

*Summary of the working program of the academic discipline*

**«Radiation Diagnostics »**

**(name of the academic discipline)**

General Educational Program of higher education (specialist's degree programs )

*code, name of the specialty*

**31.05.01 General Medicine;**

Department: **Department of Oncology, Radiation Therapy and Radiation Diagnostics**

**1. The purpose of mastering the discipline** (*participation in the formation of relevant competencies – specify the codes*):

1.1. The purpose of mastering the discipline: participation in the formation of competencies UC-1, UC - 4, GPC-1, GPC -3, GPC -5.

1.2. Tasks of the discipline:

1.3. Requirements to the deliverables of mastering the discipline

**2. Position of the academic discipline in the structure of the General Educational Program (GEP).**

**2.1.** The discipline Radiation Diagnostics refers to the core part of Block 1 of GEP HE (31.05.01 "General Medicine").

**2.2.** The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline: anatomy, physics, internal diseases, surgical diseases.

**2.3.** Mastering the discipline is required for forming the following knowledge, skills and abilities for subsequent academic disciplines: faculty therapy, occupational diseases; hospital therapy, polyclinic therapy, oncology and radiation therapy.

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

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

№	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				know	be able to	possess
1.	UC -1	Capable realize critical analysis problem situations based on systemic approach, work out action strategy	UC 1.1 Knows the methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis UC 1.2 Able to acquire new	methods of critical analysis and evaluation of modern scientific achievements; basic principles	receive new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems	has practical experience in studying the problems of professional activity using

			<p>knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience</p> <p>UC 1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; development of an action strategy for solving professional problems;</p>	<p>of critical analysis, new knowledge based on analysis, synthesis, etc.; the method of collecting data on complex scientific problems related to the professional field; ways to search for information and solutions based on actions, experiment and experience</p>	<p>related to the professional field; to search for information and solutions based on actions, experiment and experience</p>	<p>analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems</p>
2.	UC -4	<p>Able to apply modern communication technologies, including in a foreign language(s), for academic and professional interaction</p>	<p>UC 4.1 Knows the basics of oral and written communication in Russian and business communication, modern means of information and communication technologies</p> <p>UC 4.2 Is able to express his thoughts in Russian and foreign languages in business communication</p> <p>UC 4.3 Has practical experience in: compiling texts in Russian and foreign languages related to professional</p>	<p>experience of speaking in Russian and foreign languages, basics of oral and written communication in Russian and foreign languages, functional styles of the native language, requirements for business communic</p>	<p>express one's thoughts in Russian and foreign languages in business communication</p>	<p>Has practical experience in: compiling texts in Russian and foreign languages related to professional activities; experience in translating medical texts from a foreign language into Russian; experience of speaking Russian</p>

			activities; experience in translating medical texts from a foreign language into Russian;	ation, modern means of information and communication technologies		and foreign languages
3.	GPC -1	Able to assess the condition of a patient requiring medical care in emergency or emergency forms of	<p>GPC 1.1 Knows the etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methodology for collecting complaints and anamnesis; physical examination technique (examination, palpation, percussion, auscultation); a list of laboratory and instrumental research methods for assessing the condition, the main medical indications for conducting research and interpreting the results in patients requiring medical care in emergency or emergency forms</p> <p>GPC 1.2 Can identify clinical signs of conditions requiring emergency or emergency medical care</p>	etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methodology for collecting complaints and anamnesis; physical examination technique (examination, palpation, percussion, auscultation); a list of laboratory and instrumental research methods for assessing the condition, the main	make a preliminary diagnosis with subsequent referral to a specialist doctor using diagnostic and differential diagnostic techniques, including the identification of clinical signs of conditions requiring emergency or emergency medical care	methods and techniques of radiation examination of patients, the implementation of basic diagnostic measures in urgent and life-threatening conditions

				<p>medical indications for conducting research and interpreting the results in patients requiring medical care in emergency or emergency forms basic principles of radiation examination of patients, organization of planned and urgent radiation examination, rules for maintaining medical records to identify clinical signs of conditions requiring medical care in emergency or emergency forms</p>		
4.	GPC -3	Able to provide emergency medical care to patients with sudden acute diseases, conditions, exacerbation of	GPC 3.1 Knows: the rules for conducting basic cardiopulmonary resuscitation; the principles of operation of devices	rules for basic cardiopulmonary resuscitation; principles	rules for performing external electrical impulse therapy (defibrillation)	have experience for performing external electrical impulse

		chronic diseases without obvious signs of a threat to the patient's life, provide emergency medical care to patients with conditions that threaten the patient's life, including clinical death (stopping vital functions of the human body (circulation and / or respiration)	for external electrical impulse therapy (defibrillation); the rules for performing external electrical impulse therapy (defibrillation) in case of sudden cessation of blood circulation and /or breathing GPC 3.2 Knows how to perform measures to provide medical care in urgent and emergency forms; basic cardiopulmonary resuscitation in combination with electrical impulse therapy (defibrillation)	of operation of devices for external electropulse therapy (defibrillation);	n) in case of sudden cessation of blood circulation and / or respiration	therapy (defibrillation) in case of sudden cessation of blood circulation and / or respiration
5.	GPC -5	Able to collect complaints, an anamnesis of the patient's life and illness, conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation), formulate a preliminary diagnosis and draw up a plan for laboratory and instrumental examinations of the patient	GPC 5.1 Knows: Legislation of the Russian Federation in the field health care, regulatory legal acts and other documents that determine the activities of medical organizations and medical workers; method of collecting complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology,	the legislation of the Russian Federation in the field of health protection, regulatory legal acts and other documents that determine the activities of medical organizations and medical workers; method of collecting complaints , anamnesis	collect complaints, a history of life and illness of the patient and analyze the information received; conduct a complete physical examination of the patient (examination , palpation, perkussia, auskultation) and interpret its results; determination of volume, co-maintenance	Has practical experience in: collecting complaints, anamnesis of life and diseases in children and adults (their legal representatives), identifying risk factors and causes of diseases; examination and physical examination of children and adults; diagnosis

		<p>pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results</p> <p>GPC 5.2 Able to: collect complaints, anamnesis of life and disease of the patient and analyze the information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and</p>	<p>of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the</p>	<p>and after-completion of diagnostic measures</p> <p>interpret the data obtained using various radiation diagnostic methods</p>	<p>of the most common diseases in children and adults; identification of risk factors for major cancers; formulating a preliminary diagnosis, drawing up a plan for instrumental, laboratory, additional studies, consultations with specialist doctors; referral of patients for instrumental, laboratory, additional studies, consultations of medical specialists in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical</p>
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			<p>sequence of diagnostic measures  <b>GPC 5.3</b> Has practical experience in: collecting complaints, anamnesis of life and diseases in children and adults (their legal representatives), identifying risk factors and causes of diseases; examination and physical examination of children and adults; diagnosis of the most common diseases in children and adults; identification of risk factors for major cancers; formulating a preliminary diagnosis, drawing up a plan for instrumental, laboratory, additional studies, consultations with specialist doctors; referral of patients for instrumental, laboratory, additional studies, consultations of medical specialists in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care; interpretation of data from additional</p>	<p>regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results</p> <p>features of various methods of radiation diagnostics, the possibilities of domestic and foreign equipment for diagnostics</p>		<p>care; interpretation of data from additional (laboratory and instrumental) examinations of patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases and related health problems (ICD); carrying out differential diagnostics of diseases; rare recognition of conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and</p>
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			(laboratory and instrumental) examinations of patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases and related health problems (ICD); carrying out differential diagnostics of diseases; rarecognition of conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring emergency medical care			requiring emergency medical care
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#### 4. Volume of the academic discipline and types of academic work

Total labor intensity of the discipline is   2   CU ( 72 AH)

Type of educational work	Labor intensity		Labor intensity (AH) in semesters			
	volume in credit units (CU)	volume in academic hours (AH)				
Classroom work, including	2	44			44	
Lectures (L)		10			10	
Laboratory practicum (LP)*						
Practicals (P)		34			34	
Seminars (S)						
Student's individual work (SIW)		28			28	
Mid-term assessment						
credit/exam ( <i>specify the type</i> )						
<b>TOTAL LABOR INTENSITY</b>	<b>2</b>	<b>72</b>			<b>72</b>	

### 5. Sections of the academic discipline and competencies that are formed

№	Competence code	Section name of the discipline
1.	UC -1	History of the discovery of X-rays. Properties of x-rays. Laws of skiology-shadow formation.
2.	UC -4	Advantages and disadvantages of the main methods of radiation diagnostics.
3.	GPC -1	Interpretation of data obtained in the study of the organs of the chest cavity is normal. Classifications of pneumonia. X-ray manifestations of pneumonia, depending on the stage. Round shadow syndrome in the lungs. Interpretation of radiographs with diseases of the gastrointestinal tract. Interpretation of radiographs with pathology of bones and joints.
4.	GPC -3	
	GPC -5	
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