

Summary of the working program of the academic discipline

« ONCOLOGY, RADIATION THERAPY »

(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-4, GPC-1, GPC-4, PC-5, PC-9, PC-10.

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 "Oncology, radiation therapy" refers to the cycle "Professional cycle" of the basic part of the Federal State Educational Standard of Higher Professional Education in the specialty: 31.05.01 "Medical Care" (specialist level), approved by order of the Ministry of Science and Higher Education of the Russian Federation No. 988 dated August 12, 2020 .

2.2 To study the discipline, knowledge, skills and abilities are required that are formed by previous disciplines: biology, physics, chemistry, histology, biochemistry, normal and pathological anatomy, normal and pathological physiology, topographic anatomy, as well as clinical disciplines: propaedeutics of internal diseases, general surgery, faculty therapy, faculty surgery, obstetrics and gynecology, ENT diseases, eye diseases, neurology.

2.3 The study of the discipline is necessary to acquire the knowledge, skills and abilities necessary for the subsequent passage of the primary accreditation of a specialist.

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: | | |
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| | | | | know | be able to | possess |
| 1. | UC -4 | Able to apply modern communication technologies, including in a foreign language(s), for academic and | UC 4.1 Knows the basics of oral and written communication in Russian and business communication, | experience of speaking in Russian and foreign languages, | express one's thoughts in Russian and foreign languages in business communication | Has practical experience in: compiling texts in Russian |

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| | | professional interaction | modern means of information and communication technologies UC 4.2 Is able to express his thoughts in Russian and foreign languages in business communication UC 4.3 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; | basics of oral and written communication in Russian and foreign languages, functional styles of the native language, requirements for business communication, modern means of information and communication technologies | on | and foreign languages related to professional activities; experience in translating medical texts from a foreign language into Russian; experience of speaking Russian and foreign languages |
| 2. | GPC -1 | Able to assess the condition of a patient requiring medical care in emergency or emergency forms of | 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 | 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 | 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 |

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| | | | <p>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> | <p>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>basic principles of radiation examination of patients, organization of planned and urgent radiation examination, rules for maintaining medical records to identify</p> | |
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| | | | | clinical signs of conditions requiring medical care in emergency or emergency forms | | |
| 3. | GPC-4 | Able to use medical devices provided for by the procedure for the provision of medical care, as well as to conduct examinations of the patient in order to establish a diagnosis | GPC-4.1 methods of collecting anamnesis of life and diseases, complaints from patients (their legal representatives); methods of examination and physical examination; clinical picture, methods of diagnosis of the most common diseases; methods of laboratory and instrumental studies to assess the state of health, medical indications for conducting research, rules for interpreting their results; the International Statistical Classification of Diseases and Health Problems (ICD); conditions | methods of collecting anamnesis of life and diseases, complaints from patients (their legal representatives); methods of examination and physical examination; clinical picture, methods of diagnosis of the most common diseases; methods of laboratory and instrume | collect complaints, anamnesis of life and disease from patients (their legal representatives), identify risk factors and causes of disease development; apply methods of examination and physical examination of patients; interpret the results of examination and physical examination of patients; diagnose the most common | Has practical experience: collecting complaints, anamnesis of life and disease in patients (their legal representatives), identifying risk factors and causes of disease development; examination and physical examination of patients; diagnosis of the most common diseases; identifica |

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| | | | <p>requiring emergency medical care; the procedure for the use of medical devices in accordance with the current procedures for the provision of medical, clinical recommendations (treatment protocols) on the provision of medical care, assistance taking into account the standards of medical care</p> | <p>ntal studies to assess the state of health, medical indications for conducting research, rules for interpreting their results; the International Statistical Classification of Diseases and Health Problems (ICD); conditions requiring emergency medical care; the procedure for the use of medical devices in accordance with the current procedur</p> | <p>pathology in patients; identify risk factors for cancer; formulate a preliminary diagnosis, draw up a plan for laboratory, instrumental and additional studies in accordance with the procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care; refer patients to laboratory, instrumental and additional studies in accordance with the current procedures for the provision of medical</p> | <p>tion of risk factors for major oncological diseases; formulation of a preliminary diagnosis, drawing up a plan for conducting instrumental, laboratory, additional studies, consultations of specialist doctors; referral of patients to instrumental, laboratory, additional studies, consultations of specialist doctors in accordance with the current</p> |
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| | | | | <p>es for the provision of medical, clinical recommendations (treatment protocols) on the provision of medical care, assistance taking into account the standards of medical care</p> | <p>care, clinical recommendations, taking into account the standards of medical care; refer patients for consultations to specialist doctors in accordance with the procedures for the provision of medical care</p> | <p>procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical 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</p> |
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| 4. | PC -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 | IPC 5.1 Legislation of the Russian Federation in the field of 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, 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 | 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 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, | 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, auscultation) and interpret its results; determination of volume, co-maintenance and after-completion of diagnostic measures interpret the data obtained using various radiation diagnostic methods | 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 |

