Faculty of Engineering

Where ‘Made in Germany’ comes to life
International Master’s and doctoral degree programmes
Knowledge in motion

Founded in 1743, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), with its 38,000 students and more than 570 professors is a university with an excellent national and international reputation and an important economic force in the region.

One of FAU's defining features is its commitment to interdisciplinary teaching and research, which frequently go beyond the boundaries of individual subjects. In the spirit of the University's motto ‘Knowledge in motion’, the faculties and departments work together to create a virtually unparalleled range of interdisciplinary degree programmes. High-profile national and international awards as well as excellent placements in research rankings are proof of its strength in research.

FAU is part of a vast international network and maintains close ties with 500 partner universities in 70 countries. It is one of the most attractive German universities for guest researchers from abroad. Every year more and more Humboldt scholars and award-winning researchers choose to base themselves at this Northern Bavarian university.

In this inspiring environment, our students benefit from an outstanding academic education with an international perspective and excellent career opportunities.
Science – Research – Teaching

The Faculty of Engineering was founded in 1966, and has established an excellent reputation in research. In terms of the amount of funding per professor, it consistently ranks among the leaders for the highly competitive and prestigious research funding awarded by the German Research Foundation (DFG).

The Faculty of Engineering consists of five departments:
- Chemical and Biological Engineering
- Computer Science
- Electrical Engineering
- Materials Science and Engineering
- Mechanical Engineering

Its areas of expertise include health technology (in co-operation with Siemens Healthcare), engineering of advanced materials (with the cluster EAM, a world-class research and training programme), optics (in co-operation with the Max Planck Institute for the Science of Light) and microelectronics and nanoelectronics (in cooperation with the largest Fraunhofer Institute in Germany where the word-famous MP3 format was invented).

As the world of engineering is becoming increasingly interdisciplinary, many of the chairs at the Faculty of Engineering work closely with one another in collaborative projects, as well as with chairs at other FAU faculties and other universities. Numerous collaborative projects involving partnerships between industry and the University guarantee that research findings are rapidly transferred to practical applications.

The Faculty of Engineering currently concentrates on the following research fields:
- New materials and processes
- Electronics and power engineering
- Information and communication technology
- Mechatronics and production engineering
- Optical technologies
- Medical engineering

Interdisciplinary topic: Modelling/simulation/optimisation

We strongly believe that our international and interdisciplinary programmes are of great interest for all prospective students who are open-minded and keen to play a part in the international field of engineering.

FACULTY OF ENGINEERING

<table>
<thead>
<tr>
<th>5</th>
<th>departments</th>
</tr>
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<tbody>
<tr>
<td>56</td>
<td>chairs</td>
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<tr>
<td>108</td>
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<tr>
<td>10,000</td>
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<tr>
<td>20%</td>
<td>international students</td>
</tr>
<tr>
<td>24</td>
<td>degree programmes</td>
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The Faculty of Engineering offers a wide range of Bachelor’s and Master's degree programmes (BSc, MSc).

Some degree programmes are offered as part of the Elite Network of Bavaria (ENB) and are designed for especially highly motivated and talented students.

**Programmes taught in English**
- Advanced Materials and Processes, MSc, ENB
- Advanced Optical Technologies, MSc, ENB
- Advanced Signal Processing and Communications Engineering, MSc, ENB
- Chemical and Biological Engineering, MSc (partly in German)
- Communications and Multimedia Engineering, MSc
- Computational Engineering, MSc, ENB possible
- Information and Communication Technology, MSc
- Medical Engineering, specialisation in Medical Image and Data Processing, MSc
- Medical Engineering, specialisation in Health & Medical Data Analytics and Entrepreneurship, MSc

This brochure provides detailed information on these degree programmes taught in English.

