

**Division:** *Institute of Natural Sciences and Mathematics, Department of Ecology and Chemical Engineering*

**Academic programme:** *18.03.02 Energy- and Resource-saving Processes in Chemical Engineering, Petrochemistry and Biotechnology, Environmental Chemical Engineering*

**Mode of study:** *full-time*

**Programme length:** *4 years*

**Programme level:** *Bachelor's degree*

**Programme description:** *The educational programme was launched in 2001. Training is aimed at obtaining competencies in fundamental and applied ecology, nature management activities, biological aspects of environmental impact and reducing anthropogenic impact on the environment. In addition to the compulsory foreign language, the curriculum provides for the study of professional-oriented English.*

*Students carry out scientific research at the world level using the capabilities of the Nanotechnology Research and Education Centre. Over the past 5 years, students have participated in-person at conferences held in Bulgaria, Germany, the Netherlands, Spain, Slovakia, Finland, and the USA. Students publish the results of their work in world-class journals such as Biodiversitas, International Journal of GEOMATE, Ecological Indicators.*

*Our graduates have great career opportunities both in enterprises and in science.*

*The graduates have competencies in:*

- *the creation, implementation and operation of energy and resource-saving, environmentally friendly technologies in the production of basic inorganic substances, products of basic and fine organic synthesis, polymeric materials, oil refining products, etc.;*
- *the development of methods for managing industrial and household waste and raw materials.*

**Main programme-specific classes:**

- *Analytical Chemistry and Physicochemical Methods of Analysis*
- *Biotechnology*
- *Geoinformation Systems*
- *Colloidal Chemistry*

- *Mathematical Simulation of Technological Processes and Natural Environments*
- *Assessment of Environmental Damage and Payments for Environmental Pollution*
- *Rehabilitation of Disturbed Territories*
- *Resource-saving Technologies in Ecology*
- *Chemical Process Control Systems*
- *Air and Gas Purification Technology*
- *Technology for Natural and Waste Water Treatment*
- *Waste Recycling Technology*
- *Environmental Impact Audit*
- *Environmental Management and Audit*
- *Ecotoxicology*

**Programme manager:** *Svetlana G. Nitskaia, Candidate of Sciences (Engineering), Associate Professor, Associate Professor at the Department of Ecology and Chemical Engineering*