

**MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE
RUSSIAN FEDERATION
MINISTRY OF HIGHER EDUCATION AND INNOVATION OF THE
KYRGYZ REPUBLIC**

**Kyrgyz-Russian Slavic University named after B.N. Yeltsin
School of Medicine**



Chemistry

Course Outline (Module)

Assigned to Academic Curriculum	560001 General Medicine	
Qualification	Specialist	
Mode of Study	Intramural	
Total credit value	2 credit points	
Course Hours including:	60	Scope of testing semesters: exam credits
in-class learning	32	
individual work	27,7	

The course outline developed by: Abdurashitova Yu.A., Ibraeva I.G.

Course hours scheduling (per semester)						
Semester Academic Year	1 (1.1)		2 (1.2)		Total	
	Weeks					
Type of training	AC	CO			AC	CO
Lectures	8	8			8	8
Lab practical	24	24			24	24
Practical session						
Contact work during the period of theoretical training	0,3	0,3			0,3	0,3
Including interactive session	4	4			5	5
Total in-class session	32	32			32	32
Face-to-face learning	32,3	32,3			32,3	32,3
Individual work	27,7	27,7			27,7	27,7
Total	60	60			60	60

1. COURSE OUTLINE OBJECTIVES

- to acquire knowledge related to the structure, properties and mechanism of functioning of biologically active substances;
- to establish a solid foundation for studying such disciplines as biological chemistry, microbiology, physiology, pathological physiology;
- to form scientific vision of basic physical and chemical regularities in the behavior of biochemical processes;
- to develop integral perception of chemistry which allows to understand functioning of the organism as a whole and its interaction with the environment.

2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM

Educational Program Units: B1.B

2.1. Students' Preliminary Training Requirements:

2.1.1. Mathematics

2.1.2. Biology

2.1.3. Chemistry

2.2. Course Units and Practical Sessions imposing the prior Proficiency

2.2.1. Biochemistry

2.2.2. Normal physiology

2.2.3. Pharmacology

2.2.4. Clinical biochemistry

3. STUDENTS' COMPETENCIES RESULTING FROM THE COURSE UNIT (MODULE)

GS (1). Able to analyze socially significant problems and processes and use in practice methods of natural-scientific, mathematical and humanitarian sciences in various types of professional and social activities.

Knowledge:

Level 1.

- methodology of processing scientific and technical information to solve standard tasks of professional activity;
- basic laws of physical, chemical and biochemical concepts, information and communication technologies, including physical, mathematical concepts and research methods for solving professional tasks.

Skills:*Level 1.*

- to use medical and biological terminology, information and communication technologies, and research methods to solve standard tasks of professional activity;
- to apply basic physical and chemical concepts and research methods to solve professional tasks;
- to search for scientific and technical information using general and specialized databases and apply specialized software when carrying out theoretical calculations and processing experimental data to solve standard tasks of professional activity;

Expertise:*Level 1.*

- skills of working with scientific and educational portals;
- basic skills of using standard as well as specialized software and databases for statistical processing of research results and their presentation to the scientific community;
- biomedical and other terminology;
- elementary techniques of work in the biochemical laboratory;
- general safety regulations for handling computers, laboratory equipment and chemical reagents;
- skills of mathematical, chemical and biochemical thinking;
- skills of independent work with reference books, educational and scientific literature.

3. Final Students' Competences**3.1. Knowledge:**

- general patterns of natural sciences;
- general physical chemical concepts, laws and methods of analysis.

3.2. Skills:

3.2.1.

- to apply basic concepts of natural scientific disciplines;
- to predict the progress of biochemical processes occurring in living organisms;
- to interpret the obtained results at the modern level.

3.3. Expertise:

- the knowledge of the basic principles of the natural sciences, experimental skills for studying and analysis of biochemical processes.