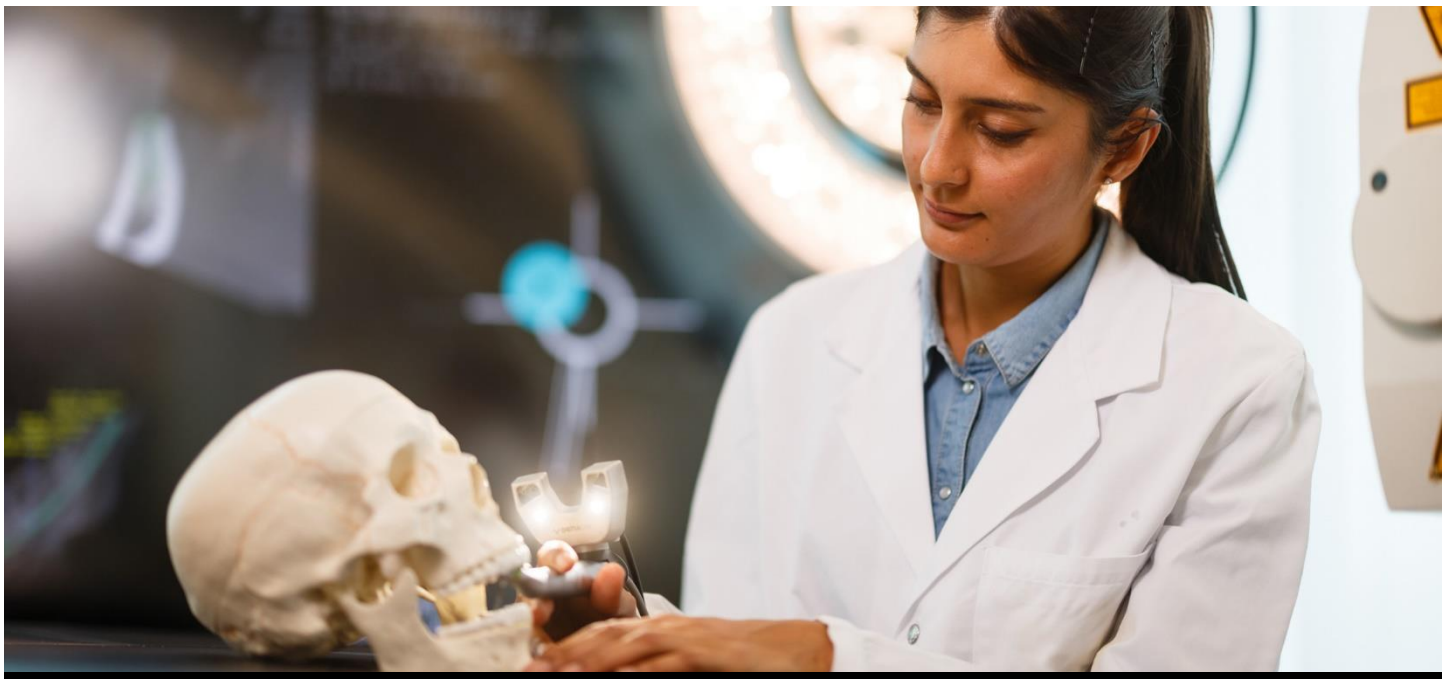
Fachhochschule Nordwestschweiz
Hochschule für Life Sciences

Universität Basel



Joint Degree Master in Biomedical Engineering

The Biomedical Engineering specialisation empowers diagnostics and therapy based on technology and engineering.

The Biomedical Engineering specialisation empowers diagnostics and therapy based on technology and engineering. This degree is a joint degree between FHNW School of Life Sciences and University of Basel.

Biomedical Engineering is a rapidly developing new discipline that applies engineering tools and methods to medical diagnostics and treatments. Students pursuing our program can specialize in a broad range of subdisciplines including implants and regenerative technologies, image acquisition and therapies, computer-assisted surgery, or diagnostic and therapeutic technologies. This interdisciplinary education in medical devices for diagnostic and therapeutic interventions puts our students into a privileged position to develop a career in a thriving academic or industrial environment.

Programme Goals
Students develop solid theoretical and applied knowledge of biomedical engineering, including state-of-the-art medical image acquisition and image analysis, a broad range of current and novel diagnostic and therapeutic technologies, innovative medical robotics and visualization systems for surgery as well as additive and conventional generation and characterization of implants and regenerative technologies.

Contents
Biomedical Basics or Engineering Basics, Biomedical Engineering Basics, Medical Systems Engineering or Biomaterials Science and Engineering, Specialisation modules (see below), Project work and practical skills, Master's thesis

Specialities
Computer and Robot Assisted Medicine; Image Acquisition and Analysis; Diagnostic and Therapeutic Technologies; Implants and Regenerative Technologies

Structure
Semester 1 & 2: courses
Semester 3: specialisation courses and 1-2 days training practical skills.
Semester 4: research for the master's thesis.

Target Group
Bachelor students with an engineering background, Bachelor students with a medical background, Bachelors in disciplines such as mathematics, computer science, physics, biology and similar

Requirements
English Language Skills, Bachelor in a medical, scientific or engineering discipline

Duration
4 semesters, full-time and part-time possible with extended length

Degree
Joint Degree Master in Biomedical Engineering

Course Directory

Workload
Part time study possible; full time study recommended
3000 – 3600 h total (corresponds to 120 ECTS)

Dates
Monday to Friday

Location
University of Basel and FHNW Campus Muttenz

Teaching method
Lectures, exercises, practical training, problem-based learning, autonomous learning, research-oriented learning, seminars

Costs
850 CHF per semester

Cooperation
FHNW School of Life Sciences and University of Basel

Programme Co-Heads
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Further Information

Registration
The Application is handled via the University of Basel
https://www.unibas.ch/de/Studium/Bewerbung-Zulassung/Anmeldung.html