

# Studying at the Westfälische Hochschule in Bocholt

The Westphalian University of Applied Sciences ("Westfälische Hochschule" or simply "WH") is a young and modern institution with three campuses. Situated in Gelsenkirchen, Bocholt and Recklinghausen in the former industrial center around the river Ruhr and the picturesque Münsterland, WH features excellent study programs with its traditional key competences in the fields of engineering and technology as well as natural science and business studies. More than 8000 students from over 50 different countries in the world are taught by over 200 highly qualified professors.

With a strong focus on applied learning and close cooperation with regional and international partners in industry and economy, WH fosters the support of international careers. Internships and practical trainings embedded in the curriculum provide the chance to establish a job-related network and ensures a smooth transition to the job market after graduation.

Our learning environment is intimate, working in small groups, where students are supported by lecturers and research assistants. Well-equipped laboratories are used for experimental learning, while participation in development projects for regional companies encourages practical application of course content, and creates new contacts for entry into the professional world.

Standard course duration:

Bachelor: 6 semesters (3 years)

Master: 4 semesters (2 years)

Course commencement:

Bachelor: Winter semester (September)

Master: Winter or summer semester (September, March)

## Contact

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[www.w-hs.de/courses-fb6](http://www.w-hs.de/courses-fb6)

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**Westfälische  
Hochschule**

Gelsenkirchen Bocholt Recklinghausen  
University of Applied Sciences

# Study Opportunities for International Students

at the  
**Westphalian University  
of Applied Sciences  
Department of  
Mechanical Engineering  
Campus Bocholt Germany**

## Industrial Engineering Bachelor of Science (B. Sc.)

Production companies require staff who combine solid technical knowledge with a high degree of economic and social skills, and who are familiar with aspects like productivity and cost-benefit ratios.

Students of this course understand that a successful product is more than just a good technically system. They learn to examine the specific purposes, needs and requirements of industrial users or end consumers, and actively help shape their company's pricing and information policy. They acquire knowledge to continuously improve existing processes and technical procedures, economically optimise these, monitor existing markets and technologies, and thus ensure long-term product success. They are also able to unlock new areas of application, and identify trends for developing new products.

As every production process must be examined from technical, business administration and organisational perspectives, graduates of this course can expect a wide range of work opportunities at production companies in all kinds of industries. Their skills also enable them to work at commercial enterprises, while their organisational knowledge means they can even be employed at service-providing companies.

## Business Engineering Master of Science (M. Sc.)

The Master of Business Engineering is an extension course; it builds on from the Bachelor of Industrial Engineering, enriching and deepening students' existing knowledge. It particularly teaches skills in designing and planning company processes.

The Masters course aims to give students the necessary know-how to manage companies or divisions, particularly in the production industry. It seeks to impart the following skills: Management willingness, planning abilities, organisational skills, understanding of technical contexts and negotiating skills. In addition, personal development and understanding of external issues are also encouraged.

Graduates are able to perform tasks involving planning company processes, controlling, or establishing quality assurance systems. As such, they for example can find employment at companies manufacturing mechanical and plant engineering products. These companies are considered innovative in terms of their products, but require the help of our graduates in questions of business administration.

## Biomimetics Bachelor of Science (B. Sc.)

Enabling natural prototypes to be used at a technical level, improving products, or developing completely new technologies inspired by nature and based on structure-function-relationships found in nature is the world of biomimetics!

In this interdisciplinary course, students initially focus on scientific elements from biology and chemistry, as well as the foundations of mathematics and IT, before moving into technically creating prototypes based on principles found in nature, using methods of mechanical engineering. Course focus areas are Lightweight construction and Sensor systems.

Principles which have endured for millions of years throughout the course of evolution, and which have proven their worth and usefulness, serve as the template for technologies used by modern-day humans.

Hands-on learning at the faculty's own workshops is a key component of this course. Biomimetics graduates can find work anywhere involving product and/or process development in industry and research areas.

## Mechatronics Bachelor of Engineering (B. Eng.)

Mechatronics combines the classic engineering disciplines mechanical engineering, electrical engineering and information technology in one course! Our daily world is full of mechatronic solutions. Key features of mechatronic systems are their mechanical structure, highly dynamic drive systems, smart sensors and microcomputer systems which control interactions between components. Developing and using these systems generates a wide range of challenging tasks for creative mechatronics engineers.

In this interdisciplinary course, students initially focus on fundamental engineering skills. Mechatronics topics are addressed in the course of the study widening the students' knowledge horizon and preparing them for the professional world. Mechatronics graduates are versatile and can find work anywhere involving product and/or process development in industry.

## Mechanical Engineering Master of Engineering (M. Eng.)

This course builds on from the Bachelors courses in Mechatronics and Biomimetics, particularly deepening students' knowledge in the two specialisation areas of robotics and lightweight design.

In both fields, emphasis is placed on expanding the technical knowledge gained from the previous, academically-oriented Bachelors courses, without neglecting the application focus, which is achieved through a deliberately large number of laboratory placements.

Students obtain a qualification enabling them to take on technically sophisticated tasks in development or production as specialists or managers at industrial companies operating in various sectors, such as mechanical and plant engineering or in other fields, e.g. automotive engineering. The first stage of the course teaches the basic knowledge and skills for academic and scientific work. Specialised enrichment in the field of mechanical engineering is then provided in the focus areas of lightweight design and robotics. Special issues in the light weight design area are e.g. design methods, numeric simulation, testing of light weight structures and in the area of the robotics e.g. motion control, embedded systems or optics/vision. In additional projects and in the final Master's thesis students gain a high degree of independence in applying the practical abilities learned.



**Note:** Currently, only some courses are being taught in English, most of them on Master's Level. However, more and more courses will follow. Please consult our web site for an up-to-date list.

