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**Federal State Autonomous Educational Institution of Higher  
Education**

**PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA  
RUDN University**

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**Institute of Medicine**

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

**COURSE SYLLABUS**

**Dental oncology and radiotherapy**

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course title

**Recommended by the Didactic Council for the Education Field of:**

**31.05.03 Dentistry**

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field of studies / speciality code and title

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

**Dentistry**

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higher education program profile/specialisation title

**2022-2023**

## 1. COURSE GOAL(s)

The goal of the course «Dental oncology and radiotherapy» is to equip students with knowledge of identifying and implementation a diagnosis of tumor lesions, benign and malignant tumors of the oral and maxillofacial area and neck, assist patients and decide on organizational matters.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) «Dental oncology and radiotherapy» is aimed at the development of the following competences /competences in part: SPC-1.4, SPC-1.5.

*Table 2.1. The list of competencies formed by students during the development of the discipline (results of the mastering of the discipline)*

Competence code	Competence	Competence indicators
SPC-1	Being able to make an examination of a patient in order to determine a diagnosis.	SPC-1.4. Detecting if patients have risk factors for oncopathology (including various background processes, precancerous conditions) based on laboratory, instrumental and additional examinations in order to make a preliminary/final diagnosis.
		SPC-1.5. Making a preliminary/final diagnosis based on the patient examination; laboratory and instrumental examinations.

## 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*
SPC-1	Being able to make an examination of a patient in order to determine a diagnosis.	Radiology Dermatovenerology Neurology Psychiatry and Narcology	Forensic Medicine

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
		Otorhinolaryngology Ophthalmology	

#### 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

##### Possible wording

1) The total workload of the course is \_\_\_\_\_ credits (\_\_\_\_\_ academic hours).

2) The total workload of the course amounts to \_\_\_\_\_ credits ( \_\_\_\_\_ 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	
		9	
<i>Contact academic hours</i>	-	-	
including:			
Lectures			
Lab work (LW)	<b>48</b>	<b>48</b>	
Seminars (S)			
<i>Self-studies</i>	<b>24</b>	<b>24</b>	
<i>Evaluation and assessment (exam/passing/failing grade)</i>	<b>6</b>	<b>6</b>	
<b>Course workload</b>	academic hours_	<b>72</b>	<b>72</b>
	credits	<b>2</b>	<b>2</b>

#### 5. COURSE CONTENTS

*Table 5.1. Course contents and academic activities types*

Course module title	Course module contents (topics)	Academic activities types
Current treatments of cancer and hematological disorders. Indications. Side effects. Complications. Treatment.	Interdisciplinary niche. Concept. Oncological alertness of a dentist, its species. The structure of the oncology service in Russia, the organization of care for patients with malignant tumors. Analysis of clinical cases requiring interdisciplinary training dentist.	LW

<p>Demonstration of clinical department material.</p> <p>(Including the use of live video from clinical departments RNTSRR)</p> <p>Morphology - the basis for effective treatment.</p> <p>Practical part. Skills of instrumentation and development of sampling morphological material (scraping, imprint, puncture)</p>		
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2.	<p>Tumors maxillofacial: squamous cell carcinoma of the oral mucosa and oropharyngeal region. Factors contributing to the development of malignant tumors. Theory of tumors. Species. Demonstration of clinical cases in practice. (Including the use of live video from clinical departments RNTSRR)</p>	<p>Knowledge of morphology is the basis of effective treatment. Practical part.</p> <p>Acquisition and development of skills for sampling morphological material (scraping, stamping, puncture). Indications.</p> <p>The role of the dentist in the primary diagnosis of oncological processes.</p> <p>Stomatoscopy. Dye samples.</p> <p>Thermography, infrared scanning. Ultrasound procedure.</p> <p>CT and MRI. Their role in the complex diagnosis of oncological processes.</p> <p>Biopsy, its types.</p> <p>Cytology. Histology</p>	LW
3.	<p>Introduction to radiation therapy. History, biological basis, mechanisms of influence on the tumor. Features of preparation of the patient to conduct external beam radiotherapy. Modern technologies of external beam radiotherapy. Tumors of the head and neck, especially of teletherapy, side effects of dental pathology</p>	<p>Squamous cell carcinoma of the oral mucosa and oropharyngeal region. Theory of tumors. Species. Demonstration of clinical cases.</p> <p>Vascular tumors of the face and jaws. Tumors of the salivary glands. Classification, clinical picture, diagnosis, differential diagnosis, treatments, prognosis.</p> <p>Osteoblastoklastoma jaws.</p> <p>Fibrous dysplasia of the jaws.</p> <p>Connective tissue tumors of the jaws and soft tissues of the face (lipoma, fibroma, osteoma).</p> <p>Classification, clinical picture, diagnosis, differential diagnosis, treatments, prognosis.</p>	LW

