Bioengineering information-measuring systems of medical purposes;
Mathematical methods, Software complexes for processing and intellectual analysis of biomedical information;
Methods and systems for remote monitoring of the patient's health state;
Methods and systems for automated screening of the population health state;
Methods and systems for physician's decision-making support;
Instrumental methods and systems for diagnostics, health state monitoring and rehabilitation.

Devices, systems and products of medical purposes;
Devices and control methods of the environment, substances, materials and productions.

The department participates in joint educational programs with the universities of Finland, Great Britain, Germany, international scientific projects in biomedical engineering.
The department of Bioengineering Systems was established in 1962 and it was the first department in the country that started training of certified specialists in the field of biomedical engineering.

The Department Faculty consists of:
- 13 Professors, Doctors of Sciences;
- 8 Associate Professors, Ph. D;
- 7 Assistant Professors.

EDUCATIONAL ACTIVITY TRAINING PROGRAMMS

Personnel training in the field of biomedical engineering: Bachelors, Masters, Postgraduate students;

The program of professional development and retraining in the field of Biomedical engineering.

TRAINING DIRECTIONS

“Bioengineering Systems and Technologies” Bachelor’s and Master’s program.

“Photonics, Instrument-making, Optical and Bioengineering Systems and Technologies”– Postgraduate student’s program.

MASTER’S PROGRAMS

Bioengineering systems and technologies for prosthetics and rehabilitation (in Russian);

Information systems and technologies at medical institutions (in Russian);

Bioengineering systems and technologies for prosthetics and rehabilitation (in English).

Attendance modes: internal, limited attendance, external

THE BACHELOR’S EDUCATIONAL PROGRAM INCLUDES THE FOLLOWING GROUPS:

- Mathematical and natural sciences disciplines;
- Medical and biological disciplines;
- Medical-engineering disciplines;
- Humanities, social and economic disciplines.

THE MASTER’S EDUCATIONAL PROGRAM includes disciplines of general scientific and professional groups aimed at Masters training in design, technological and research activity in the field of Biomedical Engineering.

Technological, industrial and research internships of Bachelors and Masters are held at the leading medical scientific institutions and hospitals, biomedical engineering enterprises, Federal Almazov North-West Medical Research Centre.

The program of professional development and retraining in the field of biomedical engineering.

Program graduates work in the field of design, manufacturing, repair and service of medical equipment. The program includes educational modules that are elected by students from a set of modules oriented towards design, repair and service of different types of medical equipment. Students take internships at “Medtechnika” (Saint-Petersburg medical equipment production company).

Workload is not less than 36 hours for the professional development program and not less than 250 hours for the retraining program.

ETU is one of the oldest technical universities of Russia which trains specialists in the field of Radio Engineering, Electronics and Electrical Engineering, Computer Science and Information Technologies, Instrument-making and Biomedical Engineering.

EDUCATION OF BACHELORS, MASTERS AND CERTIFIED SPECIALISTS IS REALIZED AT 7 FACULTIES OF:

- Faculty of Radio Engineering;
- Faculty of Electronics;
- Faculty of Computer Science and Technology;
- Faculty of Industrial Automation and Electrical Engineering;
- Faculty of Information Measurement and Biotechnical Systems;
- Faculty of Economics and Management;
- Faculty of Humanities.

Education of Bachelors is realized in 19 training programs;
Education of Masters is realized in 53 training programs;
Total number of students is about 10000 persons.
Postgraduate education is realized in 42 scientific programs.
Total number of postgraduate students is more than 250 persons.

ETU is a co-founder of medical scientific-educational cluster “Translational medicine” established for the innovative development of medical science and healthcare, biomedical engineering, manpower development, implementation of new scientific achievements and biomedical equipment in healthcare.