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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**

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

**COURSE SYLLABUS**

**Radiodiagnosis**

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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 programme  
of higher education:**

**31.05.03 Dentistry**

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higher education programme profile/specialisation title

**2023-2024**

## 1. COURSE GOAL(s)

The goal of the course "Radiodiagnosis" is to equip students with the knowledge of the basics of radiological diagnostics.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) "Radiodiagnosis" is aimed at the development of the following competences /competences in part: GPC-5, GPC-9, PC-1.

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

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC-5	Able to interpret the results of examinations of the patient with radiological methods to solve professional problems	GPC-5.4 . A student should able to determine radiological signs of the most common states and pathological processes of the human body
GPC-9	Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks	GPC-9. Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks GPC-9.2. Evaluating the results of clinical, laboratory and functional diagnosis in dealing with professional tasks.
PC-1	Being able to make an examination of a patient in order to determine a diagnosis.	PC-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*
<b>GPC-5</b>	Able to interpret the results of examinations of the patient with radiological methods to solve professional problems	Anatomy Pathological anatomy Physics	General dentistry Particular aspects of dentistry Surgical and therapeutic dentistry
<b>GPC-9</b>	Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks	Anatomy Pathological anatomy Physics	
<b>PC-1</b>	Being able to make an examination of a patient in order to determine a diagnosis.	-	-

#### 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course 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			
		6			
<i>Contact academic hours</i>	51	51			
including:					
Lectures (LC)					
Lab work (LW)					
Seminars (workshops/tutorials) (S)	51	51			
<i>Self-studies</i>	57	57			

Type of academic activities		Total academic hours	Semesters/training modules			
			6			
<i>Evaluation and assessment (exam/passing/failing grade)</i>			12			
<b>Course workload</b>	academic hours	<b>108</b>	<b>108</b>			
	credits	<b>3</b>	<b>3</b>			

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

## 5. THE COURSE MODULES AND CONTENTS

Table 5.1. The content of the discipline and types of academic activities

Modules and Topics	Content of the topics	Type of academic activities
<b>Module 1</b>  The main methods of Diagnostic Radiology (general concepts)	X-ray examination method 3 hours	S
	Diagnostic ultrasonography 3 hours	S
	CT and MRI 3 hours	S
	The main radionuclide tests 3 hours	S
<b>Module 2</b>  Diagnostic Radiology in Dentistry	Radiographic methods for the jaw-facial region 3 hours	S
	Development and anatomy of teeth and jaws in X-ray imaging 3 hours	S
	Diagnosis of congenital and acquired deformities of the maxillofacial region 3 hours	S
	X-ray diagnostics of caries, pulpitis, periodontitis, paradontal diseases 3 hours	S
	Radiation diagnostics of traumatic injuries of the jaws and teeth. Radiation diagnostics of TMJ diseases 3 hours	S

<b>Modules and Topics</b>	<b>Content of the topics</b>	<b>Type of academic activities</b>
	Radiation diagnostics of benign tumors and cysts of the jaws. 3 hours	S
	Fundamentals of the diagnosis of malignant tumors of the jaws 3 hours	S
	Radiation diagnostics of diseases of the salivary glands. Contrast method of X-ray examination - 3 hours	S
	Radiation oncology - 3 hours	S

\* - 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*

<b>Type of academic activities</b>	<b>Classroom equipment</b>	<b>Specialised educational / laboratory equipment, software, and materials for course study (if necessary)</b>
Lecture	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	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

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
		(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
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
<i>Self-studies</i>	Sets of films	Radiographs, CT, sonographic, MRI, radionuclide images

## 7. RESOURCES RECOMMENDED FOR COURSE STUDY

### Main readings:

1. Whaites E. and Drage N. Dental Radiology and Radiography Elsevier/2013, 465 p.
2. Herring William.  
Learning Radiology : recognizing the basics / W. Herring. - 4th edition - Philadelphia : Elsevier, 2020. - 382 p. : ill. - ISBN 978-0-323-56729-9 : 4730.00.
3. Pramod John R. Textbook of Dental Radiology. 2nd Edition. — Jaypee Brothers, 2011. — 289.
4. Trofimova T.N. Grapach I.A., Belchikova N.S. Radiation Diagnosis in Dentistry / 2010 - 6- 186.
5. Ilasova E.B., Chekhonatskaya M.P., Priyozheva V.N. Radiation Diagnosis, 2009-, GOELAR-Medicine, -275 S.
6. Sinitsyn E.V., Ustyuzhanin D.V. Magnetic Resonance Imaging/ 2008-, 208 S.
7. Bazhanov N.N., Bieberman J.M., Efanov O.I., etc. Inflammatory diseases of the maxillofacial area and neck / Under ed. A.G. Shargorodsky. - M.: Medicine, 1985. 351s.
8. Vorobyov Y.I., A.G. X-rays of the upper jaw on orthopantograms / Dentistry. – 1989. N 6. 40-43.
9. Rabukhina N.A., Arzhantsev AP / X-ray diagnostics in dentistry. 1999.

### Additional readings:

10. Wheels A.A. Facial Skeleton. - M.: Medicine. 1962. - 188c.
11. Lion N.D. The significance of the anatomical structure of the salivary glands in salivary-stone disease / Stomatology. – 1974. - N 1 C 25-28.
12. Pinus R.B. Odontogenic cysts of the maxillary sinus. Sverdlovsk: Wednesday. URL. Kn. It's a squire-go. 1968 - 180s
13. Rubachina N. Panina N.S., Dedeyan S.A. Role of X-ray examination in tooth decay / Dentistry. – 1986. - N 2. - S. 27-11. Solntsev A.M., Kolesov V.S. Cysts of the maxillofacial area and neck. Kiev, 1982. - 96s

### *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](http://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 “Radiodiagnosis”
2. The laboratory workshop (if any).on the course ”Radiodiagnosis”
3. The guidelines for writing a course paper / project (if any) on the course “Radiodiagnosis”.

\* 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-5, GPC-9, PC-1) 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		G.M.Zapirov
_____	_____	_____
position, department	signature	name and surname
Assistant		M.V. Podolskaya
_____	_____	_____
position, department	signature	name and surname
of Oncology and Diagnostic		A.D. Kaprin
Radiology		
_____	_____	_____
position, department	signature	name and surname

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

of Oncology and Diagnostic		A.D. Kaprin
Radiology		
_____	_____	_____
name of department	signature	name and surname

**HEAD**

**OF HIGHER EDUCATION PROGRAMME:**

First Deputy Director of MI for

Academic Affairs

S.N. Razumova

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position, department

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signature

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name and surname