

Federal State Autonomous Educational Institution of Higher Education
«Peoples' Friendship University of Russia»

Medical Institute

Recommended MCSD

SYLLABUS
(STUDY GUIDE)

Subject

Urology

Recommended for the direction of training (specialty)

31.05.01 General Medicine

Program (profile, specialization)

General Medicine

1. The purpose and objectives of the discipline

The purpose is to prepare students' knowledge of the main clinical manifestations of urological diseases, methods of diagnosis, differential diagnosis and treatment.

The objectives of the discipline:

- Provide theoretical and practical training of doctors in the specialty of medical care in the issues of modern diagnosis and treatment of urological diseases.

2. The place of the discipline in the structure of the EP HE.

The discipline of Urology belongs to the basic part of block 1 of the curriculum.

Table No. 1 shows the previous and subsequent disciplines aimed at the formation of the discipline's competencies in accordance with the competence matrix of the OP HE.

Table 1

Previous and subsequent disciplines aimed at the formation of competencies

№ п/п	Code and title of competence	Previous disciplines	Following disciplines (groups of disciplines)
General Professional Competences			
	GPC-1, GPC-6, GPC-8	Life Safety	Topographic anatomy and operative surgery, Disaster Medicine
Professional Competences (type of professional activity)			
	PC-1	Pathophysiology, Clinical Pathophysiology	Epidemiology, Medical Rehabilitation, Polyclinic Therapy, Infectious diseases, Obstetrics and Gynecology

3. Requirements to results of development of discipline:

The process of studying the discipline is aimed at the formation of the following competencies:

Table 2. The competences

Competences	Competence name	Indicators of achievement of competencies
GPC-1	Being able to implement moral and legal norms, ethical and deontological principals in professional activity	GPC-1.1. Being able to abide by the ethical standards and legal regulations in professional activity. GPC-1.2. Being able to present professional information in the process of intercultural interaction observing the principles of ethics and deontology.
GPC-6	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. Mastering the algorithm for providing first aid in emergency conditions, including in extreme conditions and foci of mass destruction. GPC-6.2. Being able to identify the conditions which require emergency medical care, including clinical signs of sudden cessation of blood circulation and respiration. GPC-6.3. Being able to provide emergency medical care to patients in conditions that pose a threat to the life of a patient, including clinical death (cessation of the vital bodily functions (blood circulation and (or) breathing).
GPC-8	Being able to implement and monitor the efficacy of medical rehabilitation of a patient, including when implementing	GPC-8.1. Being able to determine the medical indications for medical rehabilitation measures, including when implementing an individual rehabilitation or habilitation programme for persons with

	<p>individual rehabilitation and habilitation programmes for persons with disabilities; assess the patient's ability to work</p>	<p>disabilities.</p> <p>GPC-8.2. Being able to carry out measures of medical rehabilitation of a patient in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the medical care standards.</p> <p>GPC-8.3. Being able to determine medical specialists for carrying out rehabilitation measures to a patient in need of medical rehabilitation taking into account the diagnosis and in accordance with the current procedures for the provision of medical care.</p> <p>GPC-8.4. Being able to prescribe sanatorium-resort therapy to a patient in need of medical rehabilitation, including when implementing an individual rehabilitation or habilitation programme for persons with disabilities.</p> <p>GPC-8.5. Being able to monitor the implementation of rehabilitation measures and evaluate their efficacy and safety, including when implementing an individual programme for the rehabilitation or habilitation of persons with disabilities, taking into account the diagnosis in accordance with the current procedures for the provision of medical care.</p>
<p>PC-1</p>	<p>Being able to provide emergency or urgent medical care to a patient</p>	<p>PC-1.1. Being able to assess the condition of a patient who needs emergency or urgent medical care.</p> <p>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>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>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>PC-1.5. Being able to provide emergency medical care to patients in conditions which pose a threat to the patient's life, including clinical death (cessation of the vital bodily functions (blood circulation and/or respiration).</p> <p>PC-1.6. Being able to use drugs and medical devices when providing medical care in emergency or urgent forms.</p>

As a result of study of discipline a student must:

Know:

- Clinical manifestations of urological diseases.
- Diagnostic value of laboratory, radiological, ultrasound, endoscopic, radioisotope, magnetic resonance methods of research in urology,
- The main methods of treatment of urological patients (surgical, medicinal methods)

- A set of methods for providing specialized care to urological patients,
- The system of dispensary observation of urological patients and methods of treatment of relapses of diseases.

