



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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# Bachelor's degree



## Bachelor of Science in Biomedical Engineering

Technische Universität Ilmenau • Ilmenau

### Overview

Degree	Bachelor of Science in Biomedical Engineering
Teaching language	<ul style="list-style-type: none"><li>• German</li><li>• English</li></ul>
Languages	<p>Courses at TU Ilmenau are held in German.</p> <p>Double degree programme: Courses in China are conducted in English and the Bachelor's thesis has to be written in English.</p>
Mode of study	Less than 50% online
Programme duration	7 semesters
Beginning	Winter semester
Application deadline	<p>Winter semester</p> <p>Application period for students with international certificates: 16 January to 15 May Application period for students with German certificates: 16 April to 15 September</p>
Tuition fees per semester in EUR	None
Joint degree / double degree programme	Yes
Description/content	<p>Biomedical engineering is technology for life. It directly affects human health. Together with medical partners, it develops new methods for the detection and treatment of diseases and implements them in medical technology.</p> <p>The TU Ilmenau has a long and successful tradition in the field of biomedical engineering. Already in the year of 1953, the Institute of Electromedical and Radiological Engineering was established at the former "Hochschule für Elektrotechnik" (HfE), which was the first university institute in Europe that introduced an on-campus biomedical engineering programme.</p> <p>Key aspects of the Bachelor's programme include the following:</p> <ul style="list-style-type: none"><li>• substantiated engineering fundamentals</li><li>• outstanding methodical competence</li><li>• distinct understanding of current medical questions</li><li>• hands-on skills in medical engineering</li><li>• a research-centred course of study</li></ul>

# Course Details

Course organisation	<p>Students start their Bachelor's education with the five semesters at their home university. The sixth and seventh semesters are studied abroad. This also includes the Bachelor's thesis. The topic for the thesis is jointly determined with the supervisors at Tongji Zhejiang University (TZH) and the TU Ilmenau (TUIL). It is jointly supervised and assessed by one supervisor from each university. For the German students, the by-laws can be found the course regulations ("Studienordnung"). The participants are chosen by a joint commission consisting of members from both universities. The decision is based on the marks and the students' state of preparation.</p> <p>The credits are transferred according to a modified Bavarian form, which is part of the German by-laws ("Bachelor-Prüfungsordnung für den Studiengang Biomedizinische Technik (BPO-BB)"). The graduates receive a Bachelor of Engineering degree at TZH and a Bachelor of Science degree (Biomedical Engineering) at TUIL.</p> <p>The Bachelor of Science covers the following modules:</p> <ul style="list-style-type: none"><li>• Mathematics</li><li>• Physics</li><li>• Informatics for BME</li><li>• Electrical Engineering</li><li>• Basics of Electronics</li><li>• Fundamentals of Analogue Circuit Design</li><li>• Signals and Systems</li><li>• Electrical Measurement Engineering</li><li>• Electromagnetic Fields</li><li>• Automatic Control and Systems Engineering</li><li>• Mechanical Engineering</li><li>• Anatomy, Physiology, and Clinical Procedures</li><li>• Neurobionics</li><li>• Introduction to BME</li><li>• Medical Physics</li><li>• Biomedical Measurement and Treatment Technology</li><li>• Fundamentals of Biosignal Processing and Biostatistics</li><li>• Fundamentals in Economics and Management</li><li>• Elective module BME</li><li>• Laboratory and advanced seminar BME</li></ul>
A Diploma supplement will be issued	Yes
International elements	<ul style="list-style-type: none"><li>• Integrated study abroad unit(s)</li></ul>
Integrated study abroad unit(s)	Participants of the double degree programme spend the sixth and seventh semesters at the Tongji Zhejiang University (TZH).
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

## Online learning

Pace of course	Instructor-led (Specific due dates for lectures/assignments/exams)
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Phase(s) of attendance in Germany (applies to the entire programme)	Yes, compulsory
Types of online learning elements	<ul style="list-style-type: none"> <li>• Mobile learning apps</li> <li>• Online sessions</li> <li>• Online study material provided by institution</li> </ul>

## Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Approx. 150 EUR (including a public transportation ticket)
Costs of living	Approx. 860 EUR per month (including apartment)
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	Students can apply for funding at the TU Ilmenau International School.

## Requirements / Registration

Academic admission requirements	There are no specific admission requirements; there are only the general enrolment prerequisites: <a href="https://www.tu-ilmenau.de/fileadmin/Bereiche/Universitaet/Dokumente/Satzungen_und_Ordnungen/Verfahrensordr">https://www.tu-ilmenau.de/fileadmin/Bereiche/Universitaet/Dokumente/Satzungen_und_Ordnungen/Verfahrensordr</a>
Language requirements	<p>Foreign applicants for the regular Bachelor's programme at TU Ilmenau must provide proof of their German language skills. The B1 CEFR language level is the minimum requirement for applying to the programme. The C1 CEFR language level is the minimum requirement for enrolling. More information can be found at: <a href="https://www.tu-ilmenau.de/en/study/before-the-study/range-of-courses/application/language-certificates">https://www.tu-ilmenau.de/en/study/before-the-study/range-of-courses/application/language-certificates</a>.</p> <p>Applicants for the double degree programme must also provide proof of their English skills: at least a TOEFL 550 (paper-based), 213 (computer-based), 78 (Internet-based) or IELTS 6.0 band certificate.</p>
Application deadline	<p>Winter semester</p> <p>Application period for students with international certificates: 16 January to 15 May Application period for students with German certificates: 16 April to 15 September</p>
Submit application to	Online application: <a href="http://www.tu-ilmenau.de/apply">http://www.tu-ilmenau.de/apply</a>

# Services

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## Possibility of finding part-time employment

Temporary jobs are available in local businesses such as shopping malls and supermarkets.

## Accommodation

TU Ilmenau is a campus university. Most of its academic buildings and all of its dormitories are located on the Ehrenberg campus. The dormitories have been renovated in the past few years in order to accommodate students in single and double bedrooms. The Student Guild guarantees all first semester students a room in the dormitories, provided they apply on time. The dormitory rent in Ilmenau is approx. 162-295 EUR per bed per month, depending on the type of apartment and how well it is furnished. Of course, you may also independently look for a privately rented apartment in Ilmenau and the surrounding area. We cannot offer estimates on the cost of private accommodation because prices vary due to the wide range of conditions.

## Support for international students and doctoral candidates

- Welcome event
- Buddy programme

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# Contact

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🌐 Course website: <https://www.tu-ilmenau.de/studium/vor-dem-studium/studienangebot/bachelorstudiengaenge/biomedizinische-technik-b-sc>

📘 <https://www.facebook.com/TU.Ilmenau>

🌐 <https://www.linkedin.com/school/tu-ilmenau/>

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# International Programmes in Germany - Database

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