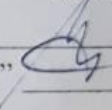


MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
Petro Mohyla Black Sea National University  
Medical Institute  
Department of Therapeutic and Surgical Disciplines

"APPROVE"

The first vice-rector  
Ishchenko NM


“ ”  2021

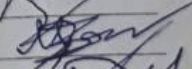
COURSE DESCRIPTION


"Urology"

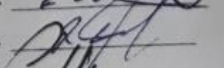
Specialty 222 "Medicine"

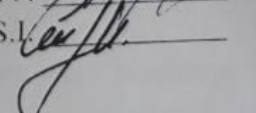
Developer  
Head of the Department of Developer  
Guarantor of the educational program  
Director of the institute  
Head of NMV

Iakovenko N.O. 

Zak M. Yu. 

Klimenko M. O. 

Grishchenko G.V. 

Shkirchak S.I. 

## 1. Description of the discipline

Characteristic	Characteristics of the discipline	
Name of discipline	Pediatrics	
Branch of knowledge	22 "Health care"	
Specialty	222 "Medicine"	
Specialization (if any)		
Educational program	Medicine	
Level of higher education	Master	
Discipline status	Normative	
Curriculum	4 year	
Academic year	2021 - 2022	
Semester numbers:	Full-time	Correspondence form
	7	-
Total number of ECTS credits / hours	3 credits / 90 hours	
Course structure:	Full-time	Correspondence form
	- lectures	8 ( 8 / 0 )
	- practical classes	22
	- hours of independent work of students	60
Percentage of classroom work	33%	
Language of instruction	English	
Form of final control	Differentiated Credit - 7th semester	

## 2. Purpose, tasks and results of studying the discipline

**The purpose of teaching the discipline "Urology"** is for students to master the methods of diagnosis, treatment and prevention of diseases of the urinary and male reproductive systems, and especially those that are most widespread. Structures of the urology department, its features, measures for the organization of the sanitary-epidemic regime in the department, mastering the basics of clinical urology; methodology of examination of the urological patient.

**Learning objectives :**

- to study the etiology, pathogenesis of diseases, classifications, clinical manifestations
- to master the basic methods of examination and treatment of patients with urological pathology.
- to master the ethical and deontological foundations of the future profession of a doctor, consolidating it in practical classes and independent work.
- to obtain sufficient baggage of knowledge and practical skills for medical activities.

**Prerequisites for studying the discipline ( interdisciplinary links).**

Urological pathology often occurs in trauma to the abdominal cavity, pelvic bones, thoracic cavity and extremities. Inflammatory diseases of the genitourinary system are combined with inflammatory diseases of the abdominal cavity, have side symptoms. Chronic diseases of the kidneys consistent with chronic diseases therapeutic profile. Renal failure quite often is a complication of diseases of the lungs, heart, central nervous system. Therefore, urology is closely related to such disciplines as anatomy, topographic anatomy, physiology and pathological physiology, surgery, orthopedics and traumatology, therapy, cardiology, neurosurgery, oncology, anesthesiology and resuscitation.

**Expected learning outcomes .** As a result of studying the discipline, students have:

**Know:**

1. General principles of examination of patients with urological pathology.
2. Special methods of examination of urological patients.
3. The main methods of conservative and surgical treatment of patients with pathology of the urinary system.
4. Diagnosis of the most common urological diseases.
5. Indications for operative and conservative methods of treatment.
6. The main advantages and disadvantages of conservative and operative methods of treatment.
7. Possible complications when using conservative and operative methods of treatment and ways of their prevention.

**Be able:**

1. Identify the most common clinical symptoms and syndromes in the clinic of urological diseases
2. diagnose and provide medical assistance during emergency conditions in clinical urological diseases
3. Demonstrate mastery of moral and deontological principles of a medical specialist and the principles of professional subordination in urology
4. Interpret the general principles of treatment, rehabilitation and prevention of the most common urological diseases

5. To make a prognosis of life and ability to work in the most common urological diseases
6. Identify the main etiological and pathogenetic factors of the most common urological diseases
7. Classify and analyze the typical clinical picture of the most common urological diseases
8. Make a plan of examination and analyze the data of laboratory and instrumental examinations in the typical course of the most common urological diseases
9. Identify indications and contraindications to surgical interventions in planned and emergency urology
10. To determine the tactics of the postoperative period, to prescribe the necessary treatment to demonstrate the ability to perform the necessary medical manipulations

**Master the skills:**

1. Collect complaints and medical history of patients with urological pathology;
2. Conduct a clinical examination;
3. Write a program and be able to interpret the results of laboratory - instrumental examination;
4. Formulate a preliminary diagnosis, conduct a differential diagnosis,
5. To formulate the final diagnosis on a specific nosology;
6. Determine the tactics of treatment and fill leaf appointments patients with urological disorders in particular nosology.

**Have competencies**

The developed program corresponds to the educational-professional program (OPP) and is focused on the formation of competencies :

**general (ZK) - ZK1-ZK3 OPP:**

- ability to abstract thinking, analysis and synthesis; ability to learn and master modern knowledge;
- ability to apply knowledge in practical situations;
- knowledge and understanding of the subject area and understanding of the profession.

**professional competencies (FC) - FC1-FC6, 8, 9, 11, 16,18 OPP:**

Patient interviewing skills .

Ability to determine the required list of laboratory and instrumental studies and evaluate their results.

Ability to establish a preliminary and clinical diagnosis of the disease.

Ability to determine the required mode of work and rest in the treatment of diseases.

Ability to determine the nature of nutrition in the treatment of diseases. Ability to determine

the principles and nature of disease treatment .

Ability to determine the tactics of emergency medical care. Emergency care skills .

Skills to perform medical manipulations.

The ability to determine the tactics of keeping persons that are subject to clinical supervision. Ability to keep medical records.

According to the educational-professional program, the expected **program learning outcomes (PRN)** include the skills of **PRN 11; 13 - 18; 22; 25; 28; 30; 32; 33; 35; 41.**

<p>PRN 11</p>	<p>Collect data on patient complaints , medical history , life history ( including including occupational history), under the conditions of the health care institution, its unit or at the patient's home, using the results of the interview with the patient, according to the standard scheme of the patient's survey . Under any circumstances (in a health care facility, its unit, at the patient's home, etc.), using knowledge about the person, his organs and systems, according to certain algorithms:          collect information about the general state of the patient (consciousness constitution) and the external appearance (examination of the skin, subcutaneous fat layer, palpation of lymph nodes, thyroid and mammary glands); assess the psychomotor and physical development of the child;          examine the condition of the cardiovascular system (examination and palpation of the heart and superficial vessels, determination of percussion boundaries of the heart and blood vessels, auscultation of the heart and blood vessels);          examine the state of breathing (examination of the thoracic cage and upper respiratory tract, palpation of the thoracic cage, percussion and auscultation of the lungs);          examine the condition of the abdominal cavity (examination of the abdomen, palpation and percussion intestines, stomach, liver, spleen, palpation of the pancreatic gland, kidneys, organs of small pelvis, finger study of the rectum);          examine the condition of the musculoskeletal system (examination and palpation); examine the state of the nervous system;          examine the condition of the genitourinary system;          assess the state of intrauterine development of the fetus by the data calculating fetal weight and auscultation of his heartbeat.</p>
<p>PRN 13</p>	<p>In the conditions of the health care institution, its subdivision and among attached population:          To be able to identify and fix the leading clinical symptom or syndrome (for list 1) by adopting a reasonable solution using preliminary data history patient data physical examination of the patient, the knowledge of the person, its organs and systems, adhering to appropriate ethical and legal standards.          To be able to establish the most probable or syndromic diagnosis of disease (in list 2) by adopting a reasoned decision by means of comparison with standards, using preliminary data history of the patient and the data given patient, on the basis of leading clinical symptom or syndrome, using the knowledge of the</p>