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| | | | <p>of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results</p> <p>IPC 5.2 assessment of basic morphofunctional data, physiological conditions and pathological processes in the human body</p> <p>IPC 5.3 Has practical experience: assessment of basic morphological and functional data, physiological conditions and pathological processes in the human body when solving professional problems; legislation of the Russian Federation in the field of health protection, regulations and other documents that determine the activities of medical organizations and medical workers; a method for collecting complaints, an anamnesis of life and illness of a patient with oncological diseases; a technique for a complete physical examination of a patient with cancer</p> | <p>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</p> | | <p>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 (laboratory and instrumental) examinations of patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases</p> |
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| | | | (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; | interpreting their results features of various methods of radiation diagnostics, the possibilities of domestic and foreign equipment for diagnostics | | 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 requiring emergency medical care |
| 5. | PC-9 | Able to provide palliative care when interacting with medical specialists and other medical workers | IPC-9.1 The procedure for providing palliative care IPC-9.2 Prescribe medicines, medical devices and nutritional therapy, taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment | To prescribe medicines, medical devices and nutritional therapy to patients with oncological diseases, taking into account the diagnosis, age and clinical picture of | prescribe non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical recommenda | evaluate the effectiveness and safety of the use of medicines, medical devices and medical nutrition - the main medical diagnostic and therapeutic methods for |

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| | | | <p>protocols) on the provision of medical care, taking into account the standards of medical care; prescribe non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; evaluate the effectiveness and safety of the use of medicines, medical devices and clinical nutrition. The procedure for providing palliative care to patients with cancer</p> | <p>the disease in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care, taking into account the standards of medical care;</p> | <p>tions (treatment protocols) on the provision of medical care, taking into account the standards of medical care;</p> | <p>providing first aid in emergency and life-threatening conditions;</p> |
| 6. | PC-10 | <p>Able to organize personalized treatment of a patient, including pregnant women, elderly and senile patients, evaluate the effectiveness and safety of treatment</p> | <p>IPC-10.1 modern methods of using drugs, medical devices and clinical nutrition for diseases and conditions in a patient in accordance with with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the</p> | <p>in a patient with cancer in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the</p> | <p>mechanism of action of non-drug treatment; medical indications and contraindications to its appointment; side effects, complications caused by its use prescribe medications, medical</p> | <p>prescribe non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision</p> |

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| | | | <p>provision of medical care, taking into account the standards of medical care; the mechanism of action of drugs, medical products and medical nutrition, medical indications and contraindications to their use; complications caused by their use; modern methods of non-drug treatment of diseases and conditions in a patient in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; mechanism of action of non-drug treatment; medical indications and contraindications to its appointment; side effects, complications caused by its use</p> | <p>provision of medical care, taking into account the standards of medical care; the mechanism of action of drugs, medical products and medical nutrition, medical indications and contraindications to their use;</p> | <p>devices and clinical nutrition to patients with oncological diseases, taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care;</p> | <p>of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; evaluate the effectiveness and safety of the use of medicines, medical devices and clinical nutrition - the skills of interpreting the results of laboratory, instrumental diagnostic methods;</p> |
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4. Volume of the academic discipline and types of academic work

Total labor intensity of the discipline is 3 CU (108 AH)

| Type of educational work | Labor intensity | | Labor intensity (AH) in semesters | | | |
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| | volume in credit units (CU) | volume in academic hours (AH) | | | | |
| Classroom work, including | 3 | 66 | | | 66 | |

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| Lectures (L) | | 14 | | | 12 | |
| Laboratory practicum (LP)* | | | | | | |
| Practicals (P) | | 52 | | | | |
| Clinical Practice (CP) | | | | | 44 | |
| Seminars (S) | | | | | | |
| Student's individual work (SIW) | | 42 | | | 34 | |
| Mid-term assessment | | | | | | |
| credit/exam (<i>specify the type</i>) | | | | | | |
| TOTAL LABOR INTENSITY | 3 | 108 | | | 108 | |

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

| № | Competence code | Section name of the discipline |
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| 1. | UC-4, | <p>Methods of radiation therapy Physical basis of radiation therapy of malignant neoplasms</p> <p>Ionizing radiation. Types of ionizing radiation.</p> <p>Types of radiation used for therapeutic purposes in oncology, their characteristics.</p> <p>Principles and methods of dosimetry, methods of protection against exposure to ionizing radiation.</p> <p>Effects of ionizing radiation at the subcellular and cellular level.</p> <p>Stages of development of radiation damage in biological tissues. Effects of ionizing radiation at the tissue level.</p> <p>The concept of radiosensitivity. Factors affecting radiosensitivity.</p> <p>Effects of AI at the organism level</p> <p>The effects of AI on the organism as a whole. Long-term effects of irradiation.</p> <p>Features of the impact of AI on malignant neoplasms.</p> <p>Factors affecting the effectiveness of radiation therapy of tumors - reparation, repopulation, reoxygenation, redistribution in the cell cycle. radio-modifying influences.</p> |
| 2. | GPC-1, GPC-4, | <p>Current state and prospects for the development of oncology. Purpose, content and place of oncology in the system of physician training.</p> <p>Morbidity and mortality from malignant neoplasms. Dynamics and structure of morbidity. Regional features of the spread of malignant neoplasms.</p> <p>Factors contributing to the development of tumors. The significance of the nature of nutrition, smoking, endocrine disorders, viruses, radioactive and ultraviolet radiation, heredity, secondary immunodeficiency states. The concept of primary and secondary prevention. Socio-hygienic and individual measures of cancer prevention. Fight against smoking. Food hygiene.</p> <p>The most important scientific directions and modern technologies in oncology. Dynamics of indicators of cure of oncological patients.</p> |
| 3 | PC-5, PC-9, PC-10 | <p>Organization of cancer care. Principles of oncological service in Russia. clinical groups. State registration system. Accounting documentation. Analysis of the causes of neglect of malignant tumors.</p> <p>Palliative care for patients with advanced forms of malignant neoplasms. The concept of the quality of life of cancer patients.</p> <p>Deontology in oncology. Tactics of a doctor in relation to an oncological patient.</p> <p>Rules of conduct for students in the oncology clinic. Curation of patients.</p> |