

14.03.02 Nuclear Physics and Engineering

Physics and Thermophysics of Innovative Nuclear Power Facilities

Program objectives:

To sensitize bachelors about key topics of fundamental physics, mathematics and engineering, basic knowledge of neutron-physical and thermal processes in nuclear power plants.

Curriculum subject areas

- research and design of advanced types of nuclear power plants, including fusion, thermal studies of promising fuel rods, fuel, construction materials and heat transfer fluids;
- model and software development for the calculation of thermohydraulic and neutron-physical processes in advanced nuclear reactors;
- creation and use of plants and systems for thermal and nuclear physics research;
- non-equilibrium physical processes;
- distribution and interaction of light with objects of animate and inanimate nature;
- nuclear and radiation safety.