

Mechatronics and Automation

Bachelor

PROGRAMME OBJECTIVES

The English-taught study programme Mechatronics and Automation addresses students of all nationalities, offering an ideal opportunity to get to know "technology made in Germany."

Combining elements from mechanical engineering, electrical engineering and computer science, the programme enables students to enhance technical systems' performance during their development and production. In addition, they will learn how to bring complex technical systems into operation, to service and optimise them. To round off the training, strong project management skills and successful teamwork, also in international teams, are imparted. As part of the programme, students complete a mandatory internship in a company, making it possible for them to gain practical experience and allowing for a smooth start to their careers.

As the programme is taught in English, intercultural aspects are embedded into its contents and students from different cultural backgrounds work together, students are enabled to work in international company projects in an increasingly globalised world. In addition, the English-language programme is intended to prepare international students for the German labour market and to facilitate their access to it.



PROFESSIONAL FIELDS

Thanks to their interdisciplinary training, graduates can work in many industries. Application fields of mechatronic systems include mechanical, vehicle and plant engineering, automation technology, aerospace technology, information and entertainment technology as well as medical technology. Engineers in mechatronics/automation are highly sought after in the mechanical engineering and the electrical industries. Their fields of activity include research and development, construction design, production, quality management as well as technical consulting, service and sales.



PROGRAMME CONTENT

All courses are taught in English.

1st Semester	2nd Semester	3rd Semester	4th Semester	5th Semester	6th Semester	7th Semester
<ul style="list-style-type: none"> – Basics of Business Administration – Future Technologies & Sustainability – Introduction to German Culture & Language/ Intercultural Communication – Basics of Computer Science – Mathematics I 	<ul style="list-style-type: none"> – Innovation & Project Management – Electrical Engineering I – Physics – Object Oriented Programming – Mathematics II 	<ul style="list-style-type: none"> – Digital Electronics – Electrical Engineering II – Engineering Mechanics – Statics and Strength of Materials – Databases – Mathematics III 	<ul style="list-style-type: none"> – Engineering Mechanics - Kinematics and Kinetic – Electrical Measurement Technology – Semiconductor Devices and Circuits – Statistics – Project 1 	<ul style="list-style-type: none"> – Basics of Mechanical Design – Electrical Machines – Measuring Systems and Sensor Technology – Industrial Automation Technology – Project 2 	<ul style="list-style-type: none"> – Mechatronic Systems 1 – Control Technology – Microcontroller Programming – Power Electronics – Internship at a company (obligatory) 	<ul style="list-style-type: none"> – Mechatronic Systems 2 – Drive Technology – Industrial Communication – Bachelor Thesis



PROGRAMME ORGANIZATION

In the study programme Mechatronics and Automation (non-work-integrated), the participants are in the same study group as the students of the work-integrated version. Since they are not permanently employed by a company, students can use the lecture-free period to complete internships, work or take additional courses (e.g. German courses). During the lecture-free periods of the 4th and 5th semester, they prepare term papers on topics assigned by the teaching staff. Alternatively, the term papers may be based on practical projects that are worked on at the university or in companies. During the lecture-free period of the 6th semester, a company internship must be completed. Switching to the work-integrated version is possible, as the courses of study are largely identical.



FACTS

Admission Requirements

- Abitur, Fachhochschulreife or an equivalent school leaving certificate or educational background that qualifies for higher education.
- B2 level in English

Application / Start of Studies

The application deadline is July 15.
Start of study: winter semester

For more Requirements on Admission and Application:



Duration of Study

7 Semester (180 credit points)

Degree

Bachelor of Engineering

Cost

The current contribution amount
➤ www.hsbi.de/kosten

Place of Study

Hochschule Bielefeld –
University of Applied Sciences and Arts (HSBI)
Faculty of Engineering and Mathematics
Gütersloh Campus
– Gleis 13, Haus III
Langer Weg 9 a
33332 Gütersloh
– Flöttmanngelände
Schulstraße 10
33330 Gütersloh
➤ www.hsbi.de/guetersloh

CONTACT

**Hochschule Bielefeld –
University of Applied Sciences
and Arts**
Interaktion 1, 33619 Bielefeld

**General Questions on Studies
Student Advising and Counselling
(Zentrale Studienberatung, ZSB)**
Phone +49 521.106-7758
➤ zsb@hsbi.de
➤ www.hsbi.de/zsb

Questions about the Degree Program

– Prof. Dr.-Ing. Andreas Unger
Phone +49 521.106-70134
➤ andreas.unger@hsbi.de
➤ www.hsbi.de/guetersloh

Questions on Applications / Admission

– Weronika Ludwig
Phone +49 521.106-70797
➤ admission@hsbi.de
➤ www.hsbi.de/internationales

