

Information Sheet

Course of Study

Medical Engineering (Master)

General Information

This master programme provides the skills and competences required for a leadership position in an internationally operating company in the medical engineering industry. Typical fields of activity include for example:

- Development and innovation management
- System development and medical technology management
- IT and imaging methods
- Research and development in medical engineering
- Simulation-based development processes
- Diagnostics
- Process and quality management

The Programme

The degree programme is a joint study programme of OTH Amberg-Weiden and OTH Regensburg, with each institution focussing on a different area of specialisation. The focus of OTH Amberg-Weiden lies on **Technologies and Systems** (core area 1), while the OTH Regensburg focusses on **Research and Development** (core area 2).

The programme is three semesters in duration with two semesters of classroom instruction and one semester intended for the final research project. It involves lectures and seminars worth 90 ECTS points.

There are three general modules that have to be taken by all students regardless of their area of specialization:

- Standards of Practice for Medical Products (first semester)
- Innovation Management (second semester)
- Final Project (third semester)

In addition to the general modules above, students have to take five compulsory modules, either from core area 1 or core area 2, depending on their area of specialization.

Core area 1 (OTH Amberg-Weiden):

- Orthopaedic Technology
- Point of Care and Molecular Diagnostics
- Machine Vision and Pattern Recognition
- Product Management and Medical Technology Planning
- System Development in Medical Engineering

Core area 2 (OTH Regensburg):

- Optimisation
- Biomaterials
- Biomechanical Modelling, Testing and Simulation
- Materials Science
- Experimental Technology and Data Analysis

In the second semester, students have to choose at least five modules from the following module catalogues:

OTH Amberg-Weiden:

- Bioelectrical Signals
- Brain-Computer Interfaces (BCI)
- Hygiene and Cleanroom Technology
- Advanced Medical Imaging
- Personalised Medicine
- Project Work
- Computational Fluid Dynamics

OTH Regensburg:

- Project Work
- Computational Fluid Dynamics
- Tissue Engineering
- Dental Biomaterials
- Corrosion and Degradation of Biomaterials

The successful completion of the programme leads to the academic degree of **Master of Science (M. Sc.)**

Director of Studies

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