	<p>person, its agencies and systems, adhering to the relevant ethical and legal norms.</p>
PRN 14	<p>In the conditions of a health care institution, its subdivision:</p> <ul style="list-style-type: none"> <li>• Assign a laboratory and / or instrumental examination of the patient (according to list 4) by making an informed decision, based on the most probable or syndromic diagnosis, according to standard schemes, using knowledge of the person, his organs and systems, adhering to relevant ethical and legal norms.</li> <li>• Carry out differential diagnosis of diseases (according to list 2) by making an informed decision, according to a certain algorithm, using the most probable or syndromic diagnosis, data of laboratory and instrumental examination of the patient, knowledge about the person, his organs and systems, adhering to appropriate ethical and</li> </ul>
	<p>legal norms.</p> <ul style="list-style-type: none"> <li>• Establish a preliminary clinical diagnosis (according to list 2) by making an informed decision and logical analysis, using the most probable or syndromic diagnosis, data from laboratory and instrumental examination of the patient, conclusions differential diagnosis, knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms.</li> </ul>
PRN 15	<p>Determine the required mode of work and rest at the treatment of the disease (2 on the list), in terms of health care facility, home of the patient and during medical evacuation in t. H. In field conditions, on the basis of previous clinical diagnosis using knowledge of man, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision for existing algorithms and standard schemes.</p>
PRN 16	<p>To determine the necessary therapeutic food in the treatment of disease (in list 2), in terms of establishment health care, home of the patient and on the stages of medical evacuation in t. H. In field conditions on the basis of previous clinical diagnosis using knowledge of human, his bodies and systems, adhering to the relevant ethical and legal norms, by making an informed decision on the existing algorithms and standard schemes.</p>
PRN 17	<p>To determine the nature of the treatment (conservative, surgical) disease (for list 2), in terms of establishment health care, home of the patient and on the stages of medical evacuation in t. H. In field conditions on the basis of previous clinical diagnosis using knowledge of human, its bodies and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.</p> <p>To determine the principles of treatment of the disease (2 on the list), in terms of establishment health care, home of the patient and on the stages of medical evacuation in t. H. Field conditions, based on previous clinical diagnosis using knowledge of a person of organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according</p>

	to existing algorithms and standard schemes.
PRN 18	Establish a diagnosis (according to list 3) by making an informed decision and assessing the human condition, under any circumstances (at home, on the street, health care facility, its units), including in an emergency , in the field , in conditions of lack of information and limited time, using standard methods of physical examination and possible anamnesis, knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms.
PRN 22	Perform medical manipulations (according to list 5) in a medical institution, at home or at work on the basis of a previous clinical diagnosis and / or indicators of the patient's condition, using knowledge about the person, his organs and systems, adhering to appropriate ethical and legal norms, by making an informed decision and using standard methods.
PRN 28	Organize holding of fixed contingent of population measures secondary and tertiary prevention, using a generalized procedure assess the state of health of humans ( screening , preventive medical examination, request for medical help), knowledge of the man
	its bodies and systems, adhering to the relevant ethical and legal norms, by making an informed decision, in the conditions of the health care institution, in particular: to form groups of dispensary supervision; to organize medical and health-improving measures differentiated from the group of medical examination.
PRN30	Carry out in the conditions of a health care institution, its subdivision: • detection and early diagnosis of infectious diseases (according to list2); * primary anti-epidemic measures in the center of an infectious disease.
PRN32	In health care facilities or at home for a patient based on the received data on the state of health of the patient by means of standard schemes, using the knowledge of human, his organs and systems, adhering to appropriate ethical and legal norms by adopting a reasoned decision: determine the tactics inspection and secondary prevention patients, which are subject to clinical supervision; to determine the tactics of examination and primary prevention of healthy persons subject to dispensary supervision; calculate and assign the necessary products catering to children of the first year of life.
PRN33	To determine the presence and extent of the restrictions of life, type, degree and duration of disability with the design of relevant documents in terms of establishment health care on the basis of information about the disease and its course, features of professional activity of the person.

PRN35	On the territory of the service according to standard methods of descriptive, analytical epidemiological and medical-statistical research: to conduct screening to identify the most important non-communicable diseases; evaluate in dynamics and in the comparison with the average static data rates of morbidity, in fact including chronic non-communicable diseases, disability, mortality, integral indicators of health; identify risk factors for the occurrence and course of diseases; to form risk groups of the population.
PRN41	In the conditions of a health care institution or its subdivision according to standard methods: carry out the selection and use of standardized clinical protocols regarding provision of medical care, which developed on the basis of evidence-based medicine; take part in the development of local protocols for medical care; spending control the quality of medical care on the basis of statistical data, expert evaluation and data of sociological studies of the use of indicators of structure, process and results of activities; identify factors that hinder the improvement of the quality and safety of medical care.

### 3. The program of the discipline

The educational process is organized according to the European Credit Transfer and Accumulation System (ECTS).

Program training course consists of **4 blocks:**

**Block 1. CLINICAL ANATOMY, PHYSIOLOGY, METHODS OF INVESTIGATION OF THE URINARY AND MALE REPRODUCTIVE SYSTEMS, DEFECTS OF DEVELOPMENT OF THE URINARY ORGANS .**

1. Anatomy and physiology of the urinary and male reproductive systems. Anomalies in the development of the urinary and male reproductive systems. Semiotics of urological diseases.

2. X-ray radionuclide, thermographic, ultrasound and instrumental methods of examination of urological patients.

**Block 2. NON- SPECIFIC AND SPECIFIC INFLAMMATORY DISEASES OF THE URINARY AND MALE REPRODUCTIVE SYSTEMS. KIDNEY DISEASE HYDRONEPHROSIS**

1. Acute pyelonephritis. Chronic pyelonephritis.

2. Cystitis, prostatitis, urethritis, cavernitis , epididymitis . Pyonephrosis, retroperitoneal fibrosis, acute paranephritis. Tuberculosis of the urinary tract and male reproductive system.

