

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



ENDORSED BY
 Prof. Anes Zarifyan

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BIOLOGY

Course Outline (Module)

Assigned to the department of: Physics, Medical Informatics and Biology
 Academic Curriculum 31050150_21_1GM.pli.xml
 31.05.01. General Medicine

Qualification Specialist

Mode of Study Intramural

The Course outline developed by: Karaeva R.R., Morkokina A.B., Kobzar V.N.

Course hours scheduling (per semester)						
Semester Academic Year	1 (1.1)		2 (1.2)		Total	
Weeks	18		21			
Type of Training	AC	CO	AC	CO	AC	CO
Lectures	36	36	18	18	54	54
Practical session	36	36	36	36	72	72
Contract work during the examination session			0,5	0,5	0,5	0,5
Including interactive session	3	3	4	4	7	7
Total in-class session	72,3	72,3	54,5	54,5	126,8	126,8
Individual work	35,7	35,7	18	18	53,7	53,7
Examin time			35,5	35,5	35,5	35,5
Total	108	108	108	108	216	216

1. THE PURPOSE OF LEARNING	
1.1	to form students' biological thinking and integral natural science worldview which are necessary in doctor's practical activities; to form basic knowledge and general concepts and to single out humans as a central object of biology studying;
1.2	to show human bio-social nature, dependence on general biological developmental laws, unity of human with life environment with emphasis on biological regularities which are advantageous for practical healthcare and to get acquainted to the effect of total consistent pattern of ecological factors on an organism;
1.3	to study parasitism and basics of medical parasitology in the context of ecology and to teach the intelligent perception of practical issues connected with biology, including human health, nature protection, recovery from ecological crisis and environmental consciousness education;

2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM	
Cycle (section) OOI:	B1.O
2.1	Students' Preliminary Training Requirements:
2.1.1	Biology, anatomy and general biology which are included in a high school level;
2.1.2	Chemistry in the frame work of a high school level.
2.2	Course Units and Practical Sessions imposing the prior Proficiency:
2.2.1	microbiology, virology;
2.2.2	normal physiology;
2.2.3	biochemistry;
2.2.4	pathophysiology, clinical pathophysiology;
2.2.5	histology;
2.2.6	medical genetics;
2.2.7	epidemiology;
2.2.8	immunology;
2.2.9	general hygiene.

3. THE COMPETENCE OF THE LEARNER, FORMED AS A RESULT OF LEARNING (MODULE)	
OPC-10: 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	basic biological, physico-chemical, mathematical and natural science concepts and laws, natural science methods, general laws of natural science for solving professional problems
Ability:	
Level 1	apply methods of basic biological, physico - chemical, mathematical and other natural and science concepts, to analyze the results of experimental studies
Skills:	
Level 1	to use of fundamental laws of natural and science concepts, to apply methods of mathematical analysis in experimental studies

Final Students' Competences

3.1	Know:
3.1.1	the role of biological elements and their compounds in living organisms;
3.1.2	basic laws of development and life activity of organisms on the basis of cell structural organization, tissues, organs;
3.1.3	structure and functions of the most important chemical compounds (nucleic acids, natural proteins, etc);
3.1.4	genetics laws and their significance for medicine;
3.1.5	general regularities of origin and development of life, anthropogenesis and human ontogenesis;
3.1.6	basic notions and issues of biosphere and ecology, phenomenon of parasitism and bioecological diseases;
3.1.7	basic regularities of development and vital activities of adults and teenagers;
3.1.8	cell differentiation, mechanism of formation of congenital malformations in children;
3.2	Ability:
3.2.1	practice of graphically represent the examined objects and processes in the form of diagrams, drawings, animations;
3.2.2	practice to create of compilation diagram which illustrate causes and mechanisms of chromosomal pathology;

3.2.3	practice to prepare of temporary specimen for microscopy (onion and water weed cells, cell inclusions);
3.2.4	practice to conduct microscopic examination;
3.2.5	practice to use basic data conversion technologies: text, table editors, search in the Internet;
3.2.6	practice to apply methods of studying human heredity (cytogenetic, genealogical, twin methods);
3.2.7	practice to solve case tasks on parasitology, phylogenetic system and organs and ecology.
3.3	Skills:
3.3.1	to work with magnifying devices (microscopes, optical and simple magnifying lenses);
3.3.2	to solve genetic and case tasks;
3.3.3	to diagnose causative agents of human parasitic diseases using sample, slide, photo;
3.3.4	to use computers for processing medical information;
3.3.5	to use information from science, popular and science literature, internet network for professional activities;
3.3.6	to solve case tasks on models of genetic counseling;
3.3.7	to compose pedigree tree and detect type and character of heredity with the benefit of genealogical method;
3.3.8	to use knowledge to solve case tasks on parasitology, phylogenetic system and organs as well as
3.3.9	ecology.