

# INTERNATIONAL PROGRAMMES

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## Master's degree



## **Master of Science in Biomedical Engineering**

Heidelberg University • Mannheim

### Overview

Degree	Master of Science in Biomedical Engineering
Teaching language	• English
Languages	Courses are held in English. (Some optional supplementary courses are offered in German and can be chosen by students with German language skills who plan to work in a German-speaking environment.)
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	1 February – 15 March for the following winter semester
Tuition fees per semester in EUR	Varied
Additional information on tuition fees	Tuition fees for non-EU students are currently 1,500 EUR per semester. EU students generally do not pay tuition fees. Please check Heidelberg University's website for updated information on tuition fees.
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	The Master's degree in Biomedical Engineering is an interdisciplinary programme open to graduates of physics, computer science, medical technology, biomedical engineering, and mathematics. A firm background in physics, computer science, and mathematics (at least six ECTS credits for each topic) is expected. The Master's programme in Biomedical Engineering emphasises research and offers the option of working in the field of medical physics and/or biomedical engineering with a strong orientation towards computer science. It meets the demand for specialists who not only have knowledge of technical devices and their usage but also have the potential to address the ever-increasing demand for programming abilities, which are likely to dominate technical solutions in medicine in the future. Graduates of this Master's programme are well equipped for various positions in industry and in research.

## **Course Details**

#### **Course organisation**

All taught courses and laboratory rotations are covered in the first three semesters. Students gain fundamental knowledge in anatomy, physiology, genetics, biophysics, and engineering mathematics through mandatory introductory courses in their first study semester. These courses are the basis for advanced courses in radiation therapy, nuclear medicine, medical imaging as well as computational medical physics. These advanced courses can be selected according to students' interests. Students deepen their knowledge in the second and third semesters through practical laboratory rotations and further advanced lectures in image analysis, scientific visualisation, bioinformatics, and computer science-related fields in biomedical engineering. The final semester is reserved for the Master's thesis and a final examination on the overall content of the programme.

Course-specific, integrated
German language courses

No

Course-specific, integrated English language courses

No

## **Costs / Funding**

<b>Tuition fees</b>	per	semester	in
FUR			

Varied

Additional information on tuition fees

Tuition fees for non-EU students are currently 1,500 EUR per semester. EU students generally do not pay tuition fees. Please check Heidelberg University's website for updated information on tuition fees.

Semester contribution

Approx. 190 EUR per semester

Funding opportunities within the university

No

### Requirements / Registration

Academic admission requirements

Bachelor's degree or equivalent (minimum 180 ECTS) in physics, computer science, medical technology, biomedical engineering, or mathematics. A strong basis of knowledge in physics, computer science, and mathematics is an essential prerequisite (minimum of 6 ECTS credits each).

Language requirements

Students whose first language is not English must provide evidence of proficiency. A minimum IELTS band 6.5 or equivalent TOEFL score is required. Exemption from this requirement may be granted to applicants who have completed their higher education in English. (Written proof is required.)

**Application deadline** 

1 February – 15 March for the following winter semester

Submit application to

Chair in Computer Assisted Clinical Medicine Medical Faculty Mannheim Heidelberg University

z.H. Prof Dr Lothar Schad Theodor-Kutzer-Ufer 1-3

#### **Services**

Possibility of finding parttime employment Students are permitted by law to work during their studies. However, we discourage students from working, as the study workload is very intense and students typically find it difficult to combine studies with work. A job may lead to poor study performance.

Accommodation

Accommodation is available through student services at the University of Mannheim and Heidelberg University as well as in privately owned hostels. The monthly rent for a single room in a student residence is approx. between 250 and 400 EUR.

#### **Contact**

#### **Heidelberg University**

Medizinische Fakultät Mannheim

Prof Dr Lothar Schad

Theodor-Kutzer-Ufer 1-3 68167 Mannheim

Course website: https://www.uni-heidelberg.de/en/study/all-subjects/biomedical-engineering/

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## International Programmes in Germany - Database

www.daad.de/international-programmes www.daad.de/sommerkurse

#### Editor

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#### **GATE-Germany**

Consortium for International Higher Education Marketing www.gate-germany.de

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