MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC

Government-run Educational Institution of Higher Professional Education
Kyrgyz-Russian Slavic University named after B. N. Yeltsin
School of Medicine

Деканат медицинского факультета

ENDORSED BY
Professor Anes Zarifyan
«26» 08. 2021

Medical Informatics

Course Outline (Module)

Assigned to the department of:	Physics, Medical Informatics and Biology
Academic Curriculum	31050150_15_12345 GM.pli.xml 31.05.01. General Medicine
Qualification	Specialist
Mode of Study	Intramural
The Course outline developed by:	Kondrateva E.I., Sorokin A.A.

Course hours scheduling (per semester)				
Semester Academic Year	**4 (2.2)**		Total	
Weeks	18			
Type of training	AC	CO	AC	CO
Lectures	18	18	18	18
Practical session	54	54	54	54
Contact work during the period of theoretical training	0,3	0,3	0,3	0,3
Including interactive session	4	4	4	4
Total in-class session	72	72	72	72
Contact work	72,3	72,3	72,3	72,3
Individual work	35,7	35,7	35,7	35,7
Total	108	108	108	108

1. COURSE OUTLINE OBJECTIVES	
1.1	Elobaration of common vision of the structure, concepts, methods and techniques of medical informatics for students. To show the simplicity and consistency of the basic computer technologies involved in medicine in order to remove the often emerging potential barrier of fundamental unknowability for a particular individual of mathematical, statistical or hardware.
1.2	Studying of standard means of computer science for solving medical problems. Development of the ability to compose a plan for the solution and implement it using the chosen methods. Development of the skill of analysis and practical interpretation of the results. Development of the ability to use various kinds of reference materials and manuals, necessary for solving practical problems.

2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM	
Educational Program Units:	Б1.В.ДВ.2
2.1	**Students' Preliminary Training Requirements:**
2.1.1	Physics and mathematics
2.1.2	Base of informatics
2.2	**Course Units and Practical Sessions imposing the prior Proficiency:**
2.2.1	Evidence-Based Medicine
2.2.2	Epidemiology
2.2.3	Clinical Pharmacology
2.2.4	Anesthesiology, resuscitation, intensive care
2.2.5	Oncology, radiation therapy
2.2.6	Forensic Medicine

3. STUDENTS' COMPETENCIES RESULTING FROM THE COURCE UNIT (MODULE)	
OPC-1: readiness to solve standard tasks of professional activity using information, bibliographic resources, medical and biological terminology, information and communication technologies and taking into account the basic information security requirements.	
Know:	
Level 1	modern information and bibliographic resources
Level 2	basic medical and biological terminology
Level 3	modern statistical information technologies
Ability:	
Level 1	to find scientific medical and biological information
Level 2	to analyze and systematize the information received
Level 3	work with scientific and technical information, applying in professional activities
Skills:	
Level 1	to working with scientific medical and biological information
Level 2	to assess medical and biological information
Level 3	to interpret the results
OPC -7: Graduate should be able and ready to use basic physical-chemical, mathematical and other natural-science concepts and methods in dealing with professional tasks.	
Know:	
Level 1	fundamental natural science regularities for solutions of job tasks
Level 2	basic physical-chemical, mathematical and natural-science methods
Level 3	general laws of natural science for solving professional problems

Ability:	
Level 1	to use the basic laws of natural science disciplines
Level 2	to apply methods of medical-biological and mathematical analysis using experimental studies
Level 3	to analyze the results of experimental studies
Skills:	
Level 1	of methods of applying physical and chemical, mathematical and natural science laws
Level 2	of method of solving professional problems using experimental research
Level 3	of methods of analysis of the results of experimental studies

Final Students' Competences	
3.1	**Know:**
3.1.1	definition and basic concepts of medical informatics;
3.1.2	structure of medical research;
3.1.3	the concept of signals and the nature of their occurrence;
3.1.4	definition and classification of random variables;
3.1.5	health resources, which you can trust;
3.1.6	basic principles of statistical information processing;
3.1.7	basic methods of using a statistical processing of medical data;
3.1.8	the main points of the analysis of scientific medical data and conclusions on research
3.2	**Ability:**
3.2.1	Find and analyze data obtained from different scientific sources;
3.2.2	create a scientific base in the SPSS application program;
3.2.3	to establish the necessary medical tasks, on the basis of the received medical data;
3.2.4	to analyze and justify the conclusions from the received medical data;
3.2.5	use modern computers for processing medical information;
3.2.6	use different methods of analysis when working with scientific medical data;
3.2.7	analyze the results of experiments;
3.3	**Skills:**
3.3.1	methods of creating a scientific base in the SPSS application program;
3.3.2	methods of formulation the necessary medical and biological tasks, according to the availble data;
3.3.3	Theoretical and practical analysis and reasoned conclusions on the medical data obtained;
3.3.4	methods of practical use of modern computers for processing medical information;
3.3.5	the skills of using different methods of analysis when working with scientific medical data;
3.3.6	methods of analyzing new scientific and educational literature, the results of experiments;