



## Course: Organic Chemistry



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**LANGUAGES OF EDUCATION:** Russian, English.

**SUBJECT** of educational course: study of the composition, methods of synthesis and chemical transformations of hydrocarbons and their functional derivatives.

**THE GOAL** of the course includes formation of following **abilities** of students:

- ❖ knowledge of methods of observation, description, identification, classification of objects of chemical engineering and food industries;
- ❖ acquiring basic knowledge of the basic sciences to the extent necessary for the development of general disciplines;
- ❖ getting research skills;
- ❖ using the theoretical principles of organic chemistry with the aim of solving typical problems of physical and chemical processes of chemical technology
- ❖ using the theoretical principles of organic chemistry with the aim of chemical equipment engineering.

### **MAIN TASK OF EDUCATIONAL COURSE**

In accordance to demands of educational-professional program, after the finishing of this course must demonstrate such learning outcomes:

#### **Knowledge:**

- ✓ of the theory of chemical structure and reactivity of organic compounds;
- ✓ of aliphatic hydrocarbons;
- ✓ of alicyclic and aromatic hydrocarbons;
- ✓ of halogen and hydro containing compounds;
- ✓ of sulfur and oxo containing compounds;
- ✓ of nitrogen compounds;
- ✓ of the carboxylic acids;
- ✓ of other classes of organic compounds.

#### **Skills:**

- ✓ to use the theoretical principles of organic chemistry to solve the typical problems of physical and chemical processes of chemical technology.
- ✓ to use the provisions of Organic Chemistry to obtain data for the design of chemical equipment.
- ✓ to plan synthesis of organic compounds.
- ✓ to identify the connection between classes of organic compounds and convert them.
- ✓ to predict the practical use of organic substances.

#### **Experience:**

- ✓ conducting experiments to determine the chemical properties of organic compounds.

**COURSE DURATION:** 72 academic hours of lectures; 18 academic hours of seminars, 18 academic hours of laboratory works

**REQUIREMENTS TO STUDENTS:** knowledge of general and inorganic chemistry, analytical chemistry