3. Urolithiasis , hydronephrosis. Acute and chronic renal insufficiency **Block 3. Traumatic DAMAGE AND tumors OF**

**URINARY AND MALE SEXUAL SYSTEM. ACUTE AND CHRONIC KIDNEY FAILURE**

1. Traumatic injuries of the urinary and male reproductive systems.



2. Neoplasms of the urinary and male reproductive systems. Adenoma and prostate cancer

#### Block 4. EMERGENCY CARE FOR UROLOGICAL DISEASES

1. Renal colic, acute urinary retention, anuria, injuries of the kidney, bladder, urethra and testicles.

<p>Block 1. CLINICAL ANATOMY, PHYSIOLOGY, METHODS OF INVESTIGATION OF URINARY AND MALE GENITAL SYSTEMS, DEFECTS OF DEVELOPMENT OF ORGANS</p> <p>Urogenital system .</p>
<p>Topic 1. Anatomy and physiology of the urinary and male reproductive systems.</p> <ol style="list-style-type: none"><li>1. Anatomical structure of the kidney, ureter, bladder, urethra, prostate, testis, penis.</li><li>2. Kidneys. Examination of the kidneys. Palpation of the kidneys. Differential diagnostic value of changes in the contours of the lumbar region. The main pathological processes palpable feigning illness kidneys. Diagnostic value of the symptom of "knocking" on the lumbar region.</li><li>3. The bladder. The main pathological processes that lead to enlargement of the bladder. Diagnostic value of examination, palpation and percussion of the bladder.</li><li>4. Prostate, seminal vesicles. Methods of rectal finger examination. Hyperplasia and prostate cancer. Changes in the prostate during its inflammation. Diagnostic value of prostate secretion analysis .</li><li>5. The urethra. Methods of examination and palpation and their diagnostic value.</li><li>6. Penis . Diagnostic value of palpation data .</li><li>7. The testicle. Methods of examination and palpation and their diagnostic value. Differential-diagnostic value of diaphanoscopy.</li></ol> <p>Anomalies in the development of the urinary and male reproductive systems.</p>
<ol style="list-style-type: none"><li>1. The frequency of abnormalities in the development of the urinary and male reproductive systems. Modern classification of developmental anomalies . Anomalies of the renal vessels, kidneys, ureters, urachus , bladder, urethra, male genitals.</li><li>2. Clinical significance of developmental anomalies , methods of their diagnosis. Disorders of uro- and hemodynamics in renal abnormalities . Possible diagnostic and tactical errors in renal abnormalities .</li></ol> <p>Semiotics of urological diseases.</p> <ol style="list-style-type: none"><li>1. Pain in the lumbar region. their general characteristics, etiology, localization, irradiation. Renal colic. Etiology and pathogenesis of pain in diseases of the bladder, prostate and external genitalia .</li><li>2. Disorders of urination. Definition, etiology, pathogenesis. Stranguria , pollakiuria , nocturia . Urinary incontinence, its types. Incontinence . Acute and chronic urinary retention. Residual urine and methods for its determination. Paradoxical ischuria.</li><li>3. Quantitative changes in urine: physiological and pathological polyuria. Oliguria . Anury. Types of anuria: renal , renal, postrenal , their causes.</li><li>4. Qualitative changes in urine: hematuria, its types, causes. Pyuria . Bacteriuria , its types. Pn eumaturia . Hiluria , its types. Urine reaction is normal and in pathology. Methods of quantitative assessment of leukocyturia by Addis-Kakovsky , Amburge , Nechiporenko. Provocative tests. Detection of atypical cells in urine</li></ol>

and their diagnostic value.

5. Assessment of renal function . Samples for dissolution and concentration. Sample Zimnitskiy . Determination of nitrogenous slag content in the blood.

Topic 2. X-ray radionuclide, thermographic, ultrasound and instrumental methods of examination of urological patients.

1. Overview . Interpretation of the image: shadows of musculoskeletal

2. apparatus, skeletonography of the kidneys, images of the shadows of the kidneys and pathological formations.

3. Excretory urography , its types. Types of contrast agents. Method of execution. Interpretation of excretory urograms . Contraindications to excretory urography . Possible complications and their prevention.

4. Retrograde ureteropyelography . Types of contrast agents for retrograde ureteropyelography , the amount of drug that must be injected into the bowl. Interpretation in reteropyelograms . Advantages and disadvantages of retrograde ureteropyelography .

5. Computed tomography and magnetic resonance imaging, indications for their use, diagnostic capabilities.

6. Renal angiography, its types. Phases of the angiogram. The value of renal angiography as a functional-morphological method. Indications and contraindications to renal angiography. Complications and their prevention. Angiographic signs of various pathological processes in the kidneys. The combination of vascular diagnostic methods

of medical manipulations during urological diseases: balloon dilatation stenosis of the renal artery embolization therapy. Indications for them and methods of execution.

7. Cystography . The essence of the method, indications and methods of implementation. Modifications cystography : sedimentary, miktseyina , politsystohrafiya , perytsystohrafiya .

8. Prevention of inflammatory complications when performing cystography .

9. Urethrography , its types: ascending and micturition descending , method of execution, diagnostic value. Complications of urethrography and their prevention.

10. Isotope renography , nephroscintigraphy , scanning, methods of execution. Diagnostic value.

11. Methods

of studying urodynamics : uroflowmetry , cystomanometry . 12.

Ultrasound examination: definition, types: percutaneous

13. endovesical, transrectal and transvaginal examination, indications for them. Puncture examination of the kidney, renal pelvis and prostate under ultrasound control.

14. Types of catheters. Elastic catheters of Nelaton , Timan , Foley , Petzer , indications for their use. Charrier scale to determine the diameter of the 26 catheters. Catheterization of the bladder of men and women. Possible complications of catheterization of the urinary bladder, their prevention and treatment. Method of holding a metal catheter in men.

15. Urethroscopy. Cysto- and chromocystoscopy. Tools for endoscopic examination. Technique of urethroscopy, cystoscopy, chromocystoscopy. Complications of cystoscopy, their prevention and treatment. Technique of ureteral catheterization . Ureteroscopy , pyeloscopy .

Block 2. NON- SPECIFIC AND SPECIFIC INFLAMMATORY DISEASES OF ORGANS URINARY AND MALE SEXUAL SYSTEM. Chronic lung DISEASE hydronephrosis

Topic 1. Acute and chronic pyelonephritis.

Acute pyelonephritis. Classification. Etiology, pathogenesis, ways of infection spread. The value of pelvic-renal reflux, the general condition of the organism, its immunobiological reactivity in the occurrence of pyelonephritis. Local factors that contribute to the development of pyelonephritis. Different pathomorphological forms of acute pyelonephritis: serous, apostematous, renal carbuncle, renal abscess, necrotic papillitis. Clinic, diagnosis. Treatment: conservative and operative. Urgent recovery methods passage of urine from the kidneys, catheterization, installation of stents, puncture percutaneous nephrostomy.

Bacteremic shock, stages, clinic, diagnosis, treatment.

Chronic pyelonephritis. Etiology. Phases of the clinical

course. Clinic. Diagnosis. Treatment. Pyonephrosis: clinic, diagnosis, treatment. The most common antibacterial drugs. The value of determining the sensitivity of the urine microflora. Acute and chronic paranephritis. Paranephritis: definition, ways of infection penetration. Clinic. Ways of breaking through manure. Diagnosis. Treatment.

