Ministry of Education and Science of the Kyrgyz Republic
Government-run Educational Institution of Higher Professional Education
Kyrgyz-Russian Slavic University
Institute of Clinical Medicine and Biomedical Technologies

ENDORSED BY
the Director, Assoc. Prof. Abilova S.S.

Medical informatics

Course Outline (Module)

Assigned to the department of Academic Curriculum	**Physics, Medical Informatics and Biology** 560001 – KR General Medicine (for foreign students)
Qualification	**Specialist**
Mode of Study	**Intramural**

The Course outline developed by: Kurmanbakeev Iu. M.

Course Hours Scheduling (per semester)

Semester Academic Year	**3(2.1)**		**Total**	
Weeks	18			
Type of Training	EP	WP	EP	WP
Practical Session	36	36	36	36
Face-to-face Learning during the period of theoretical training	0,3	0,3	0,3	0,3
Including interactive	4	4	4	4
Total in class Session	36	36	36	36
Face-to-face Learning	36,3	36,3	36,3	36,3
Individual work	53,7	53,7	53,7	53,7
Total	90	90	90	90

1. COURSE OUTLINE OBJECTIVES

1.1 To provide students with a basic understanding of computer science, personal computer architecture, operating systems, file systems, and the principles of storing, processing, and presenting digital information.

1.2 To develop practical skills in using Microsoft Word, PowerPoint, and Excel for educational and professional medical tasks, and to introduce databases, health information systems, electronic health records, interoperability standards, information security, responsible use of AI tools, and basic rule-based clinical decision support.

2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM

Educational Program Unit:	Б1.О.02

2.1 Students' Preliminary Training Requirements:

General secondary education; basic medical terminology; elementary skills in using a computer or mobile device are desirable but not mandatory.

2.2 Course Units and Practical Sessions for which this course (module) is required as a prerequisite:

Evidence-Based Medicine; Epidemiology; Clinical Pharmacology; and clinical disciplines in which students work with electronic medical information, data, and digital educational resources.

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

GC-3: Able to independently acquire new knowledge and apply it in practice using modern information technologies in professional activities.

Know:	
Level 1	Basic principles of computer hardware and software, operating systems, file systems, and common file formats.
Level 2	Basic principles of working with office applications, databases, electronic health records, and medical information systems
Level 3	Principles of organization, processing, exchange, and protection of medical information; basic concepts of clinical decision support systems and medical data standards.
Ability:	
Level 1	To perform basic operations with files and folders and use standard computer applications for entering, editing, storing, and presenting information
Level 2	To create and format medical and academic documents, presentations, tables, charts, and structured datasets using Microsoft Word, PowerPoint, and Excel
Level 3	To apply information technologies to solve basic professional medical tasks, including processing medical data and implementing simple rule-based clinical decision support models
Skills:	
Level 1	Skills in working with a personal computer, operating system, file system, and standard office software
Level 2	Skills in creating, organizing, processing, visualizing, and presenting medical and educational information using modern information technologies
Level 3	Skills in independent acquisition and practical application of digital tools for working with medical information, databases, health information systems, and basic clinical decision support tasks

Final Students' Competences

3.1 Know:

- basic principles of computer hardware, operating systems, file systems, and common file formats;
- principles and purposes of Word, PowerPoint, and Excel in educational and professional work;
- basic concepts of databases, EHR, hospital information systems, LIS/RIS, PACS, HL7/FHIR/DICOM, information security, and clinical decision support systems.

3.2 Ability:

- organize files and digital information and create properly formatted academic and medical documents;
- create presentations and structured spreadsheets, use formulas, sorting, filtering, charts, and PivotTables/PivotCharts;
- apply logical functions to medical examples and build a simple rule-based clinical decision support model using synthetic or anonymized data.

3.3 Skills:

- practical work with desktop and mobile office applications;
- independent search, organization, processing, visualization, and presentation of medical and educational information;
- responsible use of digital and AI tools with verification of information, protection of confidential data, and appropriate interpretation of results.