

## Brief Description of the Program

### Jobs

Chemists work in laboratories, production and research centers, perform a range of diagnostic and monitoring work to assess product quality and the state of the environment. They develop new products in the chemical industry in a wide range of industries from pharmaceuticals to the creation of chemicals for industrial application.

### Educational process

Classes are held in the form of classical lectures, seminars and laboratory classes in specialized chemical laboratories for electrochemistry, microscopy in materials science, environmental chemistry, colloid and inorganic chemistry, organic synthesis, and protection of oil and gas equipment from corrosion. During the course, students undergo practical training at the largest industrial enterprises in Tambov, Voronezh and Moscow. These are scientific institutions, institutes of oil and gas, electrochemistry and chemical technologies in agriculture. Practical trainings are carried out at factories producing paints, polymer products, electroplating equipment, agrochemicals, additives to fuels, rubber, plastics, etc.

### Disciplines

- ✓ Mathematics
- ✓ Inorganic chemistry
- ✓ Physics
- ✓ Analytical chemistry
- ✓ Physical chemistry
- ✓ Quantum chemistry
- ✓ Colloidal chemistry
- ✓ Theory of metal corrosion
- ✓ Metal corrosion inhibitors
- ✓ High molecular weight compounds

### Practical Training

The program involves three types of practical trainings.

1. Practical training aimed at obtaining primary professional skills. It is carried out in the form of site tours to chemical enterprises producing rubber, plastics, dyes, lubricants, respiratory protection equipment and oil refining companies.

2. Practical training aimed at obtaining professional skills and professional experience at enterprises and laboratories engaged in the analysis of environmental samples, food products, agricultural products, meat processing and oil refining products.

3. Pre-graduation practical training is aimed at consolidating professional skills and collecting material for writing the final project. Students do it at industrial enterprises, state institutions and research centers.

## Career

The most common professions for graduates are as follows: chemical analysis assistant, agrochemist, chemist at Criminal Investigation Laboratory, geochemist, pharmacist, biochemist, chemist, chemical engineer.

Graduates can work:

- ✓ at enterprises of food, oil refining and chemical industries;
- ✓ in research institutes;
- ✓ in design organizations;
- ✓ in laboratories for environment quality assessment;
- ✓ in various educational institutions.

The bachelor's degree enables graduates to realize themselves in various areas: pharmaceutical, cosmetic, oil refining, chemical and food industries. Chemists monitor the quality of products and they are involved in its certification. Graduates can also continue their studies doing a master's degree program.