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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
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

2022-2023

1. COURSE GOAL(s)

The goal of the course “Oncology, Radiation Therapy” is to equip students with the knowledge of theoretical and practical training of doctors in modern diagnostics and treatment of oncological diseases.

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-10, PC-2, PC-6.

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

| Competence code | Competence descriptor | Competence formation indicators (within this course) |
|------------------------|--|---|
| GPC-4 | A student is able to use the approved medical diagnostic devices, as well as to conduct examinations of the patient in order to establish a diagnosis | GPC-4.1. Able to use medical devices in accordance with the current rules of medical care provision, clinical recommendations and treatment protocols |
| | | GPC-4.2. Able to evaluate the effectiveness and safety of the use of medical devices |
| | | GPC-4.3. A student has mastered the technique of performing typical medical manipulations using the approved medical devices |
| GPC-10 | Able to solve standard tasks of professional activity using information, bibliographic resources, medical and biological terminology, information and communication technologies, taking into account the basic requirements of information security | GPC -10.1. Is able to use modern information and communication tools and technologies in professional activities |
| | | GPC -10 Knows how to comply with the rules of information security in professional activities |
| | | GPC -10.3. Is able to use information and communication technologies, including general and special purpose application software in solving professional tasks |
| PC-2 | Capable of conducting a patient examination in order to establish a diagnosis | PC -2.1. Has the skills of getting information on complaints, history of the patient's life and illness, as well as conducting a complete physical examination of the patient (visual examination, palpation, percussion, auscultation) |
| | | PC -2.2. Able to formulate a preliminary diagnosis and make a plan of laboratory and instrumental examinations of the patient |
| | | PC -2.3. Able to refer the patient to laboratory examination in the presence of medical |

| Competence code | Competence descriptor | Competence formation indicators (within this course) |
|-----------------|--|---|
| | | <p>indications in accordance with the current practice of the provision of medical care, clinical recommendations (treatment protocols) and standards of medical care</p> <p>PC -2.4. Able to refer the patient to instrumental methods of examination when indicated in accordance with the current practice of the provision of medical care, clinical recommendations (treatment protocols) and standards of medical care</p> <p>PC -2.5. Able to refer the patient to medical specialists when indicated in accordance with the current practice of the provision of medical care, clinical recommendations (treatment protocols) and standards of medical care</p> <p>PC -2.6. Able to refer the patient to be treated in a hospital or day-care unit when indicated in accordance with the current practice of the provision of medical care, clinical recommendations (treatment protocols) and standards of medical care</p> <p>PC -2.7. Able to carry out differential diagnosis 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)</p> |
| PC -6 | Capable of maintaining medical records and organizing the activities of the subordinated nursing personnel | <p>PC -6.1. He is able make a work plan and a report on his work, issue a passport of a medical (therapeutic) site</p> <p>PC -6.2. It is able to analyze the indicators of morbidity, disability and mortality to characterize the health of the attached population</p> <p>PC -6.3. Is able to keep medical records, including in electronic form</p> <p>PC -6.4. Is able to monitor the performance of official duties by a district nurse and other subordinate medical workers</p> <p>PC -6.5. Is able to provide internal quality control and safety of medical activities within the scope of official duties</p> |

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 | Able to use devices according to medical care rules, as well as to conduct examinations of the patient in order to establish a diagnosis | General surgery; Physics; Practice: Introductory practice on obtaining primary professional skills: patient's care; Practice for obtaining primary professional skills: assistant of junior medical personnel; Practice of diagnostic profile: assistant of the ward nurse | Neurology, medical genetics, neurosurgery; Obstetrics and gynecology; Medical rehabilitation; Traumatology, orthopedics; Endocrinology; Anesthesiology, resuscitation, intensive care; Reproductive health; Maxillofacial surgery; Emergency Medical Manipulation Practice (Simulation Center) |
| GPC - 10 | Able to solve standard tasks of professional activity using information, bibliographic resources, medical and biological terminology, information and communication technologies, taking into account the basic requirements of information security | Mathematics; Medical Informatics; Biochemistry; Pharmacology; General surgery; Biostatistics | Medical rehabilitation; Occupational diseases; Anesthesiology, intensive care, intensive care; Telemedicine |
| PC-2 | Capable of conducting a patient examination in order to establish a diagnosis | General surgery; Pathophysiology, clinical pathophysiology | Dermatovenerology; Neurology, medical genetics, neurosurgery; Obstetrics and gynecology; Otorhinolaryngology; Ophthalmology; Occupational diseases; Hospital therapy; Polyclinic therapy; Hospital surgery, |

| Competence code | Competence descriptor | Previous courses/modules* | Subsequent courses/modules* |
|-----------------|--|---|---|
| | | | pediatric surgery; Pediatrics; Traumatology, orthopedics; Endocrinology; Anesthesiology, intensive care, intensive care; Maxillofacial surgery; Reproductive health; Dentistry; Psychiatry, medical psychology; Current issues of neonatology; Fundamentals of child nutrition; Practice of surgical profile: assistant surgeon; Practice of obstetric and gynecological profile: assistant gynecologist; Assistant physician of the therapeutic profile: assistant internal diseases physician; General medical practice: assistant to an outpatient clinic doctor; Practice of obstetric and gynecological profile: assistant obstetrician |
| PC-6 | Capable of maintaining medical records and organizing the activities of the subordinated nursing personnel | Propaedeutics of internal diseases; Immunology; General surgery | Public health and healthcare, healthcare economics; Polyclinic therapy; Allergology; Maxillofacial surgery; Faculty Surgery; Ophthalmology; Practice of surgical profile: assistant surgeon; General medical practice: assistant to an outpatient clinic doctor |

* 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, 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 | | | |
|---|----------------------|----------------------------|-----|--|--|
| | | 12 | | | |
| <i>Contact academic hours</i> | 85 | 85 | | | |
| including: | | | | | |
| Lectures (LC) | 85 | 85 | | | |
| Lab work (LW) | | | | | |
| Seminars (workshops/tutorials) (S) | | | | | |
| <i>Self-studies</i> | 23 | 23 | | | |
| <i>Evaluation and assessment (exam/passing/failing grade)</i> | | | | | |
| Course workload | academic hours | 108 | 108 | | |
| | credits | 3 | 3 | | |

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

| Course module title | Course module contents (topics) | Academic activities types |
|--------------------------------|--|---------------------------|
| Module 1 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 | Lec/Lab |
| Module 2 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 | Lec/Lab |
| Module 3 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 | Lec/Lab |
| Module 4 Colorectal cancer | 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 | Lec/Lab |
| Module 5 Skin cancer, melanoma | Statistics, epidemiology and modern diagnostics of skin cancer and melanoma. Surgical, radiation, laser treatment of skin cancer and melanoma. | Lec/Lab |

| | | |
|---|---|---------|
| | Rehabilitation of patients with skin cancer and melanoma after special treatment, monitoring and treatment of disease recurrence | |
| Module 6 Esophageal cancer | 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 | Lec/Lab |
| Module 7 Thyroid cancer | 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 | Lec/Lab |
| Module 8 Lymphoma | 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 | Lec/Lab |
| Module 9 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 | Lec/Lab |
| Module 10 Liver cancer | 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 | Lec/Lab |
| Module 11 Radiation therapy of malignant tumors | Modern radiation therapy of malignant neoplasms. The types of radiation. Their characteristics. Methods of radiation therapy. Combined and complex radiotherapy. Complications of radiotherapy | Lec/Lab |
| Module 12 Drug therapy of malignant tumors. | Modern drug therapy. Groups of chemotherapy drugs, enzymes, vaccines, hormones. Private chemotherapy for various human malignant diseases. Complications. | Lec/Lab |

* - 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 | An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and | Microsoft products (OS, office package) (Subscription Enrollment |

| Type of academic activities | Classroom equipment | Specialised educational / laboratory equipment, software, and materials for course study (if necessary) |
|-----------------------------|--|---|
| | technical means of multimedia presentations. | 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 | 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 | 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. | 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 |

| Type of academic activities | Classroom equipment | Specialised educational / laboratory equipment, software, and materials for course study (if necessary) |
|-----------------------------|---|---|
| Computer lab | 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. Trufanova 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. Limfogradulomatoz 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 sources

1. Electronic libraries (EL) of RUDN University and other institutions, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System (RUDN ELS) <http://lib.rudn.ru/MegaPro/Web>
- EL "University Library Online" <http://www.biblioclub.ru>
- EL "Yurayt" <http://www.biblio-online.ru>
- EL "Student Consultant" www.studentlibrary.ru
- EL "Lan" <http://e.lanbook.com/>
- EL "Trinity Bridge"
-

2. Databases and search engines:

- electronic foundation of legal and normative-technical documentation <http://docs.cntd.ru/>
- Yandex search engine [https:// www .yandex.ru/](https://www.yandex.ru/)
- Google search engine <https://www.google.ru/>
- Scopus abstract database <http://www.elsevierscience.ru/products/scopus/>

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

1. The set of lectures on the course “Oncology and Radiation Therapy”

* 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-10, PC-2, 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:

| | | |
|--|-----------|------------------|
| Associate Professor | | Kunda M.A |
| _____ | _____ | _____ |
| position, department | signature | name and surname |
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| position, department | signature | name and surname |
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