Name of science	**Organic chemistry**
Subject/module code	OK206
Semester(s) in which the subject is taught.	*4 semesters*
Responsible teacher	*Sultanov Marat Mirzaevich, Doctor of Chemical Sciences, Professor* *Murodova Dilafruz Kadirovna, Candidate of Sciences, Associate Professor*
Language of instruction	*Uzbek*
Connect to the curriculum	*Optional*
Study hours (including contact hours, independent study)	**Total hours - 180.** **Auditory training hours - 90.** Lecture hours – 40. Laboratory training hours – 50. **Independent study hours – 90.**
ECTS	*6*
Prerequisites/Relationship to disciplines	General chemistry, inorganic chemistry, analytical chemistry, chemical calculation
Objectives/learning outcomes of the subject	The student should have an understanding of the main classes of organic compounds, master the methods of identification of organic compounds, be able to predict the properties of organic compounds and their synthesis routes, as well as possible mechanisms of transformations. The student should have practical skills in chemical synthesis and identification of organic compounds. Educational outcomes - to know the place of organic chemistry among other chemical and natural sciences; -write the main classes of organic compounds, synthesis methods, properties, spatial and electronic structure; - identify the main types of organic reactions and the mechanisms of their development; - can distinguish the main methods of studying the structure, composition and properties of organic compounds; - classify the role of the main classes of organic compounds in living nature, their ways of formation, functions, and transformations; - can distinguish the main applications of organic compounds in industry, agriculture, everyday life, medicine and other areas. - simplify the process of formulating and solving specific problems based on the laws and regulations studied in the organic chemistry course; - use safety rules and basic methods of working with organic substances when working in a chemical laboratory: - Explain how to work with chemicals according to safety standards and perform simple synthesis of organic compounds in the laboratory. - use standard instrumental methods to study organic substances and materials - recognize and emphasize the requirements for designing and presenting work results in the field of organic chemistry - to describe and present the results of scientific work in writing in accordance with the requirements for a coursework in the relevant area of chemistry
Course content (topics)	Content. 1.Organic chemistry. Description of organic compounds.

	2. Organic chemistry lessons. 3. Chemical bonds in organic chemistry. Types of bond formation 4. Saturated hydrocarbons. Production methods. Industrial use. 5. Oil and oil refining enterprises. 6.Petroleum products. 7. Saturated halogenated compounds of hydrocarbons and their properties. 8. Cycloalkanes, physical and chemical properties, uses 9. Unsaturated hydrocarbons. Occurrence and use in nature. 10. Acetylene extraction properties 11. Oxalic acid. Physical and chemical properties, industrial applications. 12. Methyl alcohol and its uses. 13. Medical uses of alcohol 14.Esters and epoxides. Physical and chemical properties, industrial applications. 15. Methods for obtaining aldehydes and ketones, aldol condensations. 16.Carboxylic acids, electronic structure, occurrence in nature, uses. 17. Monobasic unsaturated carboxylic acids. Nomenclature, isomerism 18. Acrylic acid esters, polymerization reactions. 19.Methacrylic acid esters, polymerization 20. Preparation and application of organic glass 21.Sorbic acid - use as a preservative in the food industry 22. Oils. Occurrence in nature, extraction. 23. Oils. Occurrence in nature, extraction. 24. Unsaturated carboxylic acids, their production, occurrence in nature and properties 25. Soaps, their production and properties. 26. Artificial detergents and their production and properties 27.Organometallic (organometallic and organosilicon) compounds 28. Organometallic compounds containing phosphorus and arsenic 29. Oxides. Dibasic oxide acids. Lactic acid 30. Aldehyde and keto acids. Glyoxylic acid, acetoacetic acid 31. Chemical properties of amino acids. 32. Heterocyclic amino acids 33. Aromatic hydrocarbons. Benzene. 34. Toluene and its compounds, properties 35. Nitro compounds of aromatic hydrocarbons 36. Aromatic aldehydes and ketones 37. Aromatic sulfonic acids and their properties 38. Aromatic carboxylic acids and their properties 39. Phenol – structure, properties, uses 40. Aromatic alcohols - preparation, properties.
	V. Coursework topics and requirements for them . Coursework on the application of information technologies in professional activities **is not recommended according to the curriculum.**
Exam form	*Writing*
Educational outcomes and exam requirements	Complete mastery of theoretical and methodological concepts on the topic, the ability to correctly reflect the results of the analysis, independently reflect on the processes being studied, and complete tasks in current and intermediate forms of assessment , as well as tasks for final assessment .

	The student must have submitted current tests, intermediate tests, and independent learning assignments and final tests in the relevant subject within the specified time period. A student who has not submitted current control, intermediate control, and independent learning assignments, as well as who has scored in the range of "0-29.9" for these assignments and control type, will not be included in the final control type. Also, a student who misses 25 percent or more of the classroom hours allocated to a subject without an excuse will be expelled from that subject, will not be allowed to take the final exam, and will be considered to have not acquired the appropriate credits in that subject. A student who has not passed the final exam or who has not passed the final exam and has scored in the range of "0-29.9" for this type of exam is considered an academic debtor.
Recommended readings	1. Abdusamatov A. Organic Chemistry. Tashkent, 2005. 2. Umarov B. Organic chemistry. Tashkent: Economics and Finance. 2007. 3. Sobirov Z. Organic chemistry . Tashkent. 1999. 4. Aloviddinov K., Tuychiev K., Practical exercises in organic chemistry . T.: Uzbekistan . 1997. 5. Ahmedov KN, Yu'ldoshev XY Methods of organic chemistry / Tashkent. – University. – 2003. – 252 pages. 6. Shoymardonov RA Organic chemistry . Questions, Problems and Exercises/Tashkent. - Educational . -2008. 7. Akhmedov QN, Abdushukurov AK, Tojimukhamedov HS, Yu'ldoshev AM Text of lectures from the general course of organic chemistry . T.: "Universitet". 2000. 122 p. 8.https://unilibrary.uz/ 9.www.ziyouz.uz 10.http ://www.uzedu.uz/