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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**

**Urology**

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course title

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

**31.05.01 General Medicine**

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field of studies / speciality code and title

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

**General Medicine**

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higher education programme profile/specialisation title

2023-2024

## 1. COURSE GOAL(s)

The goal of the course “Urology” is to equip students with the knowledge of the main clinical manifestations of urological diseases, methods of diagnosis, differential diagnosis and treatment.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) “Urology” is aimed at the development of the following competences /competences in part: GC-1, GC-2, GC-5, GC-8, GC-9, GC-21, GPC-1, GPC-4, GPC-6, GPC-8.

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

<b>Competence code</b>	<b>Competence descriptor</b>	<b>Competence formation indicators (within this course)</b>
GPC-1	Being able to implement moral and legal norms, ethical and deontological principals in professional activity	GPC-1. 1 Be able to observe moral and legal standards in professional activities
		GPC-1.2 Be able to express professional information in the process of intercultural interaction, observing the principles of ethics and deontology
GPC-6	Being able to organize patient care, provide primary health care, arrange work and make professional decisions in emergency conditions at the prehospital stage, in emergency situations, epidemics and in foci of mass destruction	GPC-6.1 To master the algorithm for providing first aid in emergency conditions, including in extreme conditions and foci of mass destruction.
		GPC-6.2 Be able to identify conditions requiring emergency medical care, including clinical signs of sudden cessation of blood circulation and breathing.
		GPC-6.3. Be able to provide emergency medical care to patients in conditions that threaten the lives of patients, including

Competence code	Competence descriptor	Competence formation indicators (within this course)
		clinical death (stopping the vital functions of the human body (blood circulation and (or) breathing).
GPC- 8	Being able to implement and monitor the efficacy of medical rehabilitation of a patient, including when implementing individual rehabilitation and habilitation programmes for persons with disabilities; assess the patient's ability to work	<p data-bbox="767 461 1410 651">GPC-8.1 Be able to determine medical indications for medical rehabilitation measures, including the implementation of an individual rehabilitation or habilitation program for people with disabilities</p> <p data-bbox="767 775 1410 1043">GPC-8.2 Be able to perform medical rehabilitation measures for the patient 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</p>
PC-1	Being able to provide emergency or urgent medical care to a patient	<p data-bbox="767 1178 1410 1290">PC-1.1. Being able to assess the condition of a patient who needs emergency or urgent medical care.</p> <p data-bbox="767 1301 1410 1491">PC-1.2. Being able to recognize conditions that arise from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and which require emergency medical care.</p> <p data-bbox="767 1503 1410 1693">PC-1.3. Being 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.</p> <p data-bbox="767 1704 1410 1928">PC-1.4. Being able to recognize conditions which pose a threat to the patient's life, including conditions of clinical death (cessation of the vital bodily functions (blood circulation and/or respiration) which require emergency medical care.</p> <p data-bbox="767 1939 1410 2051">PC-1.5. Being able to provide emergency medical care to patients in conditions which pose a threat to the patient's life, including</p>

Competence code	Competence descriptor	Competence formation indicators (within this course)
		clinical death (cessation of the vital bodily functions (blood circulation and/or respiration)).
		PC-1.6. Being able to use drugs and medical devices when providing medical care in emergency or urgent forms.

### 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-1	Being able to implement moral and legal norms, ethical and deontological principals in professional activity	Life Safety	Topographic anatomy and operative surgery, Disaster Medicine
GPC-6	Being able to organize patient care, provide primary health care, arrange work and make professional decisions in emergency conditions at the prehospital stage, in emergency situations, epidemics and in foci of mass destruction	Life Safety	Topographic anatomy and operative surgery, Disaster Medicine
GPC-8	Being able to implement and monitor the efficacy of medical rehabilitation of a patient, including	Life Safety	Topographic anatomy and operative surgery, Disaster Medicine

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
	when implementing individual rehabilitation and habilitation programmes for persons with disabilities; assess the patient's ability to work		
PC-1	Being able to provide emergency or urgent medical care to a patient	Pathophysiology, Clinical Pathophysiology	Epidemiology, Medical Rehabilitation, Policlinic Therapy, Infectious diseases, Obstetrics and Gynecology

\* 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 “Urology” is \_\_\_\_\_ 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
		8
Contact academic hours	45	45
including:		
Lectures (LC)		
Lab work (LW)		
Seminars (workshops/tutorials) (S)	45	45
Self-studies	27	17
Evaluation and assessment (exam/passing/failing grade)		
Course workload	academic hours	72
	credits	2
		72
		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)	
<b>Module 1</b> Research methods of the urological patient	<b>1 .</b> Symptoms of urological diseases of urination disorders. Qualitative and quantitative changes in urine. General clinical and laboratory research methods. Instrumental and endoscopic methods of examination of the urological patient. X-ray methods of research: survey and / in urography, cystography, urethrography, retrograde and antegrade pyelography - ultrasound of the kidneys, bladder, prostate, genital organs.	S
<b>Module 2</b> Anomalies of the genitourinary system	fundamentals of embryology of the urinary and reproductive systems. Classification of kidney anomalies. Ultrasonic and X-ray diagnostic methods. Anomalies of the ureters, bladder and urethra. Classification, treatment. Anomalies of the reproductive system, classification, diagnosis, treatment.	S
<b>Module 3</b> Nonspecific inflammatory diseases of the genitourinary system	Pyelonephritis, etiology, pathogenesis, clinic, diagnosis, classification, principles of treatment, paranephritis, nephrosclerosis, pyonephrosis, cystitis, urethritis, prostatitis, epididymo-orchitis, etiology, pathogenesis, clinic, diagnosis, treatment.	S
<b>Module 4</b> Nonspecific inflammatory diseases of the genitourinary system Urolithiasis disease	Etiology, pathogenesis, clinic, diagnosis of urolithiasis. Theories of stone formation. Differential diagnosis coralstones, bilateral kidney stones. Contact and remote methods of crushing stones. Surgical treatment of urolithiasis. Prevention	S
<b>Module 5</b> Injuries of the genitourinary system	Kidney injuries: open, closed, clinic, diagnosis, treatment. Injuries of the ureters. Mechanism, diagnosis, treatment. Injury to the bladder and urethra. Etiology, diagnosis, clinic and treatment. Damage to the external genitalia, diagnosis and treatment	S

<b>Module 6</b> Tumors of the genitourinary system	Tumors of the kidneys. Classification, diagnosis, clinic and treatment. Wilms tumor. Features of treatment. Tumors of the pelvis and ureters, bladder. Classification according to the TNM system. Diagnosis and treatment of testicular tumors. classification, clinic, diagnosis and treatment. Prostate cancer, diagnosis and treatment.	S
<b>Module 7</b> Acute and chronic renal failure	Etiology, pathogenesis, clinic and diagnosis of acute renal failure. Causes of CRF, classification, principles of treatment. Hemodialysis. principles of the apparatus of the "artificial kidney". Kidney transplant, indications,	S
<b>Course module title</b>	<b>Course module contents (topics)</b>	
	operation technique	

\* - 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	A lecture hall for lecture-type classes, equipped with a set of specialised furniture; board (screen) and technical means of multimedia presentations.	
Lab work	A classroom for laboratory work, individual consultations, current and mid-term assessment; equipped with a set of specialised furniture and machinery.	Laboratory CO <sub>2</sub> - incubators Shellab, laminar-flow cabinet series Biowizard , microscope "Leica Microsystem CMC», inverted microscope Leica DMi8, automatic cell counter TC20, laboratory microcentrifuge MiniSpin, a bacterial box, flow cytometer, freezer compartment UF V 700, cellular analyzer xCELLigence,

		Lab of a full cycle of histological tissue processing..
Seminar	A classroom for conducting seminars, group and individual consultations, current and mid-term assessment; equipped with a set of specialised furniture and technical means for multimedia presentations.	Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), sets of histological preparations, a list of stands, tables, visual posters, etc
<b>Type of academic activities</b>	<b>Classroom equipment</b>	<b>Specialised educational / laboratory equipment, software, and materials for course study (if necessary)</b>
Computer Lab	A classroom for conducting classes, group and individual consultations, current and mid-term assessment, equipped with personal computers (in the amount of ____ pcs), a board (screen) and technical means of multimedia presentations.	List of specialised software installed on computers for mastering the discipline
Self-studies	A classroom for independent work of students (can be used for seminars and consultations), equipped with a set of specialised furniture and computers with access to the electronic information and educational environment.	Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), sets of histological preparations, microphotographs, a list of stands, tables, visual posters, etc

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

## 7. RESOURCES RECOMMENDED FOR COURSE STUDY

### *Main readings:*

1. . Urology. National leadership. / Ed. ON. Lopatkin. –M. : GEOTAR-Media, 2013. 1024.
2. Anomalies of the genitourinary system. / Under the editorship of Daryalova S.L., M., 2008.
3. Urolithiasis disease. Guide to practical exercises in oncology. Edited by Gantsev Sh.Kh., Moscow 2007.

### *Additional readings:*

11. Injuries of the genitourinary system. Selected lectures on clinical oncology. / Under the editorship of Chissov V.I., Daryalova S.L., M., 2008.
2. Clinical guidelines. Urology. - M.: GEOTAR-Media, 2007. - 388 p.
3. Bely, L.E. Emergency urology. Guide for doctors. - M.: Medical Information Agency, 2011. - 480 p.



### *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](http://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.entd.ru/>
- Yandex search engine <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 "Urology"
2. The laboratory workshop (if any) on the course "Urology"
3. The guidelines for writing a course paper / project (if any) on the course "Urology".

\* 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 (GC-1, GC-2, GC-5,

GC-8, GC-9, GC-21, GPC-1, GPC-4, GPC-6, GPC-8) 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 the

Department of Urology

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position, department

I.V. Vinogradov

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signature

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name and surname

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

of Urology

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name of department

A.A. Kostin

---

signature

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name and surname

**HEAD  
OF HIGHER EDUCATION PROGRAMME:**

First Deputy Director of MI for

Academic Affairs

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position, department

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signature

Iv.V. Radysh

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name and surname