Be able to:

- perform an examination, physical examination of patients with urological diseases (percussion, palpation and auscultation), identifying the main symptoms of the disease and planning an instrumental clarifying diagnosis;
- during the general examination of the patient, determine the facial expression, the state of consciousness and the adequacy of perception of the surrounding, the position in bed, physique, constitution, nutritional status, the presence of a temperature reaction, skin and visible mucous membranes (coloration, the presence of rashes, nodes, hemorrhages of lymph nodes, subcutaneous tissue, muscles);
- when examining patients with urological diseases, collect anamnesis, conduct objective examinations, evaluate the data of laboratory tests of urine and blood in a patient with urolithiasis,
- if a patient has acute abdominal pain, perform a differential diagnosis aimed at confirming or excluding renal colic, taking into account the skills acquired during the lesson. Stop renal colic. According to the appearance of independently outgoing urinary concretions, determine their predominant chemical composition;
- to determine the sequence of X-ray, radioisotope and ultrasound methods of examination in case of suspected urolithiasis, to assess the state of the urinary tract, to identify the shadows of urinary calculi on an overview image of the urinary system, excretory urograms, retrograde ureteropyelogram, cystogram.
- to determine the indications for surgery (planned or urgent) and conservative treatment. Palpate and percutate the kidney. To find signs characteristic of a kidney tumor on urograms and tomograms.
- determine the varicocele. Perform bimanual palpation for bladder tumors. To find symptoms characteristic of a bladder tumor on cystograms and urograms (to distinguish a contour defect, a filling defect, dilation of the upper urinary tract). To determine the cystoscopic picture of tumors on the phantoms of the bladder. Palpate and percute the bladder. Perform a finger rectal examination of the prostate gland. Interpret prostate adenoma on cystograms. Find prostate cancer metastases in bones on scintigrams. Detect latent leukocyturia.
- interpret the results of bacteriological examination of urine, apply X-ray methods of investigation for the diagnosis of acute and chronic pyelonephritis.
- perform catheterization of the bladder on the phantom with various types of catheters. Perform catheterization of the bladder of a patient with a rubber catheter. Perform a chromocystoscopy. Interpret various cystoscopic pictures (on the phantom and in the atlas). To interpret the results of radioisotope methods for studying the functional ability of the kidneys. On an overview urogram, determine the contours of the kidneys, the line of the edge of the lumbar muscle, the shadows of true urinary concretions and false ones (phlebolitis, calcified lymph nodes, etc.).
- Perform excretory urography and calculate the required amount of contrast agent administered, taking into account the patient's body weight. Perform retrograde, including mycological cystography. Provide first aid for idiosyncrasy to iodine-containing radiopaque drugs. Interpret radiographs with contrast methods of examination (excretory urography with its modifications, retrograde ureteropyelography, renal arteriography, various modifications of cystography, urethrography).

- To evaluate the separate kidney function and the nature of the pathological process based on the results of radioisotope and ultrasound research methods,
- to analyze the results of special research methods in the diagnosis of urological diseases:
 - laboratory tests of blood and urine
 - radioimmune blood tests
 - x-ray diagnostic methods
 - endoscopic research methods
 - ultrasound research methods
 - magnetic resonance imaging
 - radioisotope diagnostic methods
 - methods of functional diagnostics
 - based on the obtained physical and instrumental diagnostic methods, determine the stage of the disease,
 - make a plan of medical and surgical treatment, based on the results of the diagnosis.

Own:

- Methods of collecting information about urological diseases
- Proper maintenance of medical records;
- Assessments of the state of public health;
- Methods of general clinical examination, interpretation of laboratory and instrumental diagnostic methods, algorithm of clinical diagnosis, preliminary diagnosis with subsequent referral of the patient to the appropriate specialist doctor.
- Consolidating indicators that characterize the degree of development of the healthcare economy, the methodology for calculating medical statistics indicators;
- The main medical diagnostic and therapeutic measures to provide medical care for urgent and life-threatening conditions.
- Knowledge of epidemiological and statistical data on urological diseases.
- Knowledge about the clinical and laboratory manifestations of urological diseases
- Interpretation of the results of instrumental methods of diagnosis of urological diseases, allowing to make the correct diagnosis at an early stage of the disease.
- Make a surgical treatment plan based on the results of instrumental diagnostics
- Have knowledge about resuscitation measures in patients with urological diseases in the early postoperative period and possible complications.
- Knowledge about the dispensary observation of urological patients, which allows to identify signs of a relapse of the disease

4. Volume of discipline and types of study

General credit value of the discipline is 2 credit units.