**Programmes taught in German**
- Chemical and Biological Engineering, BSc
- Chemical Engineering – Sustainable Chemical Technologies, BSc, MSc
- Computational Engineering, BSc
- Computer Science, BSc, MSc
- Computer Science/IT Security, BSc
- Education (Computer Science), BSc, MSc
- Electrical Engineering, Electronics, and Information Technology, BSc, MSc
- Energy Technology, BSc, MSc
- Industrial Engineering and Management, BSc, MSc
- Information and Communication Technology, BSc
- International Production Engineering and Management, BSc
- Materials Science and Engineering, BSc, MSc
- Life Science Engineering, BSc, MSc
- Mechanical Engineering, BSc, MSc
- Mechatronics, BSc, MSc
- Medical Engineering, BSc, MSc
- Nanotechnology, BSc, MSc
- Technical Vocational Education and Training, BSc, MSc

**Doctoral Programmes**

With a Master’s degree, you can do your doctoral degree (Dr.-Ing.) in nearly any field of study at the Faculty of Engineering. For specific enquiries, you can find contact details on our website. (https://www.tf.fau.eu/faculty-of-engineering/departments-and-chairs/)

The Faculty of Engineering offers one structured doctoral degree programme, the Graduate School of Advanced Optical Technologies (SAOT). Information about this programme is also included in this brochure.
Optical technology is crucial for scientific and industrial development in the 21st century. The Master’s degree programme in Advanced Optical Technologies (MAOT) provides extensive training in all applied fields of modern optical technologies.

Erlangen is one of the leading centres of excellence for optics and optical technologies in Germany and the world. In addition to the MAOT programme, the SAOT doctoral degree programme in optical technologies and the Max Planck Institute for the Science of Light are also based in Erlangen. The application of optics in medicine is supported by an outstanding hospital infrastructure. Two Fraunhofer Institutes, a Helmholtz Institute and the Bavarian Laser Centre complete the picture.

The two-year MAOT programme covers seven topics:
- Optical metrology
- Optical material and systems
- Optics in communication
- Computational optics
- Optics in medicine
- Optical material processing
- Physics of light

Students are taught the fundamentals of optics and lasers, and receive an introduction to all seven topics, from which they choose two as major subjects. In this interdisciplinary programme, lectures are given by experts from physics, medicine, computer science and engineering (electrical engineering, mechanical engineering and chemical engineering).

MAOT has its own teaching rooms and computing facilities for its students. Lectures are held in small groups with a high level of interactivity. The programme is part of the Elite Network of Bavaria. MAOT collaborates closely with the SAOT programme and the Max Planck Institute for the Science of Light.

<table>
<thead>
<tr>
<th>DEGREE</th>
<th>Master of Science</th>
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<tbody>
<tr>
<td>DURATION</td>
<td>4 semesters</td>
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<tr>
<td>PLACE OF STUDY</td>
<td>Erlangen</td>
</tr>
<tr>
<td>PREREQUISITES</td>
<td>Good Bachelor’s degree or equivalent in physics or a relevant engineering subject</td>
</tr>
<tr>
<td>LANGUAGE OF PROGRAMME</td>
<td>English (German language skills are an advantage, but not mandatory)</td>
</tr>
<tr>
<td>APPLICATION DEADLINE</td>
<td>For international students: 15 April For German students: 15 July</td>
</tr>
<tr>
<td>CONTACT</td>
<td>Dr. Jürgen Großmann</td>
</tr>
<tr>
<td>ADDRESS</td>
<td>Paul-Gordan-Straße 6, 91052 Erlangen, Germany</td>
</tr>
<tr>
<td>PHONE</td>
<td>+49 9131 85 25857</td>
</tr>
<tr>
<td>EMAIL</td>
<td><a href="mailto:maot@aot.uni-erlangen.de">maot@aot.uni-erlangen.de</a></td>
</tr>
<tr>
<td>INTERNET</td>
<td><a href="http://www.maot.studium.fau.de">www.maot.studium.fau.de</a></td>
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</tbody>
</table>
Graduate School of Advanced Optical Technologies (SAOT)
Dr.-Ing./Dr. rer. nat.

