

Biotechnical Science and Engineering

National Research Tomsk Polytechnic University

Degree or qualification is awarded: **Master**

Language of study: **English**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **3 400 - 3 800 Euro/year**

Programme curator: **Gubarev Fedor Alexandrovich**

Tel.: **+7 3822 701 810**

E-mail: gubarevfa@tpu.ru

This project is focused on developing new network Master's Degree (NMD) Program “Biomedical Sciences and Engineering”, which is a branch of the general direction 12.04.04 – “Biotechnical Systems and Technologies”. The program will be a new element in the educational structure of Tomsk Polytechnic University (TPU). Siberian State Medical University (SSMU, Tomsk) is one of the partners.

Graduates will be prepared for scientific, engineering, manufacturing, managerial, educational and expert activities in the field of design and maintenance of new types of biomedical and environmental equipment, data acquisition and processing of biomedical and environmental information as well as monitoring and control of living systems, supporting their life activities.

The NMD program is based on an interdisciplinary teaching approach and includes basic medicine and biology, cell technologies, technologies of biocompatible material, bioinformatics and high performance computing.

The originality of the program is due to careful selection of academic disciplines and topics of scientific research, the results of which are widely used for teaching purposes. The list of main topics includes:

- augmented reality and its application in biomedicine
- software and hardware for medical visualization including X-ray, computerized tomography,
- ultrasound and electrical impedance tomography
- electrophysical methods and their application in medicine
- development and medical application of the betatron
- coherent and non-coherent light sources for medical diagnostics and therapy

Specializations within this programme