Topic 2. Cystitis, prostatitis,

urethritis, cavernitis, epididymitis. Pyonephrosis, retroperitoneal fibrosis, acute paranephritis.

Cystitis: classification, ways of infection penetration. Factors that contribute to cystitis: local, general. Symptoms. Diagnosis. Treatment. Prostatitis: definition, classification, etiology, clinic. Diagnosis. Ways of breakthrough of a prostate abscess. Treatment of prostatitis.

Urethritis: etiology and pathogenesis, classification. Types

of pathogens. Clinical course, diagnosis. Treatment of urethritis and their complications.

Epididymitis: definition, etiology, pathogenesis. Clinical course, diagnosis and treatment. Cavernitis: definition, etiology, clinic, diagnosis, treatment.

Tuberculosis of the urinary tract and of male reproductive system

Ways of penetration of the pathogen. Stages of disease

development. Pathological picture. Semiology. Diagnostic methods. Provocative tests with tuberculin. Modern methods

of treatment. Dispensary supervision. Indications for urgent surgical treatment. Tuberculosis of the male genital organs: etiology, pathogenesis, clinical course. Diagnosis and treatment methods

Topic 3. Urolithiasis, hydronephrosis.

Spread of urolithiasis. Recurrent nature of the disease. Etiology and pathogenesis. Characteristics of stones by shape, location and chemical composition. X-ray optical properties of stones. Kidney stones: clinical picture,

diagnosis, treatment. Coral nephrolithiasis, classification, clinic, diagnosis, treatment. Complications of kidney stones. Modern methods of treatment

of urolithiasis. Indications for surgical treatment. Bladder stones: etiology, clinical picture, diagnosis, treatment. Prostate stones: clinic, diagnosis, treatment.

Acute and chronic renal failure

Acute renal failure: etiology, pathogenesis, stages of the disease. Symptoms, diagnosis. Principles of conservative therapy. Intestinal

dialysis, peritoneal dialysis and hemodialysis in the treatment of acute renal failure.

Etiology and pathogenesis of chronic renal failure. Stages and forms

of clinical course. Clinic, diagnosis, treatment. Indications for peritoneal dialysis and hemodialysis.

Block 3. Traumatic DAMAGE INOVOUTVORENNYA OF URIC AND MEN SEXUAL SY  
STEM. ACUTE AND CHRONIC KIDNEY  
INSUFFICIENCY.

Topic 1. Traumatic injuries of the urinary and male reproductive systems.

1. Kidney damage: open and closed. Kidney damage in combination with injury to other organs. Classification. Clinic. Diagnosis. Conservative and operative treatment.
2. Iatrogenic injuries of the kidneys and ureters: clinic, diagnosis, treatment.
3. Damage to the bladder: open and closed, intra- and extraperitoneal . Urinary incontinence as a characteristic consequence of bladder damage .
4. Detachment of the bladder neck. Symptoms, diagnosis. Zeldovich test with filling of a bladder. Cystography is the main method of diagnosing bladder damage . Execution technique .
5. Damage to the urinary bladder during a surgical intervention on the organs of the abdominal cavity, pelvis, gynecological surgery, childbirth, during endoscopic manipulations and operations. Diagnosis. Treatment.
6. Damage to the urethra. Causes of injury and mechanism of injury. Clinic, diagnosis, treatment. Ascending urethrocytography and its diagnostic value. Epicycstostomy and urogenital drainage . Possibility of primary urethral plastic surgery.
7. Damage to the organs of the scrotum: types of injuries, symptoms, diagnosis, treatment.

Topic 2. Neoplasms of the urinary and male reproductive system. Adenoma and carcinoma of the prostate gland

1. Cancer of the renal parenchyma: etiology, pathological anatomy, symptoms, diagnosis, ways of metastasis, treatment.
2. Wilms' tumor - adenomyosarcoma : symptoms, diagnosis, treatment.
3. Cancer of the renal pelvis: symptoms, diagnosis, treatment.
4. Tumors of the ureters: symptoms, diagnosis, treatment.
5. Tumors of the bladder: etiology and pathogenesis. Classification.
6. Symptoms, diagnosis. Methods of treatment: surgery, chemotherapy, radiation therapy. The place of endoscopic surgery in the treatment of bladder cancer.
7. Hyperplasia of the prostate. Etiology and pathogenesis. Clinical manifestations. Diagnosis. Treatment: conservative and operative. One- and two-stage prostatectomy . Modern minimally invasive methods of treatment of hyperplasia, indications for their implementation.
8. Prostate cancer. Etiology. Stages of the disease. Clinical picture, diagnosis, treatment. The value of P8A in the diagnosis of prostate cancer. Hormone therapy for prostate cancer.
9. Testicular tumors. Pathogenetic significance of testicular injury and cryptorchidism in the development of testicular tumors . Ways of metastasis. Clinical picture. Diagnosis, treatment.
10. Penile cancer . Etiology. The role of phimosis and balanoposthitis in the development of penile cancer . Clinic, diagnosis. Principles of treatment.

Content block 4. EMERGENCY CARE FOR UROLOGICAL  
DISEASES .

Subject 1. Renal colic, acute retention of urine, anuria, injured kidney, urinary bladder, urethra and testicles

1. The mechanism of renal colic. The main signs of renal colic. Differential diagnosis with other diseases. Methods of buying renal colic.
2. Acute urinary retention. Reasons. Diagnosis. First aid.
3. Testicular torsion : etiology, symptoms, diagnosis, treatment.
4. Paraphimosis . Causes, diagnosis. First aid.
5. Anuria. Types of anuria. Causes of anuria. Symptoms. Diagnosis. Treatment.

### The structure of the discipline

Name of blocks and topics	Number of hours					
	total	L.	P	lab	ind	Inde- pende nt
1	2	3	4	5	6	7
<b>Block1. CLINICAL ANATOMY, PHYSIOLOGY, METHODS OF INVESTIGATION OF URINARY AND MALE GENITAL SYSTEMS, DEFECTS OF DEVELOPMENT OF ORGANS</b> Urogenital system .						
Topic 1. Anatomy and physiology of the urinary and male reproductive systems. Anomalies in the development of the urinary and male reproductive systems. Semiotics of urological diseases.	10 3	1	2			10
Topic 2. X-ray radionuclide, thermographic, ultrasonic and instrumental methods examination of urological patients.	13	1	2			10
Together for block 1	26	2	4			20
<b>Block 2. NON- SPECIFIC AND SPECIFIC INFLAMMATORY DISEASES OF ORGANS URINARY AND MALE SEXUAL SYSTEM. Chronic lung DISEASE hydronephrosis</b>						
Topic 1. Acute pyelonephritis. Chronic pyelonephritis.	5	1	4			
Topic 2. Cystitis, prostatitis, urethritis, cavernitis , epididymitis . Py onephrosis, retroperitoneal fibrosis, acute paranephritis. Tuberculosis of the urinary tract and organs of the male reproductive system	3 10	1	2			10
Topic 3. Urolithiasis , hydronephrosis. Acute and chronic renal failure	2 10		2			10