SAOT provides an interdisciplinary research and education programme of excellence within a broad international network with worldwide leading experts in order to promote innovation and leadership.

The Graduate School in Advanced Optical Technologies (SAOT) offers graduates the opportunity to carry out doctoral research at FAU’s Faculty of Engineering, Faculty of Sciences and Faculty of Medicine.

It covers six fields of research: optical metrology, optical material processing, optics in medicine, optics in communication and information technology, optical materials and systems, and computational optics. Doctoral candidates work on research projects in one of these fields under the supervision of an SAOT principal investigator. In addition to their main field, each doctoral candidate chooses two additional areas in which they attend courses and workshops to acquire a broad knowledge of optical technology. Classes on the fundamentals of optics and optical technologies are also a mandatory part of the programme. During the programme, doctoral candidates have the opportunity to attend academies which encourage intensive team work to find solutions to problems in the field of optics. A credit point scheme encourages doctoral candidates to attend scientific conferences, workshops and lectures, publish scientific papers and acquire soft skills. Research at SAOT can be undertaken in collaboration with three leading research centres in Erlangen: the Bavarian Laser Centre, the Fraunhofer Institute of Integrated Systems and Device Technology, and the Max Planck Institute for the Science of Light.

Some typical research topics include:
→ Particle images for turbulent transport phenomena in combustion systems
→ Sensor-regulated tissue-specific laser surgery
→ Advanced optical surfaces created by nanostructuring
→ Lithographic projection imaging and related optical proximity effects
→ Quantification and differentiated analysis of protein concentration in the aqueous humour

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<tr>
<th>DEGREE</th>
<th>Dr.-Ing. or Dr. rer. nat.</th>
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<tbody>
<tr>
<td>DURATION</td>
<td>7 or 8 semesters</td>
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<tr>
<td>PLACE OF STUDY</td>
<td>Erlangen</td>
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<tr>
<td>PREREQUISITES</td>
<td>Excellent Master’s or Diplom degree in engineering or physics.</td>
</tr>
<tr>
<td>LANGUAGE OF PROGRAMME</td>
<td>English</td>
</tr>
<tr>
<td>APPLICATION DEADLINE</td>
<td>Application is accepted at any time.</td>
</tr>
</tbody>
</table>

CONTACT
Dr. Johannes Knorr
Paul-Gordan-Str. 6,
91052 Erlangen, Germany

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+49 9131 85 25853

EMAIL
saot-administration@fau.de

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www.saot.fau.de
This interdisciplinary programme allows students to specialise in the fields of biotechnology, technical chemistry, process engineering, product design and thermo-fluid dynamics.

Chemical and Biological Engineering (CBI) is a consecutive degree programme which follows on from Bachelor of Science degrees (usually 6 semesters) and leads to a Master of Science degree (usually 4 semesters). Some of the subjects in the Master’s degree programme are taught in English, although the majority of lectures and seminars are held in German. Knowledge of German is therefore necessary.

The degree programme allows students to choose their own areas of specialisation and includes elective and supplementary modules, a three-week project development course, a twelve-week work placement and a Master’s thesis which is completed over six months. Students can choose specialisation modules e.g. bioreaction and bioprocess engineering, chemical reaction engineering, mechanical process engineering, etc. and elective modules e.g. environmental process engineering, plant development and many more.

### Career prospects

One of the main tasks of chemical and biological engineers is to develop processes for material conversion on a laboratory scale and implement them on a production scale.

By optimising these processes, they work to improve product characteristics and to reduce unwanted by-products and waste. Chemical and biological engineers are employed not only in the chemical industry but also in the oil industry, the pharmaceutical industry, the food processing and beverages industries, plant construction, the automotive industry, energy engineering and the environmental protection sector.

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<th><strong>DEGREE</strong></th>
<th>Master of Science</th>
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<tbody>
<tr>
<td><strong>DURATION</strong></td>
<td>4 semesters</td>
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<tr>
<td><strong>PLACE OF STUDY</strong></td>
<td>Erlangen</td>
</tr>
<tr>
<td><strong>PREREQUISITES</strong></td>
<td>Excellent Bachelor’s degree in chemical and biological engineering. The Admissions Committee decides on the equivalence of alternative qualifications.</td>
</tr>
<tr>
<td><strong>LANGUAGE OF PROGRAMME</strong></td>
<td>English and German level B2 required</td>
</tr>
<tr>
<td><strong>APPLICATION DEADLINE</strong></td>
<td>15 July for the winter semester, 15 January for the summer semester</td>
</tr>
</tbody>
</table>

**CONTACT**

Karin Jess  
Immerwahrstr. 2a,  
91058 Erlangen, Germany  
+49 9131 85 67598  
karin.jess@fau.de  
www.cbi.studium.fau.de
MAP is a combination of materials science and engineering with chemical and biological engineering.

These disciplines play a key role in the development of novel technologies – without new materials, a great range of key inventions from digital computers or jet engines to customised medical implants would not have been possible. Novel materials with new functionalities or improved properties, however, require specifically designed, economically and environmentally sustainable production processes – which might themselves depend on the development of new catalyst materials. This close correlation between processes and materials is of key importance for advances and innovations in virtually any field of technology. Chemical and biological engineering and materials science and engineering are thus highly intertwined fields.

MAP is an interdisciplinary Master’s degree programme taught in English that provides a unique curriculum for the next generation of engineers. Students follow an individual curriculum to learn in small groups the fundamentals of chemical and biological engineering and/or materials science and engineering. Four focal subjects allow students to further deepen their knowledge in key technological areas:

→ Advanced processes
→ Biomaterials and bioprocessing
→ Computational materials science and process simulation
→ Nanomaterials and nanotechnology

MAP is a highly-selective, accredited 2-year Master’s degree programme and is part of the Elite Network of Bavaria (ENB). It is characterised by a very low student-to-staff ratio, early involvement in cutting-edge research through miniprojects and literature reviews, special events such as summer schools and the availability of educational grants. Furthermore, students can gain additional qualifications for an academic career or for a career in industry through specialised modules with extra credits.

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<th>DEGREE</th>
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<tbody>
<tr>
<td>DURATION</td>
<td>4 semesters</td>
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<tr>
<td>PLACE OF STUDY</td>
<td>Erlangen, partly in Bayreuth and Würzburg</td>
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<tr>
<td>PREREQUISITES</td>
<td>Excellent Bachelor’s degree or equivalent in chemical and biological engineering, materials sciences or related subjects</td>
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<tr>
<td>LANGUAGE OF PROGRAMME</td>
<td>English proficiency demonstrated through a high TOEFL or IELTS score</td>
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<tr>
<td>APPLICATION DEADLINE</td>
<td>1 June; 31 March recommended for non-EU citizens</td>
</tr>
</tbody>
</table>

CONTACT
ADDRESS
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+49 9131 85 28620

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map-applications@fau.de

INTERNET
www.map.tf.fau.de
The programme focuses on fundamental concepts of modern technologies in the areas of signal processing and communications, such as: information theory, coding, statistical signal processing, machine learning, pattern recognition, optimisation and game theory.

ASC is designed for outstanding students with Bachelor’s degrees in electrical engineering, communications engineering, computer science, or closely related disciplines, who have ambitious career goals.

Students deepen the broad interdisciplinary scope of these topics by choosing from various areas of specialisation:

→ advanced technologies in the areas of signal processing and communications
→ machine learning for image recognition, audio and video
→ next-generation wireless systems (mobile and pervasive networks)
→ intelligent networks (smart grids)
→ distributed optimisation and computing

Through hands-on experiments and research projects, students can build a solid understanding in one or more of the technical subjects. Additional training in soft skills provides insights into project and people management, teamwork and business development. Each ASC student is assigned one of the ASC teaching staff as an individual mentor and personal point of contact for the entire duration of the degree programme to ensure the highest possible quality of education and training. Students are strongly encouraged to publish research results and participate in conference presentations.

ASC scholarship: ASC students are guaranteed work as research assistants during their study, which is a great way of gaining hands-on research experience while getting paid.

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<tr>
<th>DEGREE</th>
<th>Master of Science (MSc)</th>
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<tr>
<td>DURATION</td>
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<tr>
<td>PLACE OF STUDY</td>
<td>Erlangen</td>
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<tr>
<td>PREREQUISITES</td>
<td>Outstanding Bachelor’s degree in electrical engineering, communications engineering, computer science, or closely related disciplines. Allocation of study places is based on academic performance.</td>
</tr>
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<td>LANGUAGE OF PROGRAMME</td>
<td>English</td>
</tr>
<tr>
<td>APPLICATION DEADLINE</td>
<td>Applicants from Germany and other EU countries: 15 July Applications from non-EU countries: 15 March</td>
</tr>
<tr>
<td>CONTACT ADDRESS</td>
<td>Dipl. Pol. Joanna Kudanowska Cauerstr. 7, 91058 Erlangen, Germany</td>
</tr>
<tr>
<td>PHONE</td>
<td>+49 9131 85 27155</td>
</tr>
<tr>
<td>EMAIL</td>
<td><a href="mailto:asc-admission@fau.de">asc-admission@fau.de</a></td>
</tr>
<tr>
<td>INTERNET</td>
<td><a href="http://www.asc.studium.fau.de">www.asc.studium.fau.de</a></td>
</tr>
</tbody>
</table>
Students who want to understand the underlying principles of current communication and multimedia technologies will find a stimulating environment in the CME degree programme and will learn to apply solid theory to achieve practically relevant solutions.

CME is designed for graduates of Bachelor’s degree programmes in electrical engineering, communication engineering, computer science, applied mathematics or physics and focuses on the fundamental concepts of advanced communications and multimedia.

The main contributors to the curriculum are the Chair of Digital Communications and the Chair of Multimedia Communications and Signal Processing. Based on a profound and broad working knowledge in these key areas, students are also encouraged to pursue their personal interests in areas such as audio, electronics, optical communication systems or medical image and video processing. In this way, the curriculum paves the way to careers in research and advanced development in world-class academic institutions and industry for audio, multimedia, and communications, and many other areas where these qualifications are in high demand.

The programme structure complies with internationally recognised Master’s degree programmes and meets the requirements for subsequent doctoral studies.

Career prospects:
Fundamental and applied research, product development, maintenance and customer support, sales and distribution, project management, consulting, patent law, employment at public authorities.

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<th><strong>DEGREE</strong></th>
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<td><strong>DURATION</strong></td>
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<td><strong>PLACE OF STUDY</strong></td>
<td>Erlangen</td>
</tr>
<tr>
<td><strong>PREREQUISITES</strong></td>
<td>Bachelor’s degree in information and communication technology, electrical engineering, computer science or a related subject. Allocation of study places is based on academic performance.</td>
</tr>
<tr>
<td><strong>LANGUAGE OF PROGRAMME</strong></td>
<td>English</td>
</tr>
</tbody>
</table>
| **APPLICATION DEADLINE** | Applicants from Germany and other EU countries: 15 May  
Applicants from non-EU countries: 15 March |
| **CONTACT**      | Dipl. Pol. Joanna Kudanowska  
Cauerstr. 7,  
91058 Erlangen, Germany  
+49 9131 85 27155  
studienberatung-cme@fau.de  
www.cme.studium.fau.de |
The programme focuses on fundamental concepts of modern technologies in the areas of embedded systems, networks and digital communication and media processing systems.

Today, life and the world of work are all part of the information society. A number of innovations throughout the world are based on ensuring an increasing volume of information can be exchanged efficiently and processed intelligently. Various components have to interact with each other in nearly all electronic devices. A knowledge of both hardware and software is required to be able to successfully develop such systems. Information and Communication Technology (ICT) combines the most important areas of electrical engineering, electronics, and communications engineering, as well as computer science.

Students of ICT develop and conduct research in the following fields:

- Innovative audio and video technologies (multimedia)
- Intelligent electricity networks (smart grids)
- Energy-efficient IT systems (green IT)
- Fast transmission technologies
- Optimised medical technologies (e.g. telemedicine, digital hearing aids)

Engineers who have studied information and communication technology are constantly identifying new and varied fields of work. Interdisciplinary technology of this nature is vital for most tasks and products in high-tech industries. ICT technologies are also used in the automotive sector, for example, or for the development of embedded systems.

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<th>DEGREE</th>
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<tr>
<td>PLACE OF STUDY</td>
<td>Erlangen</td>
</tr>
<tr>
<td>PREREQUISITES</td>
<td>Bachelor’s degree in electrical engineering, communications engineering, computer science, or closely related disciplines. Allocation of study places is based on academic performance.</td>
</tr>
<tr>
<td>LANGUAGE OF PROGRAMME</td>
<td>English/German</td>
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</table>
| APPLICATION DEADLINE | For winter semester: 15 July  
For summer semester: 15 January |
| CONTACT ADDRESS | Dipl. Pol. Joanna Kudanowska  
Cauerstr. 7,  
91058 Erlangen, Germany |
| PHONE           | +49 9131 85 27155       |
| EMAIL           | studienberatung-iuk@fau.de |
| INTERNET        | www.ict.studium.fau.eu  |
Computational Engineering – Combining engineering with high-performance computing expertise.

The international Master’s degree programme in Computational Engineering goes beyond the engineering and applied mathematics to prepare students perfectly for new challenges in simulation and modelling.

It is designed to allow students to study computer science together with one of the following fields of engineering of their choice, called the technical application field (TAF):

- Automatic control
- Computational materials science
- Computational optics
- Information technology (digital transmission and digital signal processing)
- Mechatronics
- Medical engineering
- Solid mechanics and dynamics
- Thermodynamics and fluid dynamics

‘Do more – get more’: Outstanding students have the opportunity to join the Bavarian Graduate School of Computational Engineering (BGCE). They attend additional courses, some of which are held at Technische Universität München, and improve their scientific and soft skills as part of the Elite Network of Bavaria (ENB).

Double degree: Students can obtain a second Master’s degree from Università della Svizzera italiana (USI) in Lugano, Switzerland. There are no tuition fees for the double degree programme. To receive this double degree, students must obtain a total of 120 ECTS with at least 30 ECTS from USI and 30 ECTS from FAU.

Career prospects
Simulation of technical processes, scientific visualisation, process optimisation, virtual product development and design

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<tr>
<td>PLACE OF STUDY</td>
<td>Erlangen</td>
</tr>
<tr>
<td>PREREQUISITES</td>
<td>Excellent Bachelor’s degree or equivalent qualification in computer science, in a related field of science or engineering, or in mathematics.</td>
</tr>
<tr>
<td>LANGUAGE OF PROGRAMME</td>
<td>English (TOEFL or equivalent), German language skills are an advantage but not mandatory</td>
</tr>
<tr>
<td>APPLICATION DEADLINE</td>
<td>15 April (non-EU applicants) 15 July (EU applicants)</td>
</tr>
</tbody>
</table>

CONTACT
ADDRESS
Martensstr. 3, 91058 Erlangen, Germany
PHONE +49 9131 85 27998
EMAIL studienberatung-ce@fau.de
INTERNET www.ce.studium.fau.eu
### Engineering meets medicine

Increasing progress in medicine requires innovative development and improved procedures, especially in the field of medical engineering. The Master’s degree programme in medical engineering provides a specific interdisciplinary education based on solid technical studies along with basic medical knowledge.

It is open to students with a Bachelor’s degree in medical engineering or a related field of engineering. All applicants have to pass a qualification assessment procedure with a strong focus on programming skills, computer science, electrical engineering and mathematics.

Within the Master’s degree programme, the specialisations ‘Medical image and data processing’ and ‘Health & medical data analytics and entrepreneurship’ (HMDA) are offered completely in English. Both provide students with in-depth expertise and methodological skills related to software systems in medical engineering. These range from basic algorithms for image enhancement, image reconstruction, image registration and computer-based diagnosis support to medical information systems. ‘HMDA’ also offers students a thorough education in business.

In addition to compulsory and elective modules, the Master’s degree programme includes key qualification courses, practical research and the Master’s thesis.

### Degree Details

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<td>DURATION</td>
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<td>PLACE OF STUDY</td>
<td>Erlangen</td>
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<tr>
<td>PREREQUISITES</td>
<td>Bachelor’s degree in engineering or equivalent qualification in a related subject; proof of English proficiency (internet based TOEFL min. 90, paper based TOEFL min. 577, IELTS min. 6.5, Cambridge Certificate in Advanced English or UNIcert III)</td>
</tr>
<tr>
<td>LANGUAGE OF PROGRAMME</td>
<td>English</td>
</tr>
<tr>
<td>APPLICATION DEADLINE</td>
<td>15 July (for the winter semester), 15 January (for the summer semester)</td>
</tr>
</tbody>
</table>

### Contact Information

| CONTACT               | PD Dr. Tino Haderlein, Dr. Felix Schmutterer |
| ADDRESS               | Martensstraße 3, 91058 Erlangen, Germany |
| PHONE                 | +49 9131 85 67337 |
| EMAIL                 | studienberatung-medizintechnik@fau.de |
| INTERNET              | www.medical-engineering.study.fau.eu |
Excellent support for excellent students

In 2004, the Bavaria government launched a programme in collaboration with the Bavarian Industry Association with the goal of supporting young academic talents.

Four of the international Master's degree programmes at the Faculty of Engineering belong to this programme, the Elite Network of Bavaria (ENB):

- Advanced Optical Technologies
- Advanced Materials and Processes
- Advanced Signal Processing and Communications Engineering
- Bavarian Graduate School of Computational Engineering

The Elite Network of Bavaria provides ideal conditions for highly qualified students

Students are also invited to attend summer or winter academies. The courses offered in these academies range from specific subject-related courses to soft skills workshops.

The elite degree programme runs in parallel to the standard degree programme. (www.elitenetzwerk.bayern.de)

The SAOT graduate school at the Faculty of Engineering supports young researchers by training outstanding doctoral candidates in an excellent research environment (see page 7).
FAU is located in southeast Germany at the heart of the Nuremberg Metropolitan Region, one of Germany’s most dynamic economic areas with over 3.5 million inhabitants.

Two cities
The Faculty of Engineering is situated in the south of Erlangen, a city with about 100,000 residents. Its baroque city centre was built around a Margrave’s residence with an extensive garden. The original residence is now home to the university administration.

Nuremberg, which has a population of half a million is a thriving city with an important historical heritage including its medieval castle and city wall. An excellent train connection links both cities. There is also an international airport in Nuremberg.

Culture
A wide variety of cultural events are offered at numerous cinemas, theatres and the town hall in Erlangen, e.g. the biennial Comic Salon, the Long Night of Sciences with a huge programme of lectures and shows throughout Erlangen, Fürth and Nuremberg, and, of course, the beautiful Schlossgartenfest, the University’s annual black-tie event. At Whitsun the famous Bergkirchweih beer festival attracts thousands of people with music and entertainment.

Thanks to its greater size and its historical background, Nuremberg has even more to offer. The castle above the historic city centre, the theatre, the opera house and the Germanisches Nationalmuseum are always worth a visit.

Some of the major annual events in Nuremberg include the internationally famous Rock im Park music festival, the Blue Night with its wide variety of music, cabaret and arts, the mediaeval jousting tournament in the historical moat, and of course the world famous Christmas market which is held during Advent.

Leisure
Sports clubs, swimming pools, tennis and squash courts, and other sports facilities provide plenty of possible leisure activities. The University offers its own university sports and music programme for all students and staff. Furthermore, the cities of Erlangen and Nuremberg with their bars, clubs and shopping centres cater for the social side of student life.

Transport
Bicycles are without doubt the preferred form of transport in the flat, bike-friendly town of Erlangen. However, there is also a very good public transport network.

Surrounding area
Situated to the south of Erlangen and Nuremberg is the Franconian Lake District where there are many opportunities for water sports enthusiasts. To the north is the city of Bamberg, a UNESCO World Heritage Site. Finally, the scenic region northeast of Erlangen known as Franconian Switzerland is a great place to go hiking, climbing, and canoeing, and has many beer gardens.
The best career opportunities – in the region and everywhere else

FAU is firmly rooted in the Nuremberg Metropolitan Region, where it is an important partner for companies, industry, politics, culture, and society.

At the forefront of research, the University contributes to identifying and solving technological, social and cultural challenges. FAU graduates profit from the Metropolitan Region’s perfect conditions for starting their professional or academic career.

Key aspects
The biggest strengths of the Metropolitan Region are transport and logistics, information and communication, medicine and pharmaceutics, energy, power electronics and environment, new materials, automation technology, and innovative services. Branches of all large banks and insurance companies are located in the region.

Some of the major companies situated in the Nuremberg and Erlangen area are Adidas, Alcatel-Lucent, Areva, Bosch, DATEV, Diehl, Faber-Castell, INA-Schaeffler, LEONI, MAN, Nestlé Schöller, Novartis Pharma, Puma, Schwan-Stabilo, and Siemens. There are also numerous small and medium-sized businesses, for example in health technology, that offer a variety of professional prospects in the region.

Collaboration
FAU’s co-operation partners include globally-operating companies such as Siemens, Audi, and Adidas, to name only three. Collaborations with regional and national companies from all lines of business allow for a direct transfer of research results.

Subject-specific placements, theses and student jobs with companies allow FAU students to gain insight into different occupational fields as well as important practical experience. This is why the highly qualified graduates of FAU are sought-after employees both in Germany and abroad.
Tuition fees
Tuition fees in Germany are comparatively low. Since 2015/16, FAU does not charge tuition fees but requires students to pay approx. 120 euros per semester for transport and student services. All university facilities can be used by students free of charge. There is no charge for examinations. Some specific language courses must be paid for separately.

Scholarships
FAU does not have a general scholarship scheme. However, the German Academic Exchange Service (DAAD) offers scholarships for international students (http://www.daad.de).

Support when you arrive in Erlangen
We help you find your feet in your new home and make new friends! The Office of Student Information and Advice (https://www.tf.fau.eu/studying/office-for-student-information-and-advice-stib/) and international degree programme staff provide special support for students during their first weeks in Erlangen. Additionally, the Central Office for International Affairs (RIA) (https://www.fau.eu/international/central-office-for-international-affairs/) offers a buddy programme and is available to answer any questions that international students may have.

University services
The Student Advice and Career Service (IBZ) is the University’s main point of contact for students in all questions regarding degree programmes, admission regulations, and application procedures, as well as course schedules and examinations. The Career Service supports both students and graduates in planning and managing their career with a wide variety of professional cross-faculty events and counselling.

In addition to its excellent teaching facilities, the University has many features which enrich student life: FAU has various libraries, cafeterias, German and other language courses, sports facilities (including facilities for sailing and climbing), an orchestra and choir, student associations, a family service, and cultural events. All this and more means you are sure to find everything you need while you are studying in Erlangen!

Academic calendar
Winter semester: 1 October to 31 March
Lecture period: mid-October to mid-February
Summer semester: 1 April to 30 September
Lecture period: mid-April to mid-July
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