

14.04.02 Nuclear Physics and Engineering

Materials for Nuclear Application

Program objective

To develop in-depth understanding of the interrelationship between physical and chemical properties, structures and processes for further invention of new materials using contemporary research methods and systems.

Curriculum features

- physicochemical and mechanical properties of structural and fuel materials
- research methods of the structural-phase state of materials
- design principles of advanced structural and functional materials.

The program will make it possible to obtain knowledge of the processes occurring in solids under external factors, including the influence of various types of radiation; the development of radiation-resistant materials used in nuclear power plants and fusion reactors.

Future professional opportunities

theoretical and experimental investigations and research of materials science and renewable energy, including physical principles of materials production and treatment

participation in international projects for the further development of fundamental knowledge about materials and search for solutions of the most complicated applied problems to the benefit of the world nuclear science and engineering