Together for block 2	30	2	8			20
<b>Block 3. Traumatic DAMAGE INOVOUTVORENNYA OF URIC and MALE SEXUAL SYSTEM. ACUTE AND CHRONIC KIDNEY FAILURE.</b>						
Topic 1. Traumatic injuries organs of the urinary and male reproductive systems.	12	2	2			8
Topic 2. Neoplasms of the urinary and male genitals systems. Adenoma and carcinoma of the prostate gland	12	2	2			8
Together for block 3	24	4	4			16
<b>Block 4. EMERGENCY CARE FOR UROLOGICAL DISEASES</b>						
Topic 1. Renal colic, acute urinary retention, anuria, trauma kidney, urinary bladder, urethra and testicles	8		4			4
<b>Final control work</b>	<b>2</b>		<b>2</b>			
<b>Sum</b>	<b>90</b>	<b>8</b>	<b>22</b>			<b>60</b>

#### 4. The content of the discipline

##### 4.1. Lecture plan

<b>№</b>	<b>Topics</b>	<b>Number of hours</b>
1	Topic 1. Anatomy and physiology of the urinary and male reproductive systems. Anomalies in the development of the urinary and male reproductive systems. Semiotics of urological diseases.	2
2	Topic 2. Acute pyelonephritis. Chronic pyelonephritis. Cystitis, prostatitis, urethritis, cavernitis , epididymitis . Pyonephrosis, retroperitoneal fibrosis, acute paranephritis.	2
3	Topic 3. Traumatic injuries of the urinary and male reproductive systems.	2
4	Topic 4. Neoplasms of the urinary and male reproductive system. Adenoma and prostate cancer	2
	<b>Total</b>	<b>8</b>

##### 4.2. Plan of practical classes

<b>№</b>	<b>Topics</b>	<b>Number hours</b>
	Block №1	

1.	Topic №1 Anatomy and physiology of the urinary and male reproductive system. Anomalies in the development of the urinary and male reproductive systems. Semiotics of urological diseases.	2
2.	Topic 2. X-ray radionuclide, thermographic, ultrasound and instrumental methods of examination of urological patients.	2
	Block №2	
3.	Topic 1. Acute pyelonephritis. Chronic pyelonephritis.	4
4.	Topic 2. Cystitis, prostatitis, urethritis, cavernitis, epididymitis. Pyonephrosis, retroperitoneal fibrosis, acute paranephritis. Tuberculosis urinary tract and organs of the male reproductive system	2
5.	Topic 3. Urolithiasis, hydronephrosis. Acute and chronic renal failure	2
	Block №3	
6.	Subject 1. Traumatic damage of urinary and male genital systems.	2
7.	Topic 2. Neoplasms of the urinary and male reproductive system. Adenoma and carcinoma of the prostate gland	2
	Block №4	
8.	Topic 1. Renal colic, acute urinary retention, anuria, kidney injury, urinary bladder, urethra and testicles	4
9.	Final control work	2
	<b>Total:</b>	<b>22</b>

Note. \* - Plan of each practical lesson:

- 1) Written solution of test problems "Step-2" on the topic.
- 2) Group work on errors, at the same time an oral interview on all material of the topic.
- 3) Practice of practical skills.
- 4) Assessment of knowledge.

#### 4.3. Tasks for independent work

Number	TOPIC	Number of hours
<b>BLOCK 1</b>		
	Preparation for practical classes (theoretical training, development of practical skills)	5
	Passage of online courses and on-line testing	5
	Independent study of topics that are not included in the plan classroom sessions Block 1 (list attached)	5
	Individual work	3
	Preparation to final control of	2
	<b>Total:</b>	<b>20</b>
<b>BLOCK 2</b>		
	Preparation for practical classes (theoretical training, development of practical skills)	5
	Passage of online courses and on-line testing	5
	Independent study of topics that are not included in the plan classroom sessions Block 2 (list attached)	5
	Individual work	3

	Preparation to final control of	2
<b>Total:</b>		20
<b>BLOCK 3</b>		
	Preparation for practical classes (theoretical training, development of practical skills)	3
	Passage of online courses and on-line testing	2
	Independent study of topics that are not included in the plan classroom sessions Block 2 (list attached)	3
	Individual work	3
	Preparation to final control of	5
<b>Total:</b>		16
<b>BLOCK 4</b>		
	Preparation for practical classes (theoretical training, development of practical skills)	2
	Passage of online courses and on-line testing	-
	Independent study of topics that are not included in the plan classroom sessions Block 2 (list attached)	2
	Individual work	4
<b>Total:</b>		60

### **Individual tasks Block №1**

Anatomy and physiology of the urinary and male reproductive systems.

1. Anatomical structure of the kidney, ureter, bladder, urethra, prostate, testis, penis. Kidneys. Examination of the kidneys. Palpation of the kidneys.
2. Differential diagnostic value of changes in the contours of the lumbar region. The main pathological processes are palpatory simulating kidney diseases. Diagnostic value of the symptom of "knocking" on the lumbar region.
3. The bladder. The main pathological processes that lead to enlargement of the bladder. Diagnostic value of examination, palpation and percussion of the bladder.
4. Prostate, seminal vesicles. Methods of rectal finger examination. Hyperplasia and prostate cancer. Changes in the prostate during its inflammation. Diagnostic value of prostate secretion analysis .
5. The urethra. Methods of examination and palpation and their diagnostic value.
6. Penis . Diagnostic value of palpation data .
7. Pain in the lumbar region. their general characteristics, etiology, localization, irradiation. Renal colic. Etiology and pathogenesis of pain in diseases of the bladder, prostate and external genitalia .
8. Disorders of urination. Definition, etiology, pathogenesis. Stranguria , pollakiuria , nocturia . Incontinence , its types. Incontinence . Acute and chronic urinary retention. Residual urine and methods for its determination. Paradoxical ischuria.
9. Quantitative changes in urine: physiological and pathological polyuria. Oliguria . Anuria. Types of anuria: renal , renal, postrenal , their causes.
10. Qualitative changes in urine: hematuria, its types, causes. Pyuria . Bacteriuria , its types. Pneumaturia . Hiluria , its types. Urine reaction is normal and in pathology. Methods of quantitative assessment of leukocyturia by Addis-Kakovsky , Amburge , Nechiporenko. Provocative tests.

