12.04.04 Biotechnical systems and technologies

High-tech diagnostic systems

Program objective

The purpose of the department is to train students who are able to work successfully in the field of research and development of high-tech information and measurement software and hardware complexes for nuclear medicine, telemedicine, industry, scientific research and medical institutions. The main feature of the educational process is fundamental training in the field of artificial intelligence systems, which allows students to master the basic and special disciplines, with a focus ultimately on implementation in clinical practice. Current industry specialists and leading scientists are actively involved in teaching professional courses at the department. The educational process is combined with active research work, which is carried out under the guidance of experienced specialists in the scientific laboratories of the department and basic enterprises.

Key research areas

- Artificial intelligence in medicine
- Information systems in medicine
- Database management systems in medicine
- Technology of programming Internet services
- Image processing systems in medicine
- Telemedicine
- Pattern recognition and decision-making
- Modeling of biological processes and systems, etc.

Future employment areas

- Developer of intelligent decision support systems
- System Analyst
- Programmer
- Web developer
- Developer and administrator of databases and computer networks

Practical training and future employment

- N.N. Blokhin Oncology Center
- Federal Medical-Biological Agency (Russia)
- National Institute of Clinical Endocrinology
- N.N. Burdenko Neurosurgery Center
- V.N. Orekhovich Institute of Biomedical Chemistry
- Enterprises of Rosatom State Corporation