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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, Radiation therapy

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

1. THE GOALS OF MASTERING THE DISCIPLINE:

The goal of the course “Oncology, Radiation therapy” is to provide knowledge and training for specialists in the program General Medicine, section – oncology and radiotherapy.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) "Radiology" 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.

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
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	Biotechnology; General Surgery; Pharmacology; Topographic anatomy and operative surgery; Neurology, medical genetics, neurosurgery; Hospital surgery, pediatric surgery; Traumatology,	Urgent conditions; Endocrinology; Hospital surgery, pediatric surgery;

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		<p>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>	
GPC-5	<p>Able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems</p>	<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,</p>	<p>Maxillofacial surgery; Sectional course; Phthisiology;</p>

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		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	
PC-1	Capable of providing medical care to the patient in urgent or emergency forms	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;	Urgent conditions; Disaster Medicine; Endocrinology; Outpatient therapy; Hospital surgery, pediatric surgery; Hospital therapy; Endoscopic urology; Allergology

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		(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 ;	
PC-2	Capable of conducting a patient examination in order to establish a diagnosis	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;	Telemedicine; Urgent conditions; Maxillofacial surgery; Sectional course; Endocrinology; Phthisiology; Outpatient therapy; Hospital surgery, pediatric surgery; Reproductive health; Hospital therapy; Endoscopic urology; Allergology;

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		Traumatology, orthopedics; Evidence-based medicine; Radiation diagnostics; Dermatovenereology; 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;	
PC-3	Capable of prescribing treatment and monitoring its effectiveness and safety	Introduction to Nutritionology**; The basics of nutrition in childhood**; Ophthalmology; Obstetrics and gynecology; Infectious diseases; Otorhinolaryngology; Pediatrics; Faculty therapy; Pharmacology; Faculty Surgery;	Telemedicine; Outpatient Cardiology**; Maxillofacial surgery; Endocrinology; Phthisiology; Outpatient therapy; Hospital surgery, pediatric surgery; Reproductive health; Hospital therapy; Endoscopic urology; Allergology;

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		Occupational diseases; Fundamentals of Integrative medicine**; Neurology, medical genetics, neurosurgery; Psychiatry, medical psychology; Outpatient therapy; Hospital surgery, pediatric surgery; Traumatology, orthopedics; Dermatovenereology; 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;	
PC-6	Capable of maintaining medical records and organizing the activities of the nursing staff at the disposal	Ophthalmology; Propaedeutics of internal diseases; Obstetrics and gynecology; Bioethics**; Infectious diseases; General Surgery; Pediatrics; Faculty therapy; Faculty Surgery; Public health and	Telemedicine; Outpatient therapy; Hospital surgery, pediatric surgery; Hospital therapy; Endoscopic urology; Allergology;

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		healthcare, economics health care; Outpatient therapy; Hospital surgery, pediatric surgery; Radiation diagnostics; Biostatistics; Hospital therapy; Urology; 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 in obtaining primary professional skills and experience; 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;	

* To be filled in according to the competence matrix of the higher education programme.

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course "**Oncology, radiotherapy**" 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			
including:					
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 hours	108	108		
	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	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	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	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	<p>Statistics, epidemiology and modern diagnostics of colon cancer. Surgical, combined and complex treatment of colon cancer.</p> <p>Rehabilitation of colon cancer patients after treatment, monitoring and treatment of disease recurrence</p>	LW
Skin cancer, melanoma	<p>Statistics, epidemiology and modern diagnostics of skin cancer and melanoma. Surgical, radiation, laser treatment of skin cancer and melanoma.</p> <p>Rehabilitation of patients with skin cancer and melanoma after special treatment, monitoring and treatment of disease recurrence</p>	LW
Esophageal cancer	<p>Statistics, epidemiology, and current diagnosis of esophageal cancer. Surgical, combined and complex treatment of cancer of the esophagus.</p> <p>Rehabilitation of patients with cancer of the esophagus after treatment, monitoring and treatment of relapses</p>	LW
Thyroid cancer	<p>Statistics and epidemiology current diagnosis of thyroid cancer. Surgical, combined treatment of thyroid cancer.</p> <p>Rehabilitation of patients with thyroid cancer after treatment, monitoring and treatment of relapses</p>	LW
Lymphomas	<p>Hodgkin's lymphoma. Statistics, epidemiology and modern diagnosis of malignant lymphomas. Modern chemoradiotherapy of malignant lymphomas.</p> <p>Rehabilitation of patients with malignant lymphoma after treatment, monitoring and treatment of relapses</p>	LW
Pancreatobiliary cancer	<p>Statistics, epidemiology and modern diagnosis of pancreatic cancer, extrahepatic bile ducts and a large duodenal nipple. Surgical, combined and complex treatment.</p> <p>Rehabilitation of patients after treatment, monitoring and treatment of relapses</p>	LW
Liver cancer	<p>Statistics, epidemiology and modern diagnosis of liver cancer. Surgical and complex treatment of liver cancer.</p> <p>Rehabilitation of patients with liver cancer after treatment, monitoring and treatment of relapses</p>	LW
Radiation therapy of malignant tumors	<p>Modern radiation therapy of malignant neoplasms. The types of radiation. Their characteristics. Methods of radiation therapy. Combined and complex</p>	LW

	radiotherapy. Complications of radiotherapy	
Drug therapy of malignant tumors.	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 REQUIREMENTS

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)
Lecture (212)	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	Microsoft products (OS, office package) (Subscription Enrollment for Education Solutions (EES) No. 56278518 dated 23/04/2019) Guarantor (Agreement No. 13A/46/2018 dated 02/04/2018) Consultant Plus (Information Support Agreement dated 01/09/2013) Regt number of the central office-03-207-7474 from September.2013
Lab work (225)	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	Microsoft products (OS, office package) (Subscription Enrollment for Education Solutions (EES) No. 56278518 dated 23/04/2019) Guarantor (Agreement No. 13A/46/2018 dated 02/04/2018) Consultant Plus (Information Support Agreement dated 01/09/2013) Regt number of the central office-03-207-7474 from September.2013
Seminar (225)	An auditorium for conducting seminar-type classes, group and individual consultations, ongoing monitoring and interim certification, equipped with a set of specialized furniture	Microsoft products (OS, office package) (Subscription Enrollment for Education Solutions

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
	and multimedia presentation equipment.	(EES) No. 56278518 dated 23/04/2019) Guarantor (Agreement No. 13A/46/2018 dated 02/04/2018) Consultant Plus (Information Support Agreement dated 01/09/2013) Regt number of the central office-03-207-7474 from September.2013
Computer Lab (212)	A computer classroom for conducting classes, group and individual consultations, ongoing monitoring and interim certification, equipped with personal computers (in the amount of 3 pcs.), a blackboard (screen) and multimedia presentation equipment.	Microsoft products (OS, office package) (Subscription Enrollment for Education Solutions (EES) No. 56278518 dated 23/04/2019) Guarantor (Agreement No. 13A/46/2018 dated 02/04/2018) Consultant Plus (Information Support Agreement dated 01/09/2013) Regt number of the central office-03-207-7474 from September.2013
Self-studies	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.	Microsoft products (OS, office package) (Subscription Enrollment for Education Solutions (EES) No. 56278518 dated 23/04/2019) Guarantor (Agreement No. 13A/46/2018 dated 02/04/2018) Consultant Plus (Information Support Agreement dated 01/09/2013) Regt number of the central office-03-207-7474 from September.2013

* The premises for students' self-studies are subject to **MANDATORY** mention

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

1. Oncology (textbook for medical schools)

Edited by S. B. Peterson of Moscow. GOATER-Media 2017,-288C. ISBN 978-5-9704-4070-0

2. Guide to practical training in Oncology , sh X Ghanaians,2007,Moscow, MIA.
3. Manual of Oncology, edited by V. I. Chissov. 2008 MIA, 835 p. ISBN 978-5-8948-1676-4
4. General questions of clinical Oncology. Moscow, peoples ' friendship University textbook. N. In. Kharchenko and co-authors, 2018 41C. ISBN 978-5-209-08360-3
5. Oncology .Tutorial. V. G. Cherenkov. 2017. Heater Media ISBN 978-5-9704-4091-9
6. Radiation therapy (radiotherapy): the Textbook / Under the editorship of G. E. Trufanov Moscow. ISBN 978-5-9704-442--7
GOATER Media. 2018-208 S.

Additional readings:

1. Cancer of the stomach in questions and answers (textbook) Moscow., Peoples ' friendship University, 1999.
2. Esophageal cancer questions and answers (textbook) Moscow., Peoples ' friendship University, 1999
3. Breast cancer questions and answers (textbook) Moscow., PFUR, 2000.
4. Lung cancer questions and answers (textbook) Moscow., PFUR, 2007.

5. Thyroid cancer questions and answers (textbook) Moscow., People's friendship University, 2008.

6. Lymphogranulematosis in questions and answers (textbook) Moscow., People's friendship University, 2008.
7. Cancer of the skin. Melanoma questions and answers (textbook) Moscow., People's friendship University, 2008.
8. . Cancer of the pancreas, bile ducts and major duodenal nipple in questions and answers (textbook) Moscow., People's friendship University, 2009.
9. Colon cancer questions and answers (textbook) Moscow., PFUR, 2011.
10. . Basic principles of chemotherapy of malignant neoplasms (textbook) Moscow, PFUR, 2014. ISBN 978-5-209-05917-2

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/>

Training toolkit for self- studies to master the course *:

1. The set of lectures on the course “Oncology, Radiotherapy”
2. The laboratory workshop (if any) on the course “Oncology, Radiotherapy”
3. The guidelines for writing a course paper / project (if any) on the course “Oncology, Radiotherapy”.
4.

* The training toolkit for self- studies to master the course is placed on the course page in the university telecommunication training and information system under the set procedure.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS’ COMPETENCES LEVEL UPON COURSE COMPLETION

The assessment toolkit and the grading system* to evaluate the competences formation level (GPC-4, GPC-5, PC-1, PC-2, PC-3, PC-6) upon the course study completion are specified in the Appendix to the course syllabus.

* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

DEVELOPERS:

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of Oncology and Diagnostic
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G.M.Zapirov

position, department

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