### **Block №2**

1. Acute pyelonephritis. Classification. Etiology, pathogenesis, ways of infection.



2. The value of pelvic-renal reflux, the general condition of the organism, its immunobiological reactivity in the occurrence of pyelonephritis. Local factors that contribute to the development of pyelonephritis.
3. Different pathomorphological forms of acute pyelonephritis: serous, apostematous, renal carbuncle, renal abscess, necrotic papillitis. Clinic, diagnosis.
4. Treatment: conservative and operative.
5. Urgent methods of restoring the passage of urine from the kidney: catheterization, stent placement, puncture percutaneous nephrostomy.
6. Bacteremic shock, stages, clinic, diagnosis, treatment.
7. Chronic pyelonephritis. Etiology. Phases of the clinical course. Clinic. Diagnosis.
8. Treatment. Pyonephrosis: clinic, diagnosis, treatment. The most common antibacterial drugs. The value of determining the sensitivity of the urine microflora.
9. Acute and chronic paranephritis. Paranephritis: definition, ways of infection penetration. Clinic. Ways of breaking through manure. Diagnosis. Treatment.
10. Urolithiasis, hydronephrosis. Spread of urolithiasis. Recurrent nature of the disease. Etiology and pathogenesis.
11. Characteristics of stones in shape, location and chemical composition. X-ray optical properties of stones. Kidney stones: clinical picture, diagnosis, treatment. Coral nephrolithiasis, classification, clinic, diagnosis, treatment.
12. Complications of kidney stones. Modern methods of treatment of urolithiasis. Indications for surgical treatment. Bladder stones: etiology, clinical picture, diagnosis, treatment. Prostate stones: clinic, diagnosis, treatment. Acute and chronic renal failure.

### **Block №3**

1. Kidney damage: open and closed. Kidney damage in combination with injury to other organs. Classification. Clinic. Diagnosis. Conservative and operative treatment.
2. Iatrogenic injuries of the kidneys and ureters: clinic, diagnosis, treatment.
3. Damage to the bladder: open and closed, intra- and extraperitoneal. Urinary incontinence as a characteristic consequence of bladder damage.
4. Detachment of the bladder neck. Symptoms, diagnosis. Zeldovich test with filling of a bladder. Cystography is the main method of diagnosing bladder damage. Execution technique.
5. Damage to the bladder during surgery on the abdominal cavity, pelvis, gynecological surgery, childbirth, during endoscopic manipulations and operations. Diagnosis. Treatment.
6. Cancer of the renal parenchyma: etiology, pathological anatomy, symptoms, diagnosis, ways of metastasis, treatment.
7. Wilms' tumor - adenomyosarcoma: symptoms, diagnosis, treatment.
8. Renal pelvic cancer: symptoms, diagnosis, treatment.
9. Tumors of the ureters: symptoms, diagnosis, treatment.
10. Tumors of the bladder: etiology and pathogenesis. Classification.
11. Symptoms, diagnosis. Methods of treatment: surgery, chemotherapy, radiation therapy. The place of endoscopic surgery in the treatment of bladder cancer.
12. Prostate hyperplasia. Etiology and pathogenesis. Clinical manifestations. Diagnosis. Treatment: conservative and operative. One- and two-

stage prostatectomy . Modern minimally invasive methods of treatment of hyperplasia, indications for their implementation.

#### **Block №4**

1. Pain in the lumbar region. their general characteristics, etiology, localization, irradiation.
2. Renal colic. Etiology and pathogenesis of pain in diseases of the bladder, prostate and external genitalia .
3. Disorders of urination. Definition, etiology, pathogenesis. Stranguria , pollakiuria , nocturia .
4. Urinary incontinence, its types. Incontinence . Acute and chronic urinary retention.
5. Residual urine and methods of its determination. Paradoxical ischuria.
6. Quantitative changes in urine: physiological and pathological polyuria. Oliguria . Anury. Types of anuria: renal , renal, postrenal , their causes.

#### **Individual tasks**

Selection and review of scientific literature on the subject of the urology program of the student's choice with the writing of an abstract and its public defense.

Selection and review of scientific literature on the subject of research work of the department with the preparation of a scientific report at a meeting of the SNT or at student conferences.

Scientific research on the topic of research work of the department with the publication of results in scientific journals.

#### **Typical test problems to be solved in practical classes Tasks № 0.**

In a 30-year-old patient, about 10 days after the paratonsillar abscess , the body temperature increased to 39 with fever, sweating , and dull pain in the right kidney. At a palpation the kidney is not palpated , the right area of a kidney is painful, there is a positive symptom of Pasternatsky . In the urine protein 0.066 g / l bacteria, leukocytes in the entire field of view. On the review roentgenogram the contour of m psoas is not present, scoliosis to the right, the contour of the right kidney is increased. What disease caused this condition of the patient?

- a) acute purulent pyelonephritis on the right
- b) intercostal neuralgia
- c) acute paranephritis
- d) right renal colic
- e) cystitis

Explain your decision.

#### **Task № 0.**

Patient '50 came with a complaint against the dull pain in the right lumbar region, pereodychni increasing the temperature of the body to 39 with fever and torrential claim of volume availability of transparent urine during this period. During the period of normalization of body temperature and relief of pain, urine is cloudy, purulent. Objectively, the tongue is dry. At a palpation the hilly right kidney is defined . Moderately painful, sedentary. In urine leukocytes on all field of view, protein 0,099 g / l. At cystoscopy from the right eye pus in the form of "paste from a tube" is allocated . What pathological process leads to this condition?

- a) paranep

hritis b)  
pyoneph  
rosis  
c) glomerulon  
ephritis d) cyst  
itis  
e) urethritis

Explain your decision.

#### **4.4. Ensuring the educational process**

Tools / equipment / software Practical classes are provided with technical support:

- computer
- projection screen
- multimedia projector
- presentation programs in urology and - anatomical mannequins- simulators urological

Examination of typical patients

#### **5. Final control**

##### **The list for the final control ( dif . Test)**

1. The main stages of development of urology as an independent medical discipline.
2. History of urology development in Ukraine.
3. History of the Department of Urology of the University.
4. The main directions of development and achievements of modern urology.
5. Organs of the urinary and male reproductive system, their functional significance.
6. Clinical anatomy of the urinary and male reproductive systems.
7. Pain in the disease of the kidneys.
8. Pain in the disease ureter and urinary bladder.
9. Pain in diseases of the urethra and male genitals .
10. Differential diagnosis of renal colic and acute surgical diseases of the abdominal cavity.
11. Nocturia , its diagnostic value.
12. Methods of blockade of the elements of the spermatic cord and the round ligament of the uterus according to Lorin- Epstein .
13. Polyuria and pollakiuria . In what diseases are they observed?
14. Urinary incontinence, its types.
15. Acute urinary retention.
16. Chronic urinary retention.
17. Symptom of residual urine.
18. Anuria, its types.
19. Causes of prerenal form of anuria.
20. Causes of renal form of anuria.
21. Causes of postrenal anuria.
22. What is "hidden leukocyturia " and methods of its detection?
23. Hematuria: types, causes , methods of determination.