Type of study load	Total hours	Semesters			
		8			
Class hours (total)	45	45			
Including:	-	-			
<i>Lectures</i>					
<i>Practical training (PT)</i>	45	45			
<i>Seminars (S)</i>					
<i>Laboratory research (LR)</i>					
Independent work (total)	27	27			
Total labor input	hours	72	72		
	Credit Unit	2	2		

5. Content of the discipline

5.1. The content of the discipline sections

№ п/п	Name of the section of discipline	Contents of the section
1.	Methods of research of a urological patient	Symptoms of urological diseases of urination disorders. Qualitative and quantitative changes in urine. General clinical and laboratory methods of research. Instrumental and endoscopic methods of examination of a urological patient. X-ray examination methods: overview and intravenous urography, cystography, urethrography, retrograde and antegrade pyelography-ultrasound of the kidneys, bladder, prostate, genitals. Multispiral computed tomography of the kidneys, retroperitoneal space of the bladder, pelvis, prostate. Magnetic resonance imaging of the kidneys, bladder, prostate, renal angiography, venocavography. Radioisotope methods of studying the kidneys, parathyroid glands, testicles.
2.	Anomalies of the genitourinary system	Fundamentals of embryology of the urinary and reproductive system. Classification of kidney abnormalities. Ultrasound and X-ray diagnostic methods. Abnormalities of the ureters, bladder and urethra. Classification, treatment. Anomalies of the reproductive system, classification, diagnosis, treatment.
3.	Non-specific inflammatory diseases of the genitourinary system	Pyelonephritis, etiology, pathogenesis, clinic, diagnosis, classification, treatment principles, paranephritis, nephrosclerosis, pionephrosis, cystitis, urethritis, prostatitis, epididymoorchitis, etiology, pathogenesis, clinic, diagnosis, treatment.
4.	Urolithiasis	Etiology, pathogenesis, clinic, diagnosis of urolithiasis. Theories of stone formation. Diff. diagnosis of coralloid stones, bilateral kidney stones. Contact and remote methods of stone crushing. Surgical treatment of urolithiasis. Prevention
5.	Injuries to the genitourinary system	Kidney injuries: open, closed, clinic, diagnosis, treatment. Ureteral injuries. Mechanism, diagnosis, and treatment. Damage to the bladder and urethra. Etiology, diagnosis, clinic, and treatment. External genital injuries, diagnosis and treatment
6.	Tumors of the genitourinary system	Kidney tumors. Classification, diagnosis, clinic, and treatment. Wilms' tumor. Features of treatment. Tumors of the pelvis, ureters, and bladder. Classification according to the VOLUME system. Diagnosis and treatment of testicular tumors, classification, clinic, diagnosis and treatment. Prostate cancer, diagnosis and treatment.
7.	Acute and chronic renal system insufficiency	Etiology, pathogenesis, clinic and diagnosis of acute renal failure. Causes of CRF, classification, treatment principles. Hemodialysis.

5.2. Sections of disciplines and types of classes

№ п/п	Name of the section of discipline	<i>L</i>	<i>PC</i>	<i>LR</i>	<i>S</i>	Ssgw	Total hours
1.	Methods of research of a urological patient		7			4	11
2.	Anomalies of the genitourinary system		6			4	10
3.	Non-specific inflammatory diseases of the genitourinary system		7			4	10
4.	Urolithiasis		6			4	10
5.	Injuries of the genitourinary system		6			4	10
6.	Tumors of the genitourinary system		6			4	10
7.	Acute and chronic renal failure		7			4	10
	TOTAL		45			27	72

6. Laboratory training (if available)

Not provided

7. Practical training (seminars) (if available)

№ п/п	№ discipline section	Themes of practical training (seminars)	Labour Intensity (hours)
1.	1.	Symptoms of urological diseases of urination disorders. Qualitative and quantitative changes in urine. General clinical and laboratory methods of research. Instrumental and endoscopic methods of examination of a urological patient. X-ray examination methods: overview and intravenous urography, cystography, urethrography, retrograde and antegrade pyelography-ultrasound of the kidneys, bladder, prostate, genitals. Multispiral computed tomography of the kidneys, retroperitoneal space of the bladder, pelvis, prostate. Magnetic resonance imaging of the kidneys, bladder, prostate, renal angiography, venocavography. Radioisotope methods of studying the kidneys, parathyroid glands, testicles.	7
2.	2.	Fundamentals of embryology of the urinary and reproductive system. Classification of kidney abnormalities. Ultrasound and X-ray diagnostic methods. Abnormalities of the ureters, bladder, and urethra. Classification and treatment. Anomalies of the reproductive system, classification, diagnosis, treatment.	6

