

**REPUBLIC OF UZBEKISTAN
MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATIONS
CHIRCHIK STATE PEDAGOGICAL UNIVERSITY**

7.	Developed by the Chirchik State Pedagogical University and approved by the decision of the University Council " _____ " _____, 2023
8.	<p>Responsible for subject/module:</p> <p>S.Y.Khushvaktov - Chirchik State Pedagogical University, acting associate professor of the "Scientific and methodological chemistry" department, doctor of philosophy in chemical sciences (Ph.D).</p>
9.	<p>Reviewers:</p> <p>O. Yu. Iskandarov - Tashkent State Pedagogical University after named Nizomiy Associate Professor of the Department of Chemistry and its Teaching Methodology.</p> <p>N.M. Qutlimuratov - Chirchik State Pedagogical University, acting associate professor of the "Scientific and methodological chemistry" department, doctor of philosophy in chemical sciences (Ph.D).</p>



"APPROVED"
By the vice-rector for
Academic Affairs
D.B.Akhmadjanov
2023 year

**GENERAL CHEMISTRY
STUDY PROGRAM**

Field of knowledge:	100,000 – Education
Field of education:	110000 – Education
Direction of education:	60110800 – Chemistry

Subject/module code GCH-110	Academic year 2023-2024	Semester 1-2	ECTS - Credits 6 - 4	
Subject/module type Mandatory	Language of education Uzbek/Russian/English		Class hours per week 4	
1.	Name of the subject	Auditorium classes (hours)	Independent education (hours)	Total load (hour)
	General Chemistry	120	180	300
2.	<p>I. The content of science.</p> <p>The purpose of general chemistry is to teach future chemistry teachers the most important basic theoretical laws in chemistry, to provide students with knowledge that meets the State Education Standard and qualifications, to develop natural resources of the Republic and products from them for each subject. It is to show the educational and educational importance of teaching by explaining the output, and to carry out orientation to the profession by in-depth coverage of issues related to chemistry courses of schools, academic lyceums and vocational colleges.</p> <p>Tasks of general chemistry - on the basis of the National Personnel Training Program, students are required to be able to work with chemical containers, chemical reagents, gas and electric heating devices, weigh on modern balances during the study period, as the possibility of conducting experiments in general chemistry is very high. , to be able to conduct various laboratory experiments, to conduct various experiments with the help of glass tubes and containers, to be able to make devices, to be able to analyze educational literature, to have the skills and abilities to conduct calculations with chemical formulas and equations required.</p> <p>II. Theoretical part (lecture sessions)</p> <p>III. The subject includes the following topics:</p> <p>Topic 1. Objectives and tasks of branches of the science "Subject of general chemistry, history of development". Enter. Chemistry and its tasks. Connection of chemistry with biology, physics and other sciences. The history of the formation and development of chemistry. Pre-Alchemy and Alchemical Era. The era of unification of chemical knowledge. The age of quantitative laws, the modern age of chemistry. Development of chemical science and industry in Uzbekistan.</p> <p>Topic 2. Basic concepts and laws of chemistry. Atomic-molecular theory</p>			

<p>Atomic-molecular theory. Chemical element. Chemical formulas. A simple substance. The phenomenon of allotropy. Elements in which the phenomenon of allotropy occurs and the causes of allotropy. Complex matter, substance and matter, laws of conservation of mass and energy of substances, connection between mass and energy.</p> <p>Topic 3. The law of constancy of composition. Law of Equivalent The law of constancy of composition. Daltonids and Bertholids. Law of Equivalents. Methods of determining equivalent molar masses in simple and complex substances and their chemical processes.</p> <p>Topic 4. Atomic and molecular mass, Avogadro's number, mole, molar mass Relative atomic and molecular mass. Molar mass. Avogadro's number, mole, molar mass. Determination of atomic mass, the reality of atoms and molecules. Dulong-Pti and Stanislaw Canisaro methods, Perrin experiments.</p> <p>Topic 5. Ideal gas laws Gay-Lussac's Law of Volume Ratios. Ideal gas laws. Determination of molecular masses of gaseous substances. Application of Clairon-Mendeleev equation.</p> <p>Topic 6. D. I. Mendeleev's periodic law of chemical elements and periodic system of elements Preliminary researches on classification of chemical elements. The discovery of the periodic law, the periodic table of elements and its structure. Modern definition of periodic law. The periodic law and the progress of the periodic table. Distribution of chemical elements in the Earth's crust and in the Universe.</p> <p>Topic 7. Periodic and non-periodic properties of chemical elements Properties of free atoms. Atomic and ionic radii. Ionization potential. Electron susceptibility. Electronegativity. Diamagnetism and paramagnetism.</p> <p>Topic 8. Modern theory of atomic structure G. Mozli's law, atomic spectra, atomic structure. E. Rutherford's theory. Niels Bohr theory. E. Schrödinger's equation, N. Bohr's postulates and wave mechanics. The beginnings of quantum mechanics. The two natures of light.</p> <p>Topic 9. Quantum numbers. Atomic nucleus.</p>

Quantum numbers. The structure of electron levels in atoms. Distribution of electrons in an atom. s-, p-, d- and f- elements. Vertical, horizontal, diagonal similarities and secondary periodicity in the periodic table. The structure of the atomic nucleus, the structure, the transformation of elements into each other and the origin of radioactive substances, radioactive decay, artificial radioactivity, nuclear energy, chemical elements.

Topic 10. Development and general description of the concept of chemical bonding

The theory of chemical bonding. Basic description of chemical bond. Electronegativity. Chemical bond and its types: covalent and ionic bond. Types of covalent bonds: polar and nonpolar covalent bonds. Covalent bond formation methods: odd electron pairing and donor-acceptor bond formation mechanism.

Topic 11. Properties of covalent bonds. Hybridization of electronic orbitals

Bond length, bond energy, bond directivity. Hybridization of electronic orbitals. Types of hybridization.

Topic 12: Molecular orbitals method and its main features

Molecular orbitals method and its main features. Method of molecular orbitals. Studying the formation of simple and complex substances based on the method of molecular orbitals.

Topic 13. Ionic, intermolecular and hydrogen bonds and their characteristics

Mechanisms of formation of ionic bonds of substances, intermolecular and hydrogen bonds in molecules, and their characteristics. Ionic, hydrogen and metallic bonds and their characteristics.

Topic 14. Coordination and chemical bonding in organic compounds

The nature of chemical bonding in coordination compounds. Electrostatic (Kossel-Magnus) theory. Covalent, valence and magnetic field theories. Chemical bond in organic compounds.

Topic 15. Structural theories of crystalline substances

Crystal lattice types. Atomic, metallic, ionic and molecular crystal lattices. Their structure and properties. Isomorphism, polymorphism.

Topic 16. Chemical reaction rate

Chemical kinetics and its importance in chemical reactions. Chemical reaction rate. Dependence of reaction rate on concentration and temperature. Activation energy of a chemical reaction. Catalysts and their types. Inhibitors. Enzymes. Application of catalysis in industry.

Topic 17. Chemical equilibrium and conditions for its displacement. The Le-Châtelet principle

Chemical equilibrium. Chemical equilibrium constant. Shifting chemical equilibrium - Le-Chatellee's principle. Factors affecting systems in equilibrium. Other methods for expressing equilibrium processes and their mathematical expressions.

Topic 18. Energetics of chemical processes

Chemical reactions heat effect. Heat of formation of chemical compounds. GESS law. First and second law of thermodynamics, entropy and enthalpy factors. Characteristic functions

Topic 19. Water, water in nature, anomalous properties of water

Water purification, water molecule structure, physical and chemical properties of water. Water hardness and methods of loss. Industrial and wastewater treatment methods.

Topic 20. General description of dispersed systems and their division into classes

Suspended systems (suspension and emulsions), colloidal solutions, real solutions. Mechanism of melting process. Solubility of solids in water. Solubility coefficient. Saturated solutions. Solubility curves. Dissolution laws of liquids and gases.

Topic 21. Concentrations of solutions and methods of their expression

Percent, molar, normal, molar and titer concentrations, their similarities and differences. Relationship between solution concentrations

Topic 22. Properties of solutions.

Vapor pressure of solutions, F. Raoul's first and second laws, nature of solutions.

Topic 23. Theory of electrolytic dissociation

Electrolytes and electrolytes. Basic rules of electrolytic dissociation theory. Degree of electrolytic dissociation. Acids, bases, salts from the point of view of electrolytic dissociation theory. Electrolytic dissociation of water, pH-hydrogen indicator.

Topic 24. Ion exchange reactions in electrolyte solutions. Hydrolysis of salts
Ion exchange reactions in electrolyte solutions. Hydrolysis of salts and their types. Theories of acids and bases.

Topic 25. Oxidation-reduction process

Reactions in which atoms of elements change with and without changes in oxidation state. Oxidation and reduction process. Oxidizing and reducing agents.

Topic 26. Types of redox reactions

Types of redox reactions. Methods of forming equations of oxidation-reduction reactions: electron balance and ion-electron methods.

Topic 27. Galvanic elements

Stress series of metals. Galvanic elements. Hydrogen electrode. Accumulators. Corrosion of metals.

Topic 28. Electrolysis and related laws.

Electrolysis of liquids and solutions. Laws of electrolysis.

Topic 29. General information about coordination compounds.

General information about coordination compounds. A. Werner's coordination theory. Types of coordination compounds, clusters of metals, classes of coordination compounds

Topic 30: Naming, isomerism and practical importance of coordination compounds

Naming coordination compounds, Isomerism phenomenon in coordination compounds, Important rules of coordination compounds, Geometry and stability of coordination compounds. Practical importance of coordination compounds

III. Instructions and recommendations on the organization of practical work

Students are given practical training on theoretical topics. It helps to develop practical skills and competence in the subjects. Practical classes are held based on presentations on the topics covered in the lecture, using interactive methods. The recommended topics are chosen according to the situation, depending on the possibility.

Recommended topics for practical training:

1. Basic concepts and laws of chemistry.

2. Development of atomic structure and periodic law. Synthesis of transuranic elements.

3. Laws of filling atomic orbitals with electrons. Klechkovsky's rule. Hund's rule and Pauli's principle.

4. Quantum mechanical theory of covalent bonds.

5. Types of hybridization of atomic orbitals.

6. Molecular orbital method (MO). The order of filling of MOs with electrons.

Write electronic formulas of molecules.

7. Chemical reaction rate.

8. Chemical balance.

9. Solutions. Solving problems related to solutions.

10. Basic rules of electrolytic dissociation theory. The mechanism of the dissociation process.

11. Ion exchange reactions in electrolyte solutions. Hydrolysis of salts.

12. Oxidation-reduction reactions.

13. Electrolysis. Laws of electrolysis

14. Coordination compounds and their properties.

IV. Recommended topics for laboratory work:

In the laboratory sessions, students learn various indicators of chemical processes, perform experiments on the conditions necessary for the departure of chemical processes, and develop practical skills and competences in the methods of calculation and drawing tables and graphs. The recommended topics are chosen according to the situation, depending on the possibility.

1 Rules of work in a general chemical laboratory. Instruments used in a general chemistry laboratory and rules for working with them

2. Methods of purification of substances. Periodic changes in the properties of elements, simple and complex substances

3. Experiments on the law of conservation of mass of matter. Experiments on the extraction and chemical properties of oxides

4. Experiments on the extraction and chemical properties of bases

5. Experiments on the extraction and chemical properties of acids

6. Performing experiments on the extraction of salts. Chemical properties of salts

7. Types of crystal lattice

8. The effect of the concentration of substances on the rate of a chemical reaction.

Effect of temperature on the rate of chemical reaction. Catalysis. Conducting chemical equilibrium experiments

9. Solutions. Conduct solubility experiments

- 10 Concentration of solutions. Preparation of solutions with a percentage concentration.
- 11 Preparation of molar concentration solutions. Preparation of normal concentration solutions.
- 12 Electrolytic dissociation and electrical conductivity of solutions. Ion exchange reactions Hydrolysis of salts
- 13 Experiments on oxidation-reduction reactions.
- 14 Experimental problems on galvanic elements Experimental problems on electrolysis
- 15 Experiments on the preparation and properties of coordination compounds

V. Independent education and independent work

Assessment of independent learning is carried out by students' completion of assigned practical projects in a team and individually. Each student is given one team project and two individual projects. The student studies and conducts research on the given issue, understanding the goals and objectives of the assigned project. Analyzes the obtained results, prepares presentations with conclusions and defends them. The number, subject, content of the projects, methods of implementation and deadlines are fully disclosed in the working science program.

Recommended topics of independent study:

1. General chemistry and the history of its development and its connection with other sciences.
2. Contribution of scientists to the development of general chemistry.
3. Development of chemistry in Uzbekistan.
4. Calculations related to the basic concepts of chemistry.
5. Basic laws of chemistry.
6. Calculations related to the basic laws of chemistry.
7. Chemical reactions and their division into classes.
8. Simple and complex substances and their importance.
9. General information about important classes of chemical compounds.
10. Oxides, naming. Groups of oxides: basic, acidic, amphoteric, neutral oxides.
11. Production and chemical properties of oxides.
12. Acids. Oxygenated and non-oxygenated acids. Basicity of acids.
13. Naming, extraction, chemical properties of acids.
14. Bases, naming. Alkalis. Amphoteric hydroxides.
15. Derivation and properties of bases.
16. Salts. Groups of salts: medium, sour, basic, double, mixed and complex salts.
17. Naming of salts, methods of extraction, properties.

18. The beginning of quantum mechanics. The fact that quantum numbers are parameters that determine the wave function.
19. X-ray spectra characterizing atoms.
20. Periodic and non-periodic properties of atoms.
21. Nuclear reactions and exercises related to them.
22. Periodic law and periodic system, and its importance.
23. Possibilities of synthesis of super heavy elements.
24. Development of ideas about chemical bonding.
25. Properties of covalent bond.
26. The method of atomic orbitals. Hybridization and its types.
27. The method of molecular orbitals and the structure of various molecules based on it.
28. Thermal effect of chemical reactions. GESs Law.
29. Chemical reaction rate. Factors affecting the rate of a chemical reaction.
30. Chemical equilibrium and its shift.
31. Laws of thermodynamics. Enthalpy and entropy.
32. Classification and theoretical laws of organic compounds.
33. Hydrocarbons and their properties.
34. Oxygenated organic compounds and their properties.
35. Solutions and calculations related to them.
36. Basic rules of electrolytic dissociation theory.
37. Hydrolysis of salts and its mechanism. Types of hydrolysis of salts.
38. Oxidation-reduction reactions and calculations based on them.
39. Laws of electrolysis and calculations based on them.
40. Coordination compounds. Basic rules of A. Werner's coordination theory.

VI. Content of training practice

Training practice is held for 2 weeks.

Practice is organized in educational and scientific laboratories of the department. During training, students get acquainted with modern laboratory devices and learn the principle of operation. He will also have the skills to provide first aid in case of injury, follow safety techniques, and fulfill the general requirements for the laboratory cabinet. They will acquire skills in preparation of solutions for analysis, sorting, storage and disposal of solutions. The operation is organized on the basis of the tasks and assignments specified in the plan-graph. At the end of the practice, students submit a report in the established order. The results of the defense of the report are recorded in the record and signed by the head of practice and the head of the department.

3.	<p>VII. Learning outcomes (competencies to be formed) As a result of mastering the subject, the student:</p> <ul style="list-style-type: none"> - The basic concept of the science of "general chemistry", chemical changes that occur in the transformation of substances into each other, stoichiometric laws in chemical processes, impressions on the atomic structure, periodic properties in the periodic system, metal and metal properties, chemical bonds in substances types of compounds, geometry, structure of substances, types of crystal lattices, hybridization of substances, chemical kinetics, solution and dissociation, hydrolysis of salts, solution medium, concentration relationship, preparation of different concentration solutions, oxidation-reduction processes, electrolysis on chemical processes to have an imagination; (knowledge) - To be able to independently apply what you have learned from general chemistry in laboratory conditions, to distinguish substances from each other, to be able to analyze gas problems using equivalence, gas laws, Claipeon Mendeleev equations, to be able to predict the properties of substances depending on their chemical bond and structure, or knowing the nature of the garden through its opposite properties, being able to correctly understand the general laws of chemistry in understanding other departments of chemistry, being able to independently use the "National Certificate" issues and theoretical tests with proper analysis; (skill). - From general chemistry - about the amount of matter and mixture of gases, percentage composition of elements, equivalent law, solutions, chemical reaction rate and equilibrium percentage, molar, normal, solubility, molality, solution titer, hydrogen index, oxidation-reduction, electrolysis should have the skills to use modern methods in solving problems.
4.	<p>VIII. Educational technologies and methods:</p> <ul style="list-style-type: none"> • lectures; • interactive case studies; • seminars (logical thinking, quick questions and answers); • work in groups; • making presentations; • individual projects; • projects to work as a team and create
5.	<p>IX. Requirements for obtaining loans: Full mastery of theoretical and methodological concepts related to science, ability to correctly reflect the results of analysis, independent observation of the studied processes and concepts, performance of tasks and tasks given in the current and interim control forms, final control it is necessary to complete written assignments based on options.</p>
6.	

<p>Basic literature</p> <ol style="list-style-type: none"> 1. Lawrie Ryan and Roger Norris., Cambridge International AS and A Level Chemistry Coursebook. Cambridge University Press. 2. Parpiyev N.A., Rakhimov H.R., Muftakhov A.G. Theoretical foundations of inorganic chemistry. Tashkent: Uzbekistan. 2000. 3. Tracy Poulsen., General Chemistry. Copyright (C) 2010, CK-12 Foundation, www.ck12.org 4. Q. Akhmerov, A. Jalilov, R. Sayfutdinov. General and inorganic chemistry. Tashkent: Uzbekistan. 2003. 5. R.Berdikulov, Sh. Mirkomilov, A. Yu. Iskandarov and others. Inorganic chemistry. Tashkent: 2018. 6. A.Yu. Iskandarov. Chemistry problem solving methodology. Tashkent: Uzbekistan. 2018. 7. Sobirov Z. Organic chemistry. Tashkent: Contact. 2005. <p>Additional literature:</p> <ol style="list-style-type: none"> 8. Raymond Chang. General Chemistry: The Essential Concepts 5th Edition, McGraw-Hill Education; England 2013. 9. V. Y. Gankin & Y. V. Gankin. General Chemistry. Institute of Theoretical Chemistry, Boston, USA, 2012. 10. Yu.T.Tashpolatov, N.G.Rakhmatullaev, A.Yu.Iskandarov. Solving problems in inorganic chemistry. Tashkent-2003. 11. Parpiyev N.A., Muftakhov A.G., Rakhimov H.R. Inorganic chemistry. Tashkent: Uzbekistan. -2003. 12. Umarov B. Organic chemistry / Tashkent. - Economy - finance. - 2007. - 398 <p>Information sources</p> <ol style="list-style-type: none"> 1. http://www.unilibrary.uz/ 2. http://www.ziyonet.uz/ 3. https://www.natlib.uz/ 4. http://www.edu.uz - website of the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan. 5. http://www.uzedu.uz - the website of the Ministry of Public Education of the Republic of Uzbekistan. 6. http://www.gov.uz – the portal of the Government of the Republic of Uzbekistan. 7. www.pedagog.uz 8. www.cspi.uz 9. www.ziyonet.uz - Ziyonet information and educational resources portal



CHET TILINI BILISH DARAJASI TO'G'RIDA

SERTIFIKAT
CERTIFICATE

OF FOREIGN LANGUAGE PROFICIENCY

Sertifikat № | Reference Number

22DTM1031116XS

Talabgor to'g'risidagi ma'lumot | Candidate Details

Shaxsni tasdiqlovchi

hujjat seriyasi va raqami | ID series and number:

AB 5045664

Familiyasi | Surname

XUSHVAQTOV

Ismi | First Name

SUYUN

Otasining ismi | Patronymic Name:

YUSUP O'G'LI



Chet tili |
Foreign Language

INGLIZ TILI

Daraja |
Level

B1

Test sinovi
natijalari |
Test Results

Tinglab tushunish |
Listening

35

O'qish |
Reading

40

Umumiy ball |
Overall Score:

41

Yozish |
Writing

45

Gapirish |
Speaking

44

Berilgan sanasi |
Date of Issue:

15.12.2022

Amal qilish muddati |
Valid until:

14.12.2024

Direktor |
Director



M.KARIMOV

BUYRUQDAN KO'CHIRMA

2023-yil « 21 » 12

№ 01-288 - son

Chirchiq sh.

**2023/2024-o'quv yilida bakalavriat
ta'lim yo'nalishlarida mutaxassislik
fanlarini ingliz tilida o'qitish to'g'risida**

O'zbekiston Respublikasi Prezidentining 2017-yil 27-iyuldagi PQ-3151-sonli "Oliy ma'lumotli mutaxassislarni tayyorlash sifatini oshirishda iqtisodiy sohalari va tarmoqlarining ishtirokini yanada kengaytirish chora tadbirlari to'g'risida"gi qarorining 5-bandida belgilangan vazifalar ijrosini ta'minlash maqsadida

BUYURAMAN

1. O'zbekiston Respublikasi Prezidentining 2017-yil 27-iyuldagi PQ-3151-sonli "Oliy ma'lumotli mutaxassislarni tayyorlash sifatini oshirishda iqtisodiy sohalari va tarmoqlarining ishtirokini yanada kengaytirish chora tadbirlari to'g'risida"gi qarorining 5-bandi rahbarlik va ijro uchun qabul qilinsin.

2. O'quv ishlari bo'yicha prorektor D.B.Axmadjanov, O'quv-uslubiy boshqarma boshlig'i M.J.Boltayev va barcha fakultet dekanlariga:

2023/2024-o'quv yilida bakalavriat ta'lim yo'nalishlarining barcha kurslarida mutaxassislik fanlarini ingliz tilida o'qitishni bosqichma-bosqich tashkil etish, ingliz tilida dars o'tadigan professor-o'qituvchilarni maqsadli tayyorlash, ularning xorijda tegishli tayyorgarlikdan o'tishini tashkil etish, shuningdek, o'quv mashg'ulotlarini olib borishga xorijiy mutaxassislarda bugungi kunda foydalanilayotgan zamonaviy o'quv adabiyotlari asosida o'qitilishini yo'lga qo'yish vazifalari yuklatilsin.

3. 2023/2024-o'quv yilida bakalavriat ta'lim yo'nalishlarida mutaxassislik fanlarini ingliz tilida olib boruvchi professor-o'qituvchilar tarkibi ilovaga muvofiq tasdiqlansin.

4. Ushbu buyruqni elektron shaklda tegishliligi bo'yicha mas'ullarga yetkazish devonxona mudiri I.Rajabova zimmasiga topshirilsin.

5. Mazkur buyruqning bajarilishini nazorat qilish o'quv ishlari bo'yicha prorektor D.B.Axmadjanov zimmasiga yuklatilsin.

Asos O'zbekiston Respublikasi Prezidentining 2017-yil 27-iyuldagi PQ-3151-sonli qarori

Rektor

Ko'chirma asliga to'g'ri



G.I.Muxamedov

Nazoratchi

Mutaxassislik fanlarini ingliz tilida o'qitish bo'yicha professor o'qituvchilari ro'yxati				
№	Professor o'qituvchining F.I.SH	Ta'lim yo'nalishi	Dars beradigan kursi, guruhi	Fanining nomi (inglizcha)
1	Raupova Mohinur Haydar qizi	Matematika va informatika	2-kurs 22/8 guruh	Elementary mathematics (Algebra), Mathematical analysis, Algebra and theory numbers
2	Ibodullayev Doniyor Quvondiqovich	Matematika va informatika	1-kurs 23/6 guruh, 2-kurs 22/8 guruh	Computer support from science, Information security, Network technologies
3	Rajabov Oybek Tog'aymurod o'g'li	Matematika va informatika	2-kurs 22/8 guruh	Web technologies, Programing languages
4	Israilova Feruza Akbar qizi	Matematika va informatika	2-kurs 22/8 guruh, 1-kurs 23/6 guruh	Of differential equations, Of geometry
5	Quljonov Nodir Jonadil o'g'li	Matematika va informatika	2-kurs 22/8 guruh	Of elementary mathematics (geometry), Mathematical literacy
6	Mahkamov Doston Shokir o'g'li	Gid hamrohligi va tarjimonlik faoliyati	2-kurs 22/2 guruh	Legal basis of tourism
7	Kamoliddiunov Farrux Burxoniddin o'g'li	Tarix	4-kurs 20/3 guruh	World history (most recent period)
8	Yo'ldoshev Umrzoq Xamza o'g'li	Tarix	4-kurs 20/3 guruh	Cooperation of international organizations
9	Tillaboyeva Dono Nazm qizi	Biologiya	3-kurs 21/1	Plant physiology
10	Ramazanov Baxtiyor Ramazanovich	Biologiya	2-kurs 22/1	Enviromental security and sustainable development
11	Xushvatov Suyun Yusup o'g'li	Fizika va kimyo	1-kurs 23/1	General chemistry
12	Eshniyozova Nargiza Norqulovna	Fizika va kimyo	1-kurs 23/2A	General chemistry