24. Bacteriuria , its types.
25. Hiluria , its types.
26. Pyuria .
27. Pneumaturia .
28. Urethrorrhagia .
29. Review urography and its interpretation.
30. Excretory urography , its types, methods of execution.
31. Types of X-ray contrast agents.
32. Contraindications to perform excretory urography .
33. Retrograde ureteropyelography , method of execution.
34. Retropneumoperitoneum , indications for use , method of performance.
35. Renal angiography, its types. Diagnostic value.
36. Cystography , types: sedimentary, miktsiyna , politsystohrafiya , indications performance diagnostic value.
37. Urethrography , types, methods of execution.
38. Radioisotope renography , method of execution, diagnostic significance.
39. Scanning of the kidneys.
40. Scintigraphy , types, diagnostic significance.
41. Computed tomography, nuclear magnetic tomography.
42. Ultrasound sonography .
43. Thermographic studies, their types, diagnostic value.
44. Uroflowmetry , tsystomanometriya .
45. Anomalies of the renal vessels.
46. Anomalies of the kidneys.
47. Anomalies of the ureters.
48. Anomalies of urachus .
49. Anomalies of the bladder.
50. Anomalies of the urethra.
51. Anomalies of the testicles.
52. Phimosis and paraphimosis .
53. Acute pyelonephritis, definition, classification.
54. Ways of infection in the kidney.
55. Symptoms of acute serous pyelonephritis.
56. Diagnosis and treatment of acute pyelonephritis.
57. Apostematous nephritis: symptoms, diagnosis, treatment.
58. Carbuncle of the kidney: symptoms, diagnosis, treatment.
59. Kidney abscess : symptoms, diagnosis, treatment.
60. Pyelonephritis of pregnant women: causes , clinic, diagnosis, treatment.
61. Bacteremic shock: stages, symptoms, diagnosis, treatment.
62. Etiology of chronic pyelonephritis, symptoms, diagnosis, treatment.
63. Pyonephrosis: symptoms, diagnosis, treatment.
64. Methods of detection of latent leukocyturia .
65. Nephrogenic hypertension: types, causes, diagnosis, treatment.
66. Acute paranephritis: definition, ways of infection penetration, symptoms, diagnosis, treatment.
67. Ways of pus breakthrough in paranephritis.
68. Retroperitoneal fibrosis: definition, etiology, symptoms, diagnosis, treatment.
69. Cystitis: classification, symptoms, diagnosis, treatment.
70. Cystalgia: symptoms, diagnosis, treatment.

71. Urethritis: classification, symptoms, diagnosis, treatment.
72. Prostatitis: classification, symptoms, diagnosis, treatment.
73. Ways of pus breakthrough at an abscess of a prostate gland.
74. Acute epididymitis : etiology, symptoms, diagnosis, treatment.
75. Cavernitis : symptoms, diagnosis, treatment.
76. Etiology and pathogenesis of renal tuberculosis .
77. Clinical and radiological classification of renal tuberculosis .
78. Symptoms and diagnosis of renal tuberculosis . Diagnostic value of provocative tests with tuberculin.
79. Modern methods of treatment of renal tuberculosis .
80. Symptoms, diagnosis and treatment of tuberculous epididymitis .
81. Etiology and pathogenesis of urolithiasis .
82. Clinical picture of kidney stones .
83. Complications of kidney stones .
84. Methods of diagnosis of kidney stones .
85. Modern methods of treatment of urolithiasis .
86. Coral-like stones, their classification.
87. Urethral stones : symptoms, diagnosis, treatment.
88. Stones of the urinary bladder: clinical features, diagnosis, treatment.
89. Hydronephrosis: stages, symptoms, diagnosis, treatment.
90. Classification of closed kidney injuries .
91. Symptoms, diagnosis and treatment of closed kidney injuries .
92. Classification of open kidney damage , symptoms, diagnosis and treatment.
93. Damage to the ureters. Symptoms, diagnosis, treatment.
94. Damage to the bladder, types, clinical manifestations.
95. Diagnosis and treatment of bladder injuries .
96. Damage to the urethra, symptoms, diagnosis, treatment.
97. Indications for the imposition of the primary urethral suture .
98. Types of plastic surgery for post-traumatic complications of urethral injuries .
99. Current invasive methods for treatment of narrowing of the urethra.
100. Testicular damage , types, symptoms, diagnosis, treatment.
101. Classification of kidney tumors .
102. Local and extrarenal signs of a tumor of a parenchyma of a kidney.
103. Diagnosis and treatment of tumors of the renal parenchyma .
104. Kidney cancer , symptoms, diagnosis, treatment.
105. Tumor Vilmsa - adenomiosarkoma , symptoms, diagnosis, treatment.
106. Tumors of the ureters, clinic, diagnosis, treatment.
107. Etiology of bladder tumors .
108. Classification of bladder tumors .
109. Clinic, diagnosis and treatment of bladder tumors .
110. Modern minimally invasive methods of treatment of bladder tumors .
111. Hyperplasia of the prostate , stages of the disease.
112. Symptoms, diagnosis and treatment of prostate hyperplasia .
113. Types of surgical interventions in the treatment of prostate hyperplasia .
114. Conservative treatment of prostate hyperplasia .
115. Early and late complications of surgical treatment of prostate hyperplasia .
116. Stages of prostate cancer.
117. Symptoms, diagnosis and treatment of prostate cancer.
118. Surgical treatment of prostate cancer.
119. Current invasive methods for treating cancer of the prostate gland.

120. What are drugs used to treat cancer of the prostate gland?
121. Clinic, diagnosis and treatment of testicular tumors .
122. Clinic, diagnosis and treatment of penile cancer .
123. Symptoms, diagnosis and treatment of nephroptosis .
124. Etiology, clinic, diagnosis and treatment of vesico-vaginal fistulas.
125. Etiology, clinic, diagnosis and treatment of urogenital fistulas.
126. Echinococcosis of the urinary system.
127. Filariasis of the genitourinary system.
128. Genitourinary schistosomiasis ( bilgartiosis ): etiology, clinic, diagnosis and treatment.
129. Neurogenic disorders of urination, causes, symptoms, diagnosis and treatment.
130. Foreign bodies of the kidneys and urinary tract: clinic, diagnosis, treatment.
131. Etiology, pathogenesis and classification of acute renal failure.
132. Symptoms, diagnosis and treatment of acute renal failure.
133. Etiology, pathogenesis of chronic renal failure.
134. Stages and forms of the clinical course of chronic renal failure.
135. Diagnosis and treatment of chronic renal failure.
136. Indications to perform peritoneal dialysis.
137. Indications to perform hemodialysis.
138. Fibroplastic induration of the penis, clinic, diagnosis, treatment.
139. Priapism : clinic, diagnosis, treatment.
140. The value of hemofiltration and plasmapheresis in the treatment of chronic renal failure.
141. Kidney transplantation . Preparing the patient for surgery, donor selection .
142. Management of the postoperative period after kidney transplantation .
143. Causes and symptoms of renal colic.
144. Methods of buying renal colic.
145. Methods of blockade of the elements of the vas deferens in men and the round ligament of the uterus in women.
146. The reasons for sharp delay of urine.
147. Methods of catheterization of the bladder in men and women.
148. Hematuria, its types, causes.
149. Medical care for hematuria.
150. Anuria, its types.
151. Medical care for various types of anuria.
152. Emergency care for kidney injuries .
153. Emergency assistance with injuries of the urinary bladder, urethra, of the purse.

