

Hochschule für
Technik und Wirtschaft
des Saarlandes
University of
Applied Sciences

Fakultät für
Ingenieurwissenschaften
School of Engineering

Contact

School of Engineering Secretary's Office

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University Admissions

Application Documents

Student Services at the htw saar

t +49 (0) 681 5867-115

apply@htwsaar.de

www.htwsaar.de/ingwi

Curriculum

1st semester

Principles of Engineering Drafting and the Representation of Machine Elements (with Machine Analysis Lab)

Engineering Mechanics – Statics

Materials Science and Technology 1

Mathematics 1

Engineering Basics with Intercultural Management

Technical English for Academic Purposes

Language 1:

- German Winter Semester (*)
- French for Beginners 1 (*)
- French 1 (*)
- Spanish for Beginners 1 (*)

* Selection depends on your German language skills

2nd semester

Engineering Mechanics – Dynamics

Manufacturing Process Technology (with Lab Course)

Basics of Component Dimensioning

Mathematics 2

Materials Science and Technology 2

Electrical Engineering for Mechanical Engineering and Process Engineering

Language 2:

- German Summer Semester (**)
- French for Beginners 2 (**)
- French 2 (**)
- Spanish for Beginners 2 (**)

** Selection depends on your German language skills

3rd semester

Mathematics 3 and Programming

Thermodynamics

Machine Elements and Design 1

Engineering Fluid Mechanics, Piston Engines, Compressors and Turbines

Dimensioning Components

CAD 3D-Modeling and Simulation

4th semester

Applying Numerical Methods

Machine Elements and Design 2

Engineering Design (with Project)

Environmental and Bioprocess Engineering with Lab

Physical Process Engineering with Practical Case Studies

Academic English Writing

5th semester

Applied Metrology

Automation Technology in Mechanical Engineering

Heat Transfer and Fluid Mechanics

Gear Technology with Lab Sessions

The Finite Element Method

Project in Mechanical or Process Engineering

Elective courses

6th semester

Industrial Placement

Bachelor Thesis with Colloquium

Overview

Degree **Bachelor of Engineering**

Program duration **6 semesters**

Teaching language **English**

Begin **Wintersemester**

Application Deadline **July 15th**

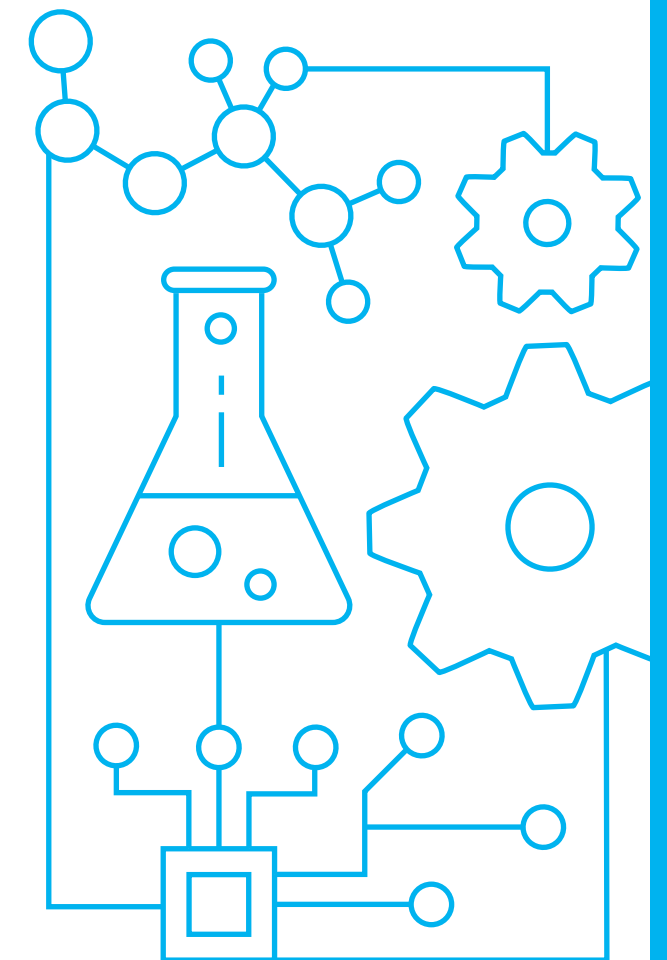
Tuition fees **none**

Admission

- 1 Higher education entrance qualification (Hochschulzugangsberechtigung, HZB) for German universities or German universities of applied sciences
- 2 Language requirements: English Level B2

ingenieur
wissenschaften
htw saar

Mechanical Engineering
Bachelor



Bachelor

Mechanical Engineering



Mechanical Engineering is a vital field that plays a crucial role in shaping the future. Our degree program is designed to be comprehensive, ensuring that students gain a wide range of knowledge and skills. This broad foundation equips our graduates to continually adapt and excel in addressing new challenges throughout their careers.

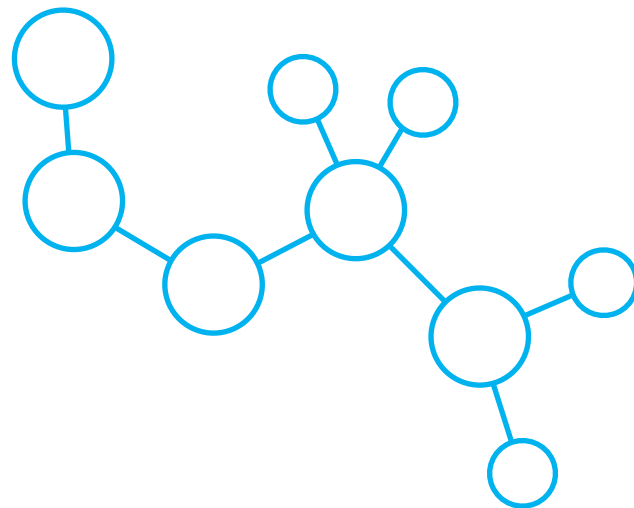


The English-language study program consists of six semesters. Within the first semester you will develop a strong grasp of mathematical basics, engineering mathematics, and project techniques. You'll also gain skills in technical communication and presentation methods while building a base in technical mechanics and materials science through laboratory work. The first semester is rounded off with courses in intercultural management, an introduction to the German language, and insights into the European working environment.

In the second semester, you'll deepen your understanding with CAD software, component design, electrical engineering, and manufacturing processes. The third semester covers thermodynamics, fluid mechanics, 3D CAD and simulation. During the fourth se-

mester, you'll explore numerical mathematics and further your design knowledge through a practical design project, considering manufacturing aspects. The topic of global sustainability is covered in courses like biological and environmental process engineering and physical process engineering with practical case studies.

The fifth semester introduces the finite element method, measurement and automation technology, and involves a large project where you can apply your technical knowledge. The final semester starts with an industrial internship, culminating in your Bachelor's thesis and its defense in a colloquium. Throughout the program, you'll also enhance your technical English skills in specialized courses.



Why Study with Us



In today's globalized world, English is the primary language for many international companies, especially in technology. Our program in Mechanical Engineering is taught entirely in English to prepare you for this global environment. Located in Saarland, a region that has seen significant industrial growth, our program ensures you'll be ready to meet the demands of local and international employers. We integrate German language courses to help you adapt to life and work in Germany, providing a comprehensive, multicultural educational experience.

Career Prospects



Graduates of our Mechanical Engineering program are well-equipped to work in a variety of industries. The program's interdisciplinary approach covers essential subjects such as mathematics, mechanics, and thermodynamics, alongside specialized topics like design, finite element methods, and system planning. You'll be prepared for roles in companies focused on the development and design of mechanical products, machines, and systems, including process engineering

applications like automated production machinery and wastewater treatment plants.

With a solid foundation in traditional mechanical/process engineering, our graduates are highly adaptable and ready for further specialization within companies. Additionally, soft skills gained through courses and projects enhance your ability to work effectively in multicultural environments.

After completing your Bachelor's degree in Mechanical Engineering, you have the possibility (with further language qualifications) to continue with a Master's program, e.g. Engineering and Management at the htw saar.

Potential Employers



Graduates can find opportunities in mechanical and process engineering companies in Saarland, Germany, and abroad. The comprehensive education provided by our program opens doors to positions in various industrial sectors, research facilities, and institutions both locally and internationally.

Embark on a fulfilling career with our Mechanical Engineering program, where we will help you acquire the skills and knowledge to thrive in a global engineering landscape.