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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA
RUDN University
Institute of Medicine**

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Oncology, Radiotherapy

course title

Recommended by the Didactic Council for the Education Field of:

31.05.01 General Medicine

field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

General Medicine

higher education programme profile/specialisation title

2026

1. COURSE GOAL(s):

The course "Oncology, radiotherapy" is included in the program of the specialty "General Medicine" in the direction of 31.05.01 "General Medicine" and is studied in the 11th semester of the 6th course. The discipline is implemented by the Department of Oncology and Radiology named after Academician V.P. Khartchenko. The discipline consists of 12 sections and 15 topics and is aimed at studying the basics of early diagnosis and modern approaches to the treatment of malignant neoplasms.

The goal of mastering the course is to provide training for specialists in the program General Medicine, section – oncology and radiotherapy.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) "Oncology, Radiation Therapy" is aimed at the development of the following competences /competences in part: GPC-4, GPC-5, PC-1, PC-2, PC-3, PC-6.

Table 2.1. List of competences that students acquire through the course study

Competence code	Competence	Indicators of Competence Formation (within the framework of this discipline)
GPC-4	Able to use medical devices approved by the rules of providing medical care, as well as to conduct examinations of the patient in order to establish a diagnosis	GPC-4.2. Able to evaluate the effectiveness and safety of the use of medical devices
		GPC-4.3. Possess the technique of performing typical medical manipulations using medical devices approved by the rules of providing medical care
GPC-5	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	GPC-5.1. Knows how to use the algorithm of clinical, laboratory and functional diagnostics in solving professional tasks
		GPC-5.2. Able to evaluate the results of clinical, laboratory and functional diagnostics in solving professional tasks
		GPC-5.3. Can determine morphofunctional, physiological conditions and pathological processes of the human body
PC-1	Capable of providing medical care to the patient in emergency	PC-1.1. Able to assess the condition of a patient requiring urgent medical care in emergency
		PC-1.2. It is able to recognize conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring urgent medical care
		PC-1.3. Able to provide emergency medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious

		signs of a threat to the patient's life
		PC-1.4. It is able to recognize conditions that pose a threat to the patient's life, including conditions of clinical death (stopping vital functions of the human body: blood circulation and/or respiration) that require emergency medical care
		PC-1.5. Able to provide emergency medical care to patients with conditions that pose a threat to the patient's life, including clinical death (stopping vital functions of the human body (blood circulation and/or respiration)
		PC-1.6. Able to use medicines and medical devices in the provision of medical care in emergency
PC-2	Capable of conducting a patient examination in order to establish a diagnosis	PC-2.1. Has the skills to collect complaints, anamnesis of the patient's life and illness, as well as to conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation)
		PC-2.2. Is able to formulate a preliminary diagnosis and make a plan for laboratory and instrumental examinations of the patient
		PC-2.3. Is able to refer the patient for laboratory examination in the presence of medical indications in accordance with the current procedures for medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care
		PC-2.4. Is able to refer the patient for instrumental examination in the presence of medical indications in accordance with the current procedures for medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care
		PC-2.5. Is able to refer the patient for consultation with specialist doctors in the presence of medical indications in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care
		PC-2.6. Is able to refer a patient for specialized medical care in inpatient conditions or in a day hospital if there are medical indications in accordance with the current procedures for medical care, clinical

		recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care
		PC-2.7. Is able to carry out differential diagnostics with other diseases/conditions, including urgent ones, as well as to establish a diagnosis taking into account the current international statistical classification of diseases and health-related problems (ICD)
PC-3	Capable of prescribing treatment and monitoring its effectiveness and safety	PC-3.1. Is able to develop a plan for the treatment of a disease or condition, taking into account the diagnosis, age and clinical picture 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
		PC-3.5 Is able to conduct palliative care in cooperation with medical doctors-specialists and other medical staff
		PC-3.6. Is able to organize personalized treatment of the patient, including pregnant women, elderly and senile patients, to evaluate the effectiveness and safety of treatment
PC-6	Capable of maintaining medical records and organizing the activities of the nursing staff at the disposal	PC-6.3. Is able to keep medical records, including in electronic form
		PC-6.4. Is able to monitor the performance of official duties by a district nurse and other medical workers

3.COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective* component of (B1) block of the higher educational programme curriculum.

* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
GPC-4	<p>Able to use medical devices approved by the rules of providing medical care, as well as to conduct examinations of the patient in order to establish a diagnosis</p>	<p>Biotechnology; General Surgery; Pharmacology; Topographic anatomy and operative surgery; Neurology, medical genetics, neurosurgery; Hospital surgery, pediatric surgery; Traumatology, orthopedics; Radiological diagnostics; Bioorganic chemistry; Experimental oncology; Physics; Chemistry; Introductory practice for obtaining primary professional skills: patient care (simulation center); Introductory practice for obtaining primary professional skills: patient care; Practice in obtaining primary professional skills: assistant to junior medical staff; Practice of diagnostic profile: assistant ward nurse; The practice of emergency medical procedures (simulation center); Practice in obtaining primary professional skills and professional experience: assistant to a procedural nurse</p>	<p>Urgent conditions; Endocrinology; Hospital surgery, pediatric surgery;</p>

GPC-5	Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems	<p>Ophthalmology; Propaedeutics of internal diseases; Medical Elementology; Obstetrics and gynecology; Biochemistry; Immunology; Otorhinolaryngology; General Surgery; Pediatrics; Pharmacology; Anatomy; Topographic anatomy and operative surgery; Histology, embryology, cytology; Normal physiology; Microbiology, virology; Pathophysiology, clinical pathophysiology; Radiation diagnostics; Bioorganic chemistry; Methods of cell biology and histology; Methods of microbiological diagnosis; Molecular genetic methods; Pathological anatomy, clinical pathological anatomy; Biology; Chemistry</p>	Maxillofacial surgery; Sectional course; Phthisiology;
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<p>PC-1</p>	<p>Capable of providing medical care to the patient in urgent or emergency forms</p>	<p>Ophthalmology; Propaedeutics of internal diseases; Obstetrics and gynecology; Infectious diseases; General Surgery; Pediatrics; Faculty therapy; Faculty Surgery; Neurology, medical genetics, neurosurgery; Outpatient therapy; Hospital surgery, pediatric surgery; Traumatology, orthopedics; Emergency medicine for life-threatening conditions; Hospital therapy; Urology; Practice of diagnostic profile: assistant ward nurse; The practice of emergency medical procedures; (simulation center); Practice in obtaining primary professional skills and professional experience: assistant to a procedural nurse; Surgical practice : Assistant surgeon; Practice of obstetric and gynecological profile: assistant to a gynecologist; Assistant physician of the therapeutic profile: assistant physician of the therapist; Practice of obstetrician-gynecological profile: assistant obstetrician; General medical practice: Assistant pediatrician ;</p>	<p>Urgent conditions; Disaster Medicine; Endocrinology; Outpatient therapy; Hospital surgery, pediatric surgery; Hospital therapy; Endoscopic urology; Allergology</p>
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<p>PC-2</p>	<p>Capable of conducting a patient examination in order to establish a diagnosis</p>	<p>Medical Enzymology**; Molecular genetics in practical biology and medicine**; Ophthalmology; Propaedeutics of internal diseases; Medical Elementology; Obstetrics and gynecology; Immunology; Infectious diseases; Otorhinolaryngology; General Surgery; Pediatrics; Faculty therapy; Faculty Surgery; Occupational diseases; Microbiology, virology; Pathophysiology, clinical pathophysiology; Neurology, medical genetics, neurosurgery; Psychiatry, medical psychology; Outpatient therapy; Hospital surgery, pediatric surgery; Traumatology, orthopedics; Evidence-based medicine; Radiation diagnostics; Dermatovenerology; Clinical Dentistry; Neonatology**; Topical Issues of Neonatology**; Cardiology in Quests; Methods of microbiological diagnostics; Molecular genetic methods; Pathological anatomy, clinical pathological anatomy; Hospital therapy; Urology; Surgical practice : Assistant surgeon ; Practice of obstetric and gynecological profile: assistant to a gynecologist; Assistant physician of the therapeutic profile: assistant physician of the therapist; General medical practice: assistant to an outpatient clinic doctor; Practice of obstetrician-gynecological profile: assistant obstetrician; General medical practice: Assistant pediatrician;</p>	<p>Telemedicine; Urgent conditions; Maxillofacial surgery; Sectional course; Endocrinology; Phthisiology; Outpatient therapy; Hospital surgery, pediatric surgery; Reproductive health; Hospital therapy; Endoscopic urology; Allergology;</p>
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<p style="text-align: center;">PC-3</p>	<p style="text-align: center;">Capable of prescribing treatment and monitoring its effectiveness and safety</p>	<p>Introduction to Nutritionology**; The basics of nutrition in childhood**; Ophthalmology; Obstetrics and gynecology; Infectious diseases; Otorhinolaryngology; Pediatrics; Faculty therapy; Pharmacology; Faculty Surgery; Occupational diseases; Fundamentals of Integrative medicine**; Neurology, medical genetics, neurosurgery; Psychiatry, medical psychology; Outpatient therapy; Hospital surgery, pediatric surgery; Traumatology, orthopedics; Dermatovenerology; Current issues of neonatology**; Topical Issues of Neonatology**; Experimental oncology; Cardiology in Quests; The basics of therapeutic nutrition; Geriatrics and palliative medicine Clinical Trials**; Hospital therapy; Urology; Surgical practice : Assistant surgeon ; Practice of obstetric and gynecological profile: assistant to a gynecologist; Assistant physician of the therapeutic profile: assistant physician of the therapist; General medical practice: assistant to an outpatient clinic doctor; Practice of obstetrician-gynecological profile: assistant obstetrician; General medical practice: Assistant pediatrician;</p>	<p style="text-align: center;">Telemedicine; Outpatient Cardiology**; Maxillofacial surgery; Endocrinology; Phthisiology; Outpatient therapy; Hospital surgery, pediatric surgery; Reproductive health; Hospital therapy; Endoscopic urology; Allergology;</p>
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PC-6	Capable of maintaining medical records and organizing the activities of the nursing staff at the disposal	<p>Ophthalmology; Propaedeutics of internal diseases; Obstetrics and gynecology; Bioethics**; Infectious diseases; General Surgery; Pediatrics; Faculty therapy; Faculty Surgery; Public health and healthcare, economics health care; Outpatient therapy; Hospital surgery, pediatric surgery; Radiation diagnostics; Biostatistics; Hospital therapy; Urology; Introductory practice for obtaining primary professional skills:</p> <p>patient care (simulation center); Introductory practice for obtaining primary professional skills: patient care;</p> <p>Practice in obtaining primary professional skills: assistant to junior medical staff; Practice in obtaining primary professional skills and experience;</p> <p>Professional activity: assistant to a procedural nurse; Surgical practice : Assistant surgeon ; Practice of obstetric and gynecological profile: assistant to a gynecologist; Assistant physician of the therapeutic profile: assistant physician of the therapist; General medical practice: assistant to an outpatient clinic doctor; Practice of obstetrician-gynecological profile: assistant obstetrician;</p>	<p>Telemedicine; Outpatient therapy; Hospital surgery, pediatric surgery; Hospital therapy; Endoscopic urology; Allergology;</p>
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* To be filled in according to the competence matrix of the higher education programme.

4. THE COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course "Oncology, Radiation therapy" is **3** credits (108 academic hours).

*Table 4.1. Types of academic activities during the periods of higher education programme mastering (full-time training)**

Type of academic activities	Total academic hours	Semesters/training modules			
		11			
<i>Contact academic hours</i>	68	68			
<i>including:</i>					
Lectures (LC)					
Lab work (LW)	68	68			
Seminars (workshops/tutorials) (S)					
<i>Self-studies</i>	22	22			
<i>Evaluation and assessment (exam/passing/failing grade)</i>	18	18			
Course workload	academic	108	108		

Type of academic activities		Total academic hours	Semesters/training modules			
			11			
	hours					
	credits	3	3			

* To be filled in regarding the higher education programme correspondence training mode.

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Lung cancer	1.1 Statistics, epidemiology and modern diagnostics of lung cancer. Surgical, combined and complex treatment of lung cancer. Rehabilitation of lung cancer patients after treatment, monitoring and treatment of disease recurrence	LW
Stomach cancer	2.1 Statistics, epidemiology and modern diagnostics of stomach cancer. Surgical, combined and complex treatment of gastric cancer. Rehabilitation of patients with gastric cancer after treatment, monitoring and treatment of disease recurrence	LW
Breast cancer	3.1 Statistics, epidemiology and modern diagnostics of breast cancer. Surgical, combined and complex treatment of breast cancer. Rehabilitation of patients with breast cancer after treatment, monitoring and treatment of disease recurrence	LW
Colorectal cancer	4.1 Statistics, epidemiology and modern diagnostics of colon cancer. Surgical, combined and complex treatment of colon cancer. Rehabilitation of colon cancer patients after treatment, monitoring and treatment of disease recurrence	LW
Skin cancer, melanoma	5.1 Statistics, epidemiology and modern diagnostics of skin cancer and melanoma. Surgical, radiation, laser treatment of skin cancer and melanoma. Rehabilitation of patients with skin cancer and melanoma after special treatment, monitoring and treatment of disease recurrence	LW

Esophageal cancer	6.1 Statistics, epidemiology, and current diagnosis of esophageal cancer. Surgical, combined and complex treatment of cancer of the esophagus. Rehabilitation of patients with cancer of the esophagus after treatment, monitoring and treatment of relapses	LW
Thyroid cancer	7.1 Statistics and epidemiology current diagnosis of thyroid cancer. Surgical, combined treatment of thyroid cancer. Rehabilitation of patients with thyroid cancer after treatment, monitoring and treatment of relapses	LW
Lymphomas	8.1 Hodgkin's lymphoma. Statistics, epidemiology and modern diagnosis of malignant lymphomas. Modern chemoradiotherapy of malignant lymphomas. Rehabilitation of patients with malignant lymphoma after treatment, monitoring and treatment of relapses	LW
Pancreatobiliary cancer	Statistics, epidemiology and modern diagnosis of pancreatic cancer, extrahepatic bile ducts and a large duodenal nipple. Surgical, combined and complex treatment. Rehabilitation of patients after treatment, monitoring and treatment of relapses	LW
Liver cancer	9.1 Statistics, epidemiology and modern diagnosis of liver cancer. Surgical and complex treatment of liver cancer. Rehabilitation of patients with liver cancer after treatment, monitoring and treatment of relapses	LW
Radiation therapy of malignant tumors	10.1 Modern radiation therapy of malignant neoplasms. The types of radiation. Their characteristics. Methods of radiation therapy. Combined and complex radiotherapy. Complications of radiotherapy	LW
Drug therapy of malignant tumors.	11.1 Modern drug therapy. Groups of chemotherapy drugs, enzymes, vaccines, hormones. Private chemotherapy for various human malignant diseases. Complications.	LW

* - to be filled in only for **full**-time training; *LC* - lectures; *LW* - lab work; *S* - seminars.

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENT

Table 6.1. Classroom equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lab-work	An auditorium for conducting laboratory work, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	
Computer-lab	IT for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of PC (n=), projection screen, multimedia equipment.	
Seminar room	An auditorium for conducting seminar-type classes, group and individual consultations, ongoing monitoring and interim certification, equipped with a set of specialized furniture and multimedia presentation equipment.	
Self-studies	An auditorium for students to work independently (it can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to Electronic Individual Educational Service.	
Self-studies (lecture room).	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to Electronic Informational-Educational Media.	

7. RESOURCES RECOMMENDED FOR COURSE STUDIES:

Main readings:

- Robert De W. Marsh. **The Essentials of Clinical Oncology**. 2024. 698 p. <https://www.jaypeedigital.com/book/9788180615139>. DOI 10.5005/jp/books/10971
- General aspects of clinical oncology. Study Guide for students, residents, aspirants studying oncology [Электронный ресурс] = Общие вопросы клинической онкологии : Учебно-методическое пособие на английском языке / Н.В. Харченко [и др.]. - Электронные текстовые данные. - М. : Изд-во РУДН, 2018. - 40 с.
- National Cancer Institute, USA: <https://www.cancer.gov/types>
- Herring William. **Learning Radiology : recognizing the basics** / W. Herring. - 4th edition ; Книга на английском языке. - Philadelphia : Elsevier, 2020. - 382 p. : ill. - ISBN 978-0-323-56729-9 : 4730.00.
- Principles and Management of Cancer. by Tejinder Kataria, Hemant Singhal , Dinesh Chand Doval. JaypeeDigital / 2016. <https://www.jaypeedigital.com/book/9789351529712>

Internet-based sources

- 1. Electronic libraries with access for RUDN students:
 - Electronic library network of RUDN – ELN RUDN <http://lib.rudn.ru/MegaPro/Web>
 - ELN «University Library online» <http://www.biblioclub.ru>
 - ELN Urait <http://www.biblio-online.ru>
 - ELN «Student Advisor» www.studentlibrary.ru
 - ELN «Lan» <http://e.lanbook.com/>
- 2. Databases and search engines:
 - electronic fund of legal and regulatory and technical documentation <http://docs.cntd.ru/>
 - search system Yandex <https://www.yandex.ru/>
 - search system Google <https://www.google.ru/>
- abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

8. EVALUATION MATERIALS AND A POINT-RATING SYSTEM FOR ASSESSING THE LEVEL OF COMPETENCE FORMATION IN THE DISCIPLINE

Evaluation materials and a score-rating system (SRS) for assessing the level of competence formation (part of competencies) based on the results of mastering the discipline "RADIOLOGY" are presented in the Appendix to this Work Program of the discipline. Assessment tools and SRS are formed on the basis of the requirements of the relevant local regulatory act of the RUDN.

DEVELOPERS:

Academician, Professor

A.D. Kaprin

position, department

signature

name and surname

HEAD OF EDUCATIONAL DEPARTMENT:

of Urology and Operative

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oncurology

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