### **An indicative list of practical skills for final control in Urology**

1. To conduct palpation of the kidneys.
2. Perform percussion and palpation of the bladder.
3. To conduct palpation of the urethra and of the scrotum.
4. Conduct palpation of the prostate .
5. Evaluate the indicators of the general analysis of urine.
6. Evaluate the indicators of biochemical analysis of blood.
7. Perform catheterization of the bladder with an elastic and metal catheter.
8. Establish and fix a permanent catheter into the urinary bladder.
9. Interpret the results:
10. a) review and excretory urography ;
11. b) isotope renography ;

12. c) ultrasound sonography .
13. Carry out differential diagnosis of renal colic with acute surgical diseases of the abdominal cavity.
14. To make the scheme of inspection and treatment of patients with urological pathology.
15. To help with paraphimosis .
16. Taking smears from the urethral cavity .

### **Examples of tests**

1. Is it possible to promote the acceleration of the death of a hopeless patient?
  - 1 impossible, forbidden
  - 2 possible at the request of the patient
  - 3 possible at the request of relatives and neighbors of the patient
  - 4 is possible at the request of relatives and neighbors of the patient
  
2. Should I help the enemy or the criminal?
  - 1 belongs with the permission of the prosecutor's office
  - 2 yes, it is necessary
  - 3 belongs with the permission of the managing medical institutions
  
3. Medical duties:
  - 1 professional activity doctor
  - 2 duties that correspond to the category
  - 3 components of deontology , its category
  - 4 proper attitude to the patient, providing assistance
  
4. Medical collegiality :
  - 1 official relations of doctors
  - 2 professional relations of doctors
  - 3 polite professional relations
  - 4 official subordination of doctors
  
5. Medical secrecy:
  - 1 concealment from the patient of the nature of his treatment
  - 2 concealment of the truth for useful purposes
  - 3 concealment of the truth with a charitable purpose for the patient
  
6. Medical indications to surgical intervention:
  - 1 infringement function body threat to the life of the patient
  - 2 request of parents
  - 3 requests from relatives
  - 4 requests of the patient
  
7. Does the possible medical experiments on patients?
  - 1 impossible
  - 2 are possible without notifying the patient
  - 3 are possible at the request of the patient

4 are possible with the permission of the Ministry of Health of Ukraine with the purpose of improving methods of diagnosis and treatment i consent of the patient

8. deontology - the science of the duty doctor and the nursing staff is so that:

1 establish a trusting relationship: patient -

doctor 2 commercial relationship with the

patient

3 proper relationship to the patient, assist

him 4 organize pleasant conditions of stay in hospital

9. Ethical norms of the doctor are defined:

1

skills 2 laws and

orders

3 ethnic features of the region

4 moral responsibility to society

10. Changes in urine in the first 48 hours at primary acute pyelonephritis of pregnant women : 1 cylindruria

2 piuriya

3 bacteriuria , protei

nuria

4 erythrocyturia

11. Treatment tactics of acute pyelonephritis of pregnant women :

1 heat, antibiotics , antispasmodics

2 catheterization or stenting of

the ureter, antibiotics , antispasmodics 3 analgesics , antispasmodic

s , antibiotics

12. Is it possible to perform excretory urography in pyelonephritis of pregnant women ? 1 yes

2 no

13. Acute pyelonephritis of pregnant women is treated with positional therapy : 1 knee-elbow position and on the healthy side

2 sitting

3 lying on the

healthy side 4 lying on

the back

5 lying on the side of the diseased kidney

14. The main method of treatment of

acute hniynoho piyelonefrytu vahitnyh : 1 kateteryzatsiya ureter ANTI

BACTERIAL therapy

2 surgical treatment

3 antibacterial therapy , antispasmodics



15. expedient to interrupt vahitnist under a sharp piyelonefrytu ? 1 yes  
2 no

16. Permissible methods for determining urodynamic disorders in chronic pyelonephritis of pregnant women :  
1 excretory urography  
2 ultrasound  
3 radionuclide methods  
4 chromocystoscopy

17. Conservative treatment of urgent incontinence of urine in women : 1 bouginage sechivnyka  
2 hormone therapy  
3 instylyatsiya 2% solution Collargolum into the urinary bladder 4 oksabutin

18. The treatment of incontinence of urine in women in klimakterychnomu periodi : 1 Aloe  
2 ascending showers  
3 sitting baths  
4 fibs  
5 estrogen therapy under the supervision of a gynecologist

19. The most often cause incontinence of urine in women :  
1 birth trauma  
2 FUNCTIONAL nedostatnist mihurovo sechivnykovoho-segment 3 after operations on organs bowls

20. The true incontinence of urine is at:  
1 prostatic hyperplasia  
2 difficult operations  
3 cervical tsystyti , kameni urinary bladder

## **6. Evaluation criteria and tools for diagnosing learning outcomes**

### **Control methods**

- Survey (testing of theoretical knowledge and practical skills).
- Test control.
- Writing a review of scientific literature (abstracts), performing individual tasks, their defense.

**Current control.** Testing in practical classes of theoretical knowledge and the acquisition of practical skills, as well as the results of independent work of students. Supervised by teachers according to the specific purpose of the curriculum. Assessment of the level of students' training is carried out by: interviewing students, solving and analyzing situational tasks and test tasks, interpreting the results of clinical- instrumental and clinical-laboratory research, monitoring the acquisition of practical skills. Conducted at each practical lesson.

**Intermediate control.** Checking the possibility of students using for clinical and diagnostic analysis of theoretical knowledge and practical skills on all topics studied, as well as the results of independent work of students. Carried out in the last lesson on the topic by passing practical skills, solving situational problems and testing.

**The final control** is carried out upon completion of the study of all topics in the last, control, lesson.

In order to establish the results of training in the discipline is also the **final control in the form of a differentiated credit**. Students are admitted to the test who have attended all lectures, classroom classes, completed full independent work and in the process of learning scored the number of points, not less than the minimum - **70 points**.

#### **Distribution points are getting students**

The maximum number of points that a student can get for current educational activity is 120. Accordingly, the maximum number of points for each topic is  $120 \text{ points} / 8 \text{ topics} = \mathbf{15 \text{ points for each}}$ . The minimum number of points -  $70 \text{ points} / 8 \text{ topics} = \mathbf{8,7 \text{ points}}$ . Evaluation below 8,7 points means "unsatisfactory", the theme is not enrolled and subject to working out in the prescribed manner.

In a FCW (differentiated credit), a student can get a maximum of **80 points**. **Credit** is considered passed if the student scored no less than **50 points**.

#### **Evaluation of the success of the student**

<b>Block (current educational activity)</b>	<b>Maximum number of points</b>
Topics from 1st to 8th	15 points for each of
<b>Together for 8 topics</b>	<b>120</b>
FCW(differentiated credit)	<b>80</b>
<b>Together for block and FCW</b>	<b>200</b>

#### **Criteria for evaluation of knowledge**

The knowledge students are evaluated both on theoretical, so also with practical training on the following criteria:

**13.5-15 points per topic, and 71-80 points for diff. credit ("excellent" on the national scale, and on the ECTS scale)** - the student correctly answered 90-100% of the tests of the KROK-2 format. Correctly, clearly logically and fully answers all standardized questions of the current topic, including questions of a lecture course and independent work, or an exam ticket. Closely connects theory with practice and correctly performs practical work with writing a conclusion on the results. Freely reads the results of laboratory tests, solves situational problems of increