



FACULTY OF BIOMEDICAL ENGINEERING



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OF BIOMEDICAL
ENGINEERING
CTU IN PRAGUE

The Faculty of Biomedical Engineering in Kladno is the second youngest faculty of Czech Technical University in Prague being, at the same time, the only public institute of higher education in the Central Bohemian Region. It was founded in 2005 and its allocation to Kladno proved highly beneficial from the very beginning.



TOP RESEARCH

- Interaction of XUV radiation with biological objects
- Optimization of mechanical lung ventilation
- Nanocomposite and nanocrystalline materials for implantology and biomedicine
- Biotelemetry systems for monitoring and supporting treatment of diabetes patients
- Health technology assessment for medical devices
- Rehabilitation process quantification
- New trends in disaster medicine
- Evaluation of immediate eye, head, limbs and body position in clinical practice
- Development of high-speed thin-layer scintillators for high-resolution imaging
- New quantum detection technologies for sensing in intracellular environment



STUDY PROGRAMMES IN ENGLISH

Bachelor's Degree Programme

Biomedical Technician

The graduates can work in medical establishments with medical instrumentation technology; they are also able to assist during examination of a patient by the medical imaging techniques as well as during other examinations which demand working with technology. The graduates can be employed not only as technical staff of medical establishments but also as technicians and managers of production, development and service medical companies. The study branch is accredited by the Ministry of Health of the Czech Republic and after completion of studies the graduates obtain the certificate of professional qualification to practice the profession of biomedical technician pursuant to sec. 20 of Act N. 96/2004 Coll.

Master's Degree Programme

Biomedical Engineering

Biomedical Engineering – CEMACUBE (Common European MAster's CoUrse in Biomedical Engineering, Erasmus Mundus) – Double Degree with RWTH Aachen, Germany

The graduates will obtain the overview of biomedical and clinical technology in compliance with the current development of this area. In medical establishments, they will be able to operate, check and maintain diagnostic and therapeutic devices and their software, including assistance to the doctors during examination of the patients. They will be able to arrange activities connected with keeping the records and operation of medical devices. Due to their ability to participate in development and research activities especially of the experimental nature, they will be able to find a job with institutions dealing with development, production, sale and servicing of medical devices or programming of diagnostic and therapeutic devices and methods designed for healthcare industry. The study branch is accredited by the Ministry of Health of the Czech Republic and after completion of studies the graduates obtain the certificate of professional qualification to practice the profession of a Biomedical engineer pursuant to sec. 27 of Act N. 96/2004 Coll.

Instruments and Methods for Biomedicine

This study programme prepares engineers for working in the development and utilization of complicated instrumentations technology in biology and medicine. On the one hand, the graduates will gain the knowledge of optics and optical devices, ionizing and non-ionizing radiation, measuring instruments in medicine, spectroscopy, biocompatible materials and application of lasers in biomedicine and on the other hand they will be acquainted with molecular biology, simulation of physiological systems, cytology a cytogenetics.

Systematic Integration of Processes in Health Service

The study is aimed at preparation of engineers for the organizationally-technical work in hospitals, hygienic stations, commercial sphere etc. Students of this branch will gain theoretical knowledge as well as practical experience not only in the technical, or more precisely the economic branches, but in necessary extent also in biology and medicine. This allows the graduates to communicate with both doctors and other mediinsurance companies. The study branch is accredited by the Ministry of Health of the Czech Republic and after completion of studies the graduates obtain the certificate of professional qualification to practise the profession of a Medical laboratory technician pursuant to sec. 9 of Act N. 96/2004 Coll.

Doctoral Degree Programme

Biomedical and Clinical Technology

This is an interdisciplinary study branch focused on rapid development of modern technologically complicated devices for medicine and biology.



CONTACTS

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