4.	<p>Long-term effects of external beam radiotherapy. Radionuclide therapy, mechanisms of influence on the tumor. Radiation safety. Demonstration of clinical cases in practice.</p>	<p>Isolated and combined treatment of benign and malignant tumors Chloe. Side effects of treatment. Complications in cancer patients in oral and maxillofacial area.</p>	LW
5.	<p>Radiation damage to the oral mucosa. Definition. Classification. emergence theory. Methods and approaches to treatment. Demonstration of clinical cases in practice</p>	<p>History, biological basis, mechanisms of influence on the tumor. Features of preparation of the patient to conduct external beam radiotherapy. Modern technologies of external beam radiotherapy. Types of radiation therapy. Brachytherapy, remote and interstitial therapy. Radionuclide therapy, mechanisms of influence on the tumor. Features of external beam radiation therapy, side effects, dental pathology. Long-term effects of external beam radiotherapy.</p>	LW
6.	<p>Osteomyelitis of the jaw bones of various origins (radiation, bisphosphonate, desomorphic). Clinical and radiological signs of diagnosis.</p> <p>POINTS</p>	<p>Definition. Classification. emergence theory. Methods and approaches to treatment complications in patients receiving radiation and chemotherapy. Early and late complications of radiation treatment. Osteoradionecrosis.</p>	LW

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## 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 236	Classroom for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	Installing the dental chair with Hiradent 654-3 -1 pc. ED 240 ovens with RS422 (Binder) (9010-0101) (LLC Diaem) - 1pc. RC-2ZT Phantom Frasco GmbH head trainer Germany (10130120/190315/0001935) - 1 pc. Dental tools (set) - 10 pcs. Workplace student / teacher as part of the system unit, monitor, keyboard - 1 pcs. Intraoral Camera (10125230/221108/0006472 Korea.) - 1 pc. Ultrasonic scaler DTE-7DLED - 4 pcs.
Seminar 237, 436	Classroom for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	Classroom, Equipped with a set of specialized furniture, whiteboard;a set of devices includes portable multimedia projector, laptop,projection screen,stable wireless Internet connection. Software: Microsoft Windows,MS Office\Office 365,MS TEAMS,Chrome Monitor LED LG 55" 55UF771V Ultra HD, 100Hz, DVB-T2, DVB-C, DVB-S2, USB, WiFi

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Computer Lab 437	Classroom for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	<p>Classroom, Equipped with a set of specialized furniture, whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, stable wireless Internet connection.</p> <p>Software: Microsoft Windows, MS Office\Office 365, MS TEAMS, Chrome Monitor LED LG 55" 55UF771V Ultra HD, 100Hz, DVB-T2, DVB-C, DVB-S2, USB, WiFi</p> <p>The workplace of the student / teacher as part of the system unit, monitor, keyboard - 8 pcs., there is an Internet connection.</p> <p>Software: Windows 8.1 Corporate (Microsoft Office Professional Plus 2007, Corporate Licensing Program (Microsoft Subscription) Enrollment for Education Solutions № 86626883 or 01.04.2018 г.)</p> <p>Sirona Wibv-systems 1001-02-160-0445</p> <p>№№</p> <ol style="list-style-type: none"> <li>1) 2-3067086, 2016</li> <li>2) 2-2707139, 2016</li> <li>3) 2-2707136, 2016</li> <li>4) 2-2707154, 2016</li> <li>5) 2-2536154, 2016</li> <li>6) 2-2707122, 2016</li> <li>7) 2-2695658, 2016</li> <li>8) 2-2707144, 2016</li> </ol>

## 7. RESOURCES RECOMMENDED FOR COURSE STUDY

### a) Main readings:

1. 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. Oncology [electronic resource]: National leadership. BRIEF edition / Ed. IN AND. Chissova, MI Davydova. - М.: GEOTAR-Media, 2017.

### b) Additional readings:

1. Pitot Henry C. Fundamentals of oncology [Текст] : A course of lectures for students / H.C. Pitot. - Книга на английском языке. - New York and Basel : Dekker, 1978. - 192 p.
2. The radiotherapy of malignant disease [Текст] / Ed. by E.C.Easson and R.C.S.Pointon. - Книга на английском языке. - Berlin : Springer, 1985. - 474 p.c) Internet sources:

Electronic libraries with access for RUDN students:

<http://lib.rudn.ru/MegaPro/Web>  
<http://www.biblioclub.ru>  
<http://www.biblio-online.ru>  
[www.studentlibrary.ru](http://www.studentlibrary.ru)  
<http://e.lanbook.com/>

Databases and search engines:

<http://docs.cntd.ru/>  
<https://www.yandex.ru/>  
<https://www.google.ru/>  
<http://www.elsevierscience.ru/products/scopus/>

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

1. The set of lectures on the course "Dental oncology and radiation therapy"
2. The laboratory workshop (if any).on the course "Dental oncology and radiation therapy"
3. The guidelines for writing a course paper / project (if any) on the course "Dental 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 (competences in part) 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 of  
Department of general and  
clinical dentistry

\_\_\_\_\_  
position, department

\_\_\_\_\_  
signature

E.N.Gvozdikova

\_\_\_\_\_  
name and surname

### **HEAD OF EDUCATIONAL DEPARTMENT:**

of general  
and clinical dentistry

\_\_\_\_\_  
name of department

\_\_\_\_\_  
signature

A.M.Avanesov

\_\_\_\_\_  
name and surname

### **HEAD OF HIGHER EDUCATION PROGRAMME:**

First Deputy Director of Medical  
Institute

\_\_\_\_\_  
position, department

\_\_\_\_\_  
signature

S.N. Razumova

\_\_\_\_\_  
name and surname