3.	3.	Pyelonephritis, etiology, pathogenesis, clinic, diagnosis, classification, treatment principles, paranephritis, nephrosclerosis, pionicphrosis, cystitis, urethritis, prostatitis, epididymoorchitis, etiology, pathogenesis, clinic, diagnosis, treatment.	7
4.	4.	Etiology, pathogenesis, clinic, diagnosis of urolithiasis. Theories of stone formation. Diff. diagnosis of coralloid stones, bilateral kidney stones. Contact and remote methods of stone crushing. Surgical treatment of urolithiasis. Prevention	6
5.	5.	Kidney injuries: open, closed, clinic, diagnosis, treatment. Ureteral injuries. Mechanism, diagnosis, and treatment. Damage to the bladder and urethra. Etiology, diagnosis, clinic, and treatment. External genital injuries, diagnosis and treatment	6
6.	6.	Kidney tumors. Classification, diagnosis, clinic, and treatment. Wilms ' tumor. Features of treatment. Tumors of the pelvis, ureters, and bladder. Classification according to the TNM system. Diagnosis and treatment of testicular tumors, classification, clinic, diagnosis and treatment. Prostate cancer, diagnosis and treatment.	6
7.	7.	Etiology, pathogenesis, clinic and diagnosis of acute renal failure. Causes of CRF, classification, treatment principles. Hemodialysis. principles of the device of the "artificial kidney" device. Kidney transplantation, indications, surgery technique.	7

8. Material and technical support of the discipline:

Classrooms of the Department of Urology with 25 and 50 seats, a 300-seat lecture hall in the Herzen Moscow Research Institute.

Topometric, radiation installations, drug therapy wards.

Classrooms of the Department of Urology with 25 and 50 seats, a 300-seat lecture hall in the Herzen Moscow Research Institute.

Every classroom has computers, laptops, and projectors.

9. Information support of the discipline

a) software.

Presentations of lectures and laboratory classes in all sections of the discipline.

Test tasks for training and knowledge control.

b) resources of the information and telecommunication network "Internet":

1. RUDN University EBS and third-party EBS that university students have access to on the basis of concluded contracts:
 - Electronic library system of RUDN University-EBS RUDN University
<http://lib.rudn.ru/MegaPro/Web>
 - University Library Online <http://www.biblioclub.ru>
 - EBS Yurite <http://www.biblio-online.ru>
 - Student Advisor www.studentlibrary.ru
2. Databases and search engines:
 - electronic fund of legal, regulatory and technical documentation <http://docs.cntd.ru>
 - Yandex search engine <http://yandex.ru>
 - Google search engine <http://google.ru>
 - abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>
 - WHO Documentation Center <http://whodc.mednet.ru/>
 Telecommunications Educational and Information System of the Peoples ' Friendship University of Russia (TUIS <http://esystem.pfur.ru>)

10. Educational and methodological support of the discipline:

a) basic literature

1. Urology. National guidelines. / Edited by N. A. Lopatkin. - M.: GEOTAR-Media, 2013. 104.
2. Anomalies of the genitourinary system. / Edited by S. L. Daryalova, Moscow, 2008.
3. Urolithiasis. A guide to practical classes in oncology. Edited by Sh. K. Gantsev, Moscow, 2007.

b) additional literature

1. Injuries of the genitourinary system. Selected lectures on clinical oncology. /Ed. Chissova V. I., Daryalova S. L., Moscow, 2008.
2. Clinical recommendations. Urology, Moscow: GEOTAR-Media, 2007, 388 p.
3. Bely, L. E. Urgent urology. Guide for doctors. - M.: Medical Information Agency, 2011. - 480 p.

11. Methodological guidelines for students on mastering the discipline "Urology".

Students are required to attend classes, complete teacher assignments, get acquainted with the recommended literature, and so on. When certifying a student, the quality of work in the classroom, the level of preparation for independent activity in the chosen field, the quality of performing teacher tasks, and the ability to independently study educational material are evaluated.

During practical classes in classrooms, relevant topics are analyzed using multimedia equipment (computer, projector).

Independent work during extracurricular hours can take place both in the lecture halls of the department and in the computer class, where students can study material using presentations prepared by teachers of the department, as well as computer tests.

Extracurricular independent work includes:

the study of material from a textbook, textbooks on paper and electronic media; preparation of an abstract message on a selected topic; preparation for the implementation of control works and test tasks.

Requirements for the abstract: relevance of the topic, compliance of the content with the topic, depth of study of the material, correctness and completeness of the use of sources, compliance of the abstract design with standards.

12. The Fund of evaluation funds for the interim certification students in the discipline of Urology

To assess the level of mastering the educational material of the discipline "Urology", which includes a list of competencies, indicating the stages of its formation, description of indicators and criteria for evaluation of competences in various the stages of their formation, the description of the scales of assessment, typical assignments or additional materials needed for the assessment of knowledge, skills and (or) experience activities that characterize the stages of formation of competences in the process of development educational programs, instructional materials, determining procedures assessments of knowledge, skills, skills and (or) experience of activity that characterize the stages of competence formation have been developed in full and are available to students on the discipline page in the TUIS RUDN.

The program is compiled in accordance with the requirements of the FSES HE.

Developers:

Professor

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with Oncourology course

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