Increasing progress requires innovative development and improved procedures especially in the field of medical engineering. More than ever, enterprises in the field of medical technology are in need of specialists with an engineering as well as a medical background. A specific interdisciplinary education based on solid technical and scientific studies along with basic medical knowledge about physiological processes in the human body creates the qualification for further development of medical devices and materials.

**Fields of Activity**
- Further/new development of imaging techniques
- Development of highly complex devices for diagnostics and therapy
- Development and application of novel materials for implants and prosthesis
- Development of surgical robots and assisting systems

In addition to working in research, various job opportunities present themselves to graduates of healthcare engineering in locations like medical technology companies or hospitals. A specialisation on topics like development, quality control, sales, and counselling or technical service and training for the handling of medical technical devices are further important assignment areas.

**City of Erlangen and region**
Erlangen, a lively city full of students, open to the world and with a strong standing in economics, is situated at the center of the dynamic “Metropolis of three cities” Erlangen-Nuremberg-Fürth. With more than 100,000 inhabitants (1/3 students), Erlangen offers the ideal size for living, learning and enjoying one’s time. The broad variety in the areas of cultural and leisure options opens up many possibilities for night owls as well as culture and sports enthusiasts. For more info, see www.erlangen.de and www.nuernberg.de

**Contact:**
Chair of study programme: Dr. Andreas Maier  
Programme advisor: Claudia Barnickel  
Phone: (+49) 9131 – 85 37775 (Secretary) (+49) 9131 – 85 67337  
E-Mail: studienberatung-medizintechnik@fau.de

**Adress:**
Martensstraße 3  
Computer science tower 9th floor  
91058 Erlangen

**Internet:**
www.medical-engineering.study.fau.eu
Bachelor Studies – Curriculum

The two branches of study “Imaging Techniques” and “Medical Devices and Prosthetics” are the ideal preparation for the master programme. The master programme Medical Engineering (4 semesters) can be started after successfully completing a subject-related bachelor programme. It offers interesting branches of study and the formation of one’s own profile. Only one branch is taken in English!

Medical Electronics

In the medical electronics programme, in-depth skills regarding hardware and software systems of medical devices are acquired. Fundamentally, knowledge of the engineering sciences in the field of electronic engineering, telecommunications, and information technology are the basis for this branch.

Medical Image and Data Processing

In this branch of study, the graduates gain in-depth expertise and methodological competence for construction and manufacturing of high-class medical-technical devices and implants in consideration of the interdisciplinary and the special biological surroundings at or within the human body.

Medical Devices, Manufacturing Engineering, and Prosthetics

Besides obligatory and optional modules, the flexible master programme is made up of courses for personal competence build-up and of the Master’s thesis. Additionally, a research internship is integrated in the curriculum, which deepens scientific work. Depending on the choice of studies – either Medical Image & Data Processing, Medical Electronics, or Medical Devices & Manufacturing – one may decide on several propositions of the particular obligatory modules of the respective course.

The M. Sc. graduation is the precondition to continue your research-oriented career with a doctorate’s programme.

What about the career prospects?

The global market for medical devices is valued at approximately 200 Billion Euros at present. The growth of the market is predicted to be approx. 11%, which correlates to the average growth of sales in past 5 years. The strong position results from the fact that approx. 10 % of all medical engineering’s employees are engaged in the medical engineering sector in Germany. Especially trained employees for medical engineering are still sought-after.