



COURSE: Special chapters of Organic Chemistry

LECTURERS: Tatyana Zhuk, Ph. Lesya Chernysh, Ph. D

LANGUAGES OF EDUCATION: Russian, English

SUBJECT of the educational course: study of the structure, synthesis methods and chemical conversion of organic substances, methods of their purification and isolation of the blends and testing the purity of the obtained compounds



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

- ❖ to be able to distinguish the classes of organic compounds;
- ❖ to be able to identify the correlation between the classes and the homologous series of organic compounds;
- ❖ to be able to carry out the conversion of organic compounds;
- ❖ to be able to predict the properties of organic compounds by their structure;
- ❖ to be able to detect the structure of organic compounds on their properties;
- ❖ to be able to plan the scheme for the synthesis of complex organic compounds from simple;
- ❖ to know the safety rules during the work in the laboratory of organic chemistry;
- ❖ to be able to predict the practical use of organic substances;
- ❖ to be able to conduct experiments to identify the chemical properties of organic compounds;
- ❖ to be able to allocate from mixtures of organic substances;
- ❖ to be able to determine the purity of the organic substances.

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 basis of mechanisms of organic reactions;
- ✓ of the range of organic substances;
- ✓ of various classes of organic compounds;
- ✓ of basic methods for different classes of organic compounds;
- ✓ of the reactivity of different classes of organic compounds;
- ✓ of the correlation between the various classes of organic compounds;
- ✓ of general concepts on how to clean organics;
- ✓ of setting the purity of organic compounds in different aggregate states;
- ✓ of the work safety in the laboratory of organic substances;
- ✓ of practical use of organic substances.

Skills:

- ✓ to conduct a literature search;
- ✓ to plan synthesis of organic compounds;
- ✓ to identify the connection between classes of organic compounds and convert them;
- ✓ Planning of purification of organic compounds;
- ✓ to establish the purity of organic compounds;
- ✓ to predict the practical use of organic substances.

Experience:

- ✓ of conducting experiments on the synthesis, isolation and purification of organic compounds.

COURSE DURATION: 18 academic hours of lectures, 36 academic hours of seminars, 72 academic hours of laboratory works

REQUIREMENTS TO STUDENTS: knowledge in the field of organic chemistry, General and Inorganic Chemistry, Analytical Chemistry

