Chemical Technology

National Research Lobachevsky State University of Nizhni Novgorod (Lobachevsky University)

Degree or qualification is awarded: **Master's Degree in Chemical Technology**

Language of study: **Russian**
Mode of study: **full-time**
Duration: **2 years**
Availability of free education: **yes**
Price: **155 000 RUB per year**

Programme webpage at the university website: http://www.unn.ru/chem

Programme curator: **Liliya Erushkina**
Tel.: **+78314623521**
E-mail: admissions@fis.unn.ru

Students studying at the Faculty of Chemistry become highly qualified specialists. Graduates from the Faculty of Chemistry get employed at academic and industrial scientific research institutions, leading enterprises of petrochemical and chemical industry in Russia and the Nizhny Novgorod region, analytical control laboratories (ecological control, customs, forensic laboratories, sanitary and epidemiological service), enterprises of radio-electronic, pharmaceutical, food, wood processing and other industries, as well as teachers at higher educational establishments, schools and other sectors of national economy. Students of the Faculty of Chemistry actively participate in scientific work, which is an integral element of the educational process. A lot of students are winners of Russian scientific student's conferences and competitions. After graduation the most talented students improve their scientific qualification by studying under postgraduate training programmes under the guidance of leading professors of the Faculty.

Specializations within this programme

Technology of Inorganic Substances

The training of the Master’s degree students is aimed at providing expanded understanding of modern methods of inorganic compounds synthesis from available starting compounds, covering peculiarities of chemical reactions kinetics in various aggregate states, showing external influence possibilities on inorganic synthesis processes, learning to apply general principles of the inorganic synthesis theory in order to acquire a specific substance.

The key objectives are to teach students to independently plan the inorganic compounds synthesis of the predetermined composition with definite properties, to conduct the process thermodynamic analysis with the application of thermodynamic data banks, to select the source chemical reagents, apparatus and methodical execution to obtain the desired substance. Students learn to understand physical and chemical principles which are considered the basis for the most important classes of inorganic substances; thermodynamic and kinetic regularities that govern the inorganic substances generation processes; influence of external factors on the direction and depth of the synthesis process. Students also learn the approaches to generating major chemical compounds classes: simple substances, hydrides, oxides, chalcogenides, halides, nitrides, carbides, as well as learn to choose relevant methods of the specified inorganic compounds synthesis and to use targeted influence on the synthesis parameters by means of external impact change.