ANNOTATION OF THE DISCIPLINE «MEDICAL GENETICS»

for the training of specialists of the 2nd Master of Medicine level of high education
education sector 22 "Public Health"
speciality 222 "Medicine"

Since heredity and variability are integral components of life, genetics should be the basis for theoretical and clinical training of the doctor. Importance of genetic knowledges for a physician is determined by a constant increasing of inherited pathology in the structure of morbidity, mortality and population disability. Studying the discipline, students should understand how to use the previously obtained theoretical knowledge from genetics in clinical practice; to enrich knowledges about medical genetics, according to the modern problems of diagnosis, treatment and prevention of hereditary pathology

The organization of the educational process is carried out according to the requirements of the European Credit Transfer System

Name of discipline	**Number of ECTS credits, number of hours, of which**				**Study year Study semester**	**Type of control**
	Totally	**Auditory**		**Self work (hr)**		
		Lectures (hr)	**Pactical classes (hr)**			
«Medical genetics» *8 Parts*	1,5 credits ECTS / 45 hr	6	16	23	III year (V / VI semesters)	Credit

The subject of discipline «Medical genetics»: clinical genetics

Interdisciplinary links: discipline «Medical genetics»:

a) It is based on the study of medical biology and genetics, medical and biological physics, medical chemistry, biological and bioorganic chemistry, morphological disciplines, normal and pathological physiology, propaedeutic of internal medicine, propaedeutic pediatrics by students and integrates with these disciplines;

b) forms the foundation for the following studying of modern diagnostic technologies that are used in the diagnosis not of hereditary diseases only, but also in clinical practice generally; trains skills to apply knowledge of modern methods of genetic diagnosis in the professional;

c)provides an understanding of the modern features of monogenic and chromosomal diseases, as well as of common human diseases that arise on the background of hereditary predisposition and require the integration of classical clinical ideas and modern high technologies.

The Aim of the discipline «Medical genetics» is acquiring skills of active use of previously obtained theoretical knowledge in genetics in clinical practice, updating knowledge of medical and clinical genetics, especially modern problems of diagnosis, treatment and prophylaxis of hereditary pathology, studying a number of "new" common nosological forms of hereditary diseases.

The Objectives of studying the discipline "Medical genetics"distinguish what the student must know and be able to perform while studding the discipline.

As a result of the study of the discipline "Medical genetics" the student must know:

- the nature of hereditary human diseases, their etiology, pathogenesis, the causes of wide clinical polymorphism of etiologically uniform forms and genetic heterogeneity of clinically similar states;
- approaches and methods of detection of individuals with increased risk of multifactorial illness;
- methods of diagnostics of the most common forms of hereditary pathology;
- goals, methods and possibilities of medical genetic counseling, prenatal diagnosis and screening programs;
- goals and possibilities of modern methods of cytogenetic, biochemical and molecular genetic diagnostics;
- the principles of the interaction of the medical genetic service with all health services and indications for the organization of the flow of patients.

As a result of the study of the discipline "Medical genetics" the student must be able to:

- to examine patients and their relatives and to reveal congenital and hereditary pathology;
- to determine the clinical features of hereditary pathology and patient status;
- To estimate diagnostic, prognostic value of the manifested symptoms, and morphogenetic variants (microanomalies of development);
- to correctly collect a genetic history, to make a genealogy, to determine the type of inheritance;
- to diagnose the most common forms of hereditary pathology.