

COURSE DESCRIPTOR

№	Topic	Total, hours	Lectures, hours	Workshops (seminars) , hours	Labs, hours	Self-study of the material, hours	Individual tasks, hours
full-time course form of study							
Module 1. Cytogenetics							
1	Introduction to Medical Biology	2	0	2	0	0	0
2	Biology as a Science. Light Microscopy	6	2	2	0	2	0
3	Cell Structure	4	0	2	0	2	0
4	Cell Division. Gametogenesis	4	0	2	0	2	0
5	Chromatin, Chromosomes, and Karyotype	6	0	2	0	4	0
Module 2. Classical Genetics							
1	Mendel's First and Second Laws. Monohybrid Cross	4	0	2	0	2	0
2	Mendel's Third Law. Types of Crosses. Lethal Genes	4	0	2	0	2	0
3	Interaction of Allelic Genes. Multiple Allelism. Blood Groups	4	0	2	0	2	0
4	Interaction of Nonallelic Genes	6	0	2	0	4	0
5	Gene Linkage. Chromosome Mapping	6	0	2	0	4	0
6	Genetics of Sex. Sex Linkage. Cytoplasmic Inheritance	4	0	2	0	2	0
7	Genotype and Phenotype	6	0	2	0	4	0
Module 3. Molecular Genetics. Mutations							
1	The Structure of Nucleic Acids. DNA Repair	8	2	2	0	4	0
2	DNA Replication. Transcription	8	2	2	0	4	0
3	Translation. Gene Regulation	6	0	2	0	4	0
4	Genes and Genomes. Horizontal Gene Transfer	8	2	2	0	4	0
5	Mutations	4	0	2	0	2	0

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Module 4. Medical Genetics. Population Genetics and Evolution							
1	Reproduction. Ontogenesis. Regeneration. Transplantation	6	0	2	0	4	0
2	Human Genetics. Twin Studies, Dermatoglyphics, Pedigree Analysis	6	0	2	0	4	0
3	Single-Gene Disorders	4	0	2	0	2	0
4	Chromosome Disorders. Genetic Counseling	4	0	2	0	2	0
5	Population Genetics	4	0	2	0	2	0
Module 5. Human Ecology. Medical Parasitology							
1	Ecology and Biosphere. Poisonous organisms	6	0	2	0	4	0
2	Introduction to Parasitology. Protozoans. Sarcodina	6	2	2	0	2	0
3	Flagellates	4	0	2	0	2	0
4	Sporozoans. Infusorians. Methods of Diagnostics of Protozoan Diseases	4	0	2	0	2	0
5	Flatworms. Flukes: Fasciola hepatica, Opisthorchis felineus, Clonorchis sinensis, Dicrocoelium dendriticum, and Metagonimus yokogawai	4	0	2	0	2	0
6	Flukes: Paragonimus ringeri, Schistosoma spp., and Nanophyetus salmincola. Tapeworms: Diphyllbothrium latum	4	0	2	0	2	0
7	Cyclophyllidean Tapeworms	6	0	2	0	4	0
8	Oviparous Nematodes	8	2	2	0	4	0
9	Viviparous Nematodes. Methods of Diagnostics of Helminthoses. Segmented Worms: Medicinal Leech	6	0	2	0	4	0
10	Arthropods. Arachnids. Ticks and Mites	6	0	2	0	4	0
11	Insects: Lice, Cockroaches, Bugs, and Fleas	6	0	2	0	4	0
12	Dipterans. Medical Importance of Arthropods	6	0	2	0	4	0
<i>Total (full-time course form of study)</i>		<i>180</i>	<i>12</i>	<i>68</i>	<i>0</i>	<i>100</i>	<i>0</i>