Summary of the working program of the academic discipline

« Medical informatics »

General Educational Program of higher education (<u>specialist's degree programs</u>) 31.05.01 General Medicine

Department: Information technology

- 1. The purpose of mastering the discipline (participation in the formation of relevant competencies -31.05.01 General Medicine): is to form systemic fundamental knowledge about the use of modern information technologies in medicine and the field of healthcare organization for the collection, storage, processing and analysis of biomedical information, which is necessary to improve the quality of medical care to the population in the professional practice of a doctor.
- 2. Position of the academic discipline in the structure of the General Educational Program (GEP).
- **2.1.** The discipline medical informatics refers to the core part of Block 1 of GEP HE (Academic discipline index).

The discipline is taught in second semester of 1 year of study.

- 2.2. The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline:
 - 1.Mathematics;
 - 2.Physics.

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following general professional (GPC) and

professional (PC) competencies

1	Com	The content		As a result of m	nastering the di	scipline,	
№	pete	of the	Code and name of the	the students should:			
745	nce code	competence (or its part)	competence acquisition metric (CAM)	know	be able to	possess	
1	GPC	Able to	CAM-10.1 _{GPC-10} .	the conchilities	onnly	the	
1	-10.	understand	Capable of reference	the capabilities of reference	apply modern	practical	
	-10.	the		information	information	-	
			information systems and			experien	
		principles of	professional databases;	systems and	and	ce in the	
		modern	methods of information	professional	communicat	use of	
		information	retrieval, information	databases;	ion	modern	
		technologies	and communication	methods of	technologies	informat	
		and use them	technologies; modern	information	to solve the	ion and	
		to solve the	medical and biological	retrieval,	tasks of	bibliogr	
		tasks of	terminology;	information	professional	aphic	
		professional	fundamentals of	and	activity;	resource	
		activity	information security in	communication	carry out an	s, the	
			professional activities	technologies;	effective	use of	
			CAM-10.2 _{GPC-10} . Can	modern	search for	special	
			apply modern	medical and	information	software	
			information and	biological	necessary to	and	
			communication	terminology;	solve the	automat	
			technologies to solve the	fundamentals	tasks of	ed	
			tasks of professional	of information	professional	informat	
			activity; carry out an	security in	activity	ion	
			effective search for	professional	using	systems	

	1		Ι			
			information necessary to	activities	reference	to solve
			solve the tasks of		systems and	standard
			professional activity		professional	tasks of
			using reference systems		databases;	professi
			and professional		use modern	onal
			databases; use modern		medical and	activity,
			medical and biological		biological	taking
			terminology; master and		terminology	into
			apply modern		; master and	account
			information and		apply	the
			communication		modern	basic
			technologies in		information	require
			professional activity,		and	ments
			taking into account the		communicat	of
			basic requirements of		ion	informat
			information security		technologies	ion
			CAM-10.3 _{GPC-10} . Has		in	security
			practical experience in		professional	
			the use of modern		activity,	
			information and		taking into	
			bibliographic resources,		account the	
			the use of special		basic	
			software and automated		requirement	
			information systems to		s of	
			solve standard tasks of		information	
			professional activity,		security	
			taking into account the			
			basic requirements of			
	7.0		information security		,	
2	PC-	Able to:	CAM-21.1 PC-21. Knows:	medical and	analyze official	
	21	analyze	medical and statistical	statistical		
		morbidity,	indicators of morbidity,	indicators of	reporting	
		disability	disability and mortality	morbidity,	data,	
		and	characterizing health of	disability and	including	
		mortality	the assigned population,	mortality	forms of	
		indicators to	the order of their	characterizing	federal and	
		characterize	calculation and	health of the	sectoral	
		the health of the	evaluation	assigned	statistical	
			CAM-21.2 PC-21. Able to:	population, the	observation;	
		assigned	analyze official	order of their	analyze medical and	
		population of medical	statistical reporting data,	calculation and evaluation	statistical	
			including forms of federal and sectoral	evaluation	indicators of	
		care and aimed at	statistical observation;		morbidity,	
			analyze medical and		disability	
		creating conditions	statistical indicators of		and	
		for	morbidity, disability and		mortality to	
		protecting	mortality to assess the		assess the	
		the health	1		health of the	
		of citizens	health of the assigned population		assigned	
3	PC-	Able to:	CAM-22.1 _{PC-22} . Knows:	the legislation	population Able to: fill	
٦	PC- 22					
	<i>LL</i>	maintain	the legislation of the	of the Russian	out medical	

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medical	Russian Federation in	Federation in	documentati
records,	the field of health	the field of	on including
also in the	protection, regulatory	health	in the
electronic	legal acts and other	protection,	electronic
form in the	documents defining the	regulatory	form in
MIS	activities of medical	legal acts and	MIS; work
	organizations and	other	with
	medical workers; rules	documents	personal
	for working in	defining the	data of
	information systems and	activities of	patients and
	information and	medical	information
	telecommunications	organizations	constituting
	network "the Internet";	and medical	a medical
	rules for registration of	workers; rules	secret; use
	medical documentation	for working in	information
	in medical organizations	information	systems and
	providing outpatient	systems and	information
	medical care including	information	and
	medical worker's home	and	telecommun
	visits	telecommunica	ication
	CAM-22.2 PC-22. Able to:	tions network	network, the
	fill out medical	"the Internet";	Internet, in
	documentation including	rules for	professional
	in the electronic form in	registration of	activities
	MIS; work with	medical	
	personal data of patients	documentation	
	and information	in medical	
	constituting a medical	organizations	
	secret; use information	providing	
	systems and information	outpatient	
	and telecommunication	medical care	
	network, the Internet, in	including	
	professional activities	medical	
	r wer veres	worker's home	
		visits	
	1		

4. Volume of the academic discipline and types of academic work

Type of educational work		or intensity		Labor intensity		
	volume in credit	volume in academic	(AH) in semesters			
	units (CU)	hours (AH)	1	2	3	4
Classroom work, including						
Lectures (L)	0,39	14		14		
Laboratory practicum (LP)*	1,44	52		52		
Practicals (P)						
Seminars (S)						
Student's individual work (SIW)	1,17	42		42		
Mid-termassessment						
credit/exam (specify the type)						
TOTAL LABOR INTENSITY	3	108		108		

№	Compete nce code	Section name of the discipline	The content of the section in teaching units
1	GPC-10; PC-21; PC-22	Medical informatics	 Statistical algorithms for processing of empirical data. Principles of creating computer models. Probabilistic methods in medicine. Basic concepts of computer communication networks. Concepts of local, corporate, regional and global networks. Internet information resources. Basic concepts about the structure and organization of databases (DB) and database management system (DBMS) on the example of LibreOffice Base relational DBMS. Principles of presentations making.