) comprises a work placement semester (semester 5). In semester 3 and 4 you will acquire advanced core competences in mechanical engineering, in semesters 6 and 7 practice-oriented modules will follow, deepening the subject matter learned so far.

You can customize your study by selecting modules from a comprehensive catalogue of specialization and elective modules.

You will top-off your studies with a Bachelor's thesis under the supervision of one of our full-time professors. Your thesis can be done in a company or at the university. It will provide an opportunity to gather more in-depth knowledge in a specialisation and to possibly initiate contact to your future employer.

Upon successful graduation our University will award the academic degree Bachelor of Engineering (B.Eng.).

### PRACTICE-ORIENTED TRAINING IN COMPANIES

A prominent feature of studying at Universities of Applied Sciences in Bavaria is the close link of theory with practice. You may choose between the classical study model and the Engineering Studies with Extended Practical Experience in which, additional to the usual work placement semester, you also work in your company during the semester breaks and receive a salary from them throughout your studies.

You will be required to complete an initial work placement of six weeks duration. Possible fields of activity here are general metal processing, work with machine tools, in the assembly department, etc. If you have done an apprenticeship in a mechanical engineering, or completed the technology stream of a (German) technical college you may be exempt from this pre-study work placement.

The work placement semester (semester 5) will familiarize you with an engineer's work. You will be given concrete tasks and projects of an engineer. Possible areas of activity are design and development, production and production control, assembly, operation and maintenance of machines and industrial plants, quality assurance, testing, distribution and counselling.

If you seek further qualification you can choose from several Master's degree courses at Kempten University of Applied Sciences.

## LIST OF STUDY MODULES \*

### Basic Studies Period (Semesters 1 and 2)

- Mathematics for Engineers
- Information Technology for Engineers and Office Applications
- Physics and Chemistry
- Materials Science
- Introduction to Electrical Engineering
- Technical Mechanics and Strength of Materials
- Design and Machine Elements 1

### Main Studies Period (Semesters 3 to 7)

- Mathematics and Simulation of Dynamic Systems
- Electrical Engineering, Electrical Drives, Electronics
- Control Engineering
- Measurement Engineering
- Machine Dynamics
- Technical Fluid Mechanics
- Technical Thermodynamics and Heat Transmission
- Conveyance, Drive Engineering, Oil-hydraulics
- Machine Tools
- Transmission Technology
- Prime Movers and Processing Machines
- Design and Machine Elements 2
- Computer-Aided Engineering
- Business Administration
- Compulsory Electives

- Work placement semester and seminar
- Engineering Project
- Bachelor Thesis and seminar

\*This list of study modules is an excerpt of all course modules available. (Changes may occur).

## CONTACT

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## IMPORTANT LINKS

(Information in English on our website)

[www.hs-kempten.de](http://www.hs-kempten.de) > INTERNATIONAL > click English flag (in the top left-hand corner)

[Information for international exchange students](#)  
(> INTERNATIONAL > EXCHANGE STUDENTS / INCOMING)

[Study programmes – short description in English](#)  
(> INTERNATIONAL > DOWNLOADS > Study Programmes)

[Guests and Visitors at Kempten University](#)  
(> INTERNATIONAL > GUESTS AND VISITORS)

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**PLEASE NOTE** that, although this description is written in English, the study course is taught in German.