

15.04.05 Design and Technology for Machine-Building Industries

Nuclear Engineering Technology

Program objective

Training of masters for and application production processes and means of design and technological informatics and computer-aided design, creation of new production technologies, and technology-oriented production, instrumental and control systems for various service purposes, marketing research in the field of nuclear engineering.

Alumni professional activities

- Design and engineering activities: goal formulation, assignment preparation for the development of new and modernization of existing production processes in nuclear engineering;
- Production and technological activities: development and implementation of optimal technologies for the manufacture of mechanical engineering products for the nuclear power industry, selection and effective use of new modern materials, taking into account ensuring the necessary reliability of manufactured products, standardization and certification of production;
- Research activity: design and technology of nuclear engineering –

selecting of the necessary research methods;
mastering and building new theories and models;
processing the results of research and their analysis;
analyzing academic literature, tracking scientific periodicals;
writing and formatting scientific articles;
preparation of research reports, participation in conferences and grant activities.

Curriculum features

- Business English
- Philosophical problems of science and technology
- History and methodology of science and production
- Economic substantiation of scientific decisions
- Mathematical modeling in mechanical engineering
- Computer technologies in science and production
- Methodology of scientific research in mechanical engineering;
- Nanotechnology in mechanical engineering;
- Reliability and diagnostics of technological systems;
- Modern problems of instrumental support of mechanical engineering industries;
- Calculation, modeling and design of computer-controlled equipment;
- Technological quality assurance.

Practical training and future employment

- Research, development and production enterprises of the machine-building division of the State Corporation "Rosatom"
- enterprises of power, chemical and general machine-building.