

04.04.02 Materials Chemistry, Physics and Mechanics

Pharmaceutical and Radiopharmaceutical Materials Science

Department "Pharmaceutical and Radiopharmaceutical Chemistry"

Program objective

training of highly qualified specialists with in-depth knowledge of the chemical, physical, mechanical and pharmaceutical properties of substances to develop innovative projects for the synthesis, diagnostics, production of pharmaceutical and radiopharmaceuticals based on traditional technologies and nanotechnologies.

What do we work with?

- a wide range of various materials for the needs of biology and medicine (materials with target functional characteristics, polymers and biosystems, including materials for diagnostics and therapy (theranostics) of dangerous diseases, including oncological; semiconductor nanocrystals for diagnostics and monitoring of treatment results; magnetic materials for hyperthermia; smart materials).
- single crystals, thin films, composites, nanocomposites, nanostructured materials, nanobiomaterials.

Program competitive advantages

- "dual" training system: a combination of study at a university with work-internship at a specialized enterprise and at the Pharmaceutical Center for Practical Training and Competencies of MEPhI Institute of Atomic Energy at Obninsk
- modern technological and analytical equipment, "clean rooms"

Practical training and future employment opportunities

- State Atomic Energy Corporation "Rosatom" companies
- Leipunskiy Institute of Physics and Power Engineering
- Karpov Institute of Physical Chemistry
- Tsyba Federal Research Medical Center "Radiology Research Center" of the Ministry of Health of Russia
- Corporations of Caluga pharmaceutical cluster (AstraZeneca PLC, Obninsk chemical and pharmaceutical company, Hemofarm Ltd., Bion Company, Berahim LLC, Kalugapharmacy, SLL "CHEMFARMKOMPLEKT", Berlin-Chemie AG/Menarini Group, PHARM-SYNTHESIS, Nearmedic Pharma, PharmVILAR)