



COURSE: Additional chapters of Organic Chemistry



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LANGUAGES OF EDUCATION: Russian, English

SUBJECT of the educational course: study of synthetic methods and chemical transformations of chemical compounds, methods for their isolation and purification from the mixture and testing the purity of the compounds obtained.

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

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

Knowledge:

- ✓ of general concepts of chemistry of organic compounds;
- ✓ 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.

demonstrate such learning outcomes:

Skills:

- ✓ to plan synthesis of organic compounds;
- ✓ to identify the connection between classes of organic compounds and convert them;
- ✓ of planning 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: 36 academic hours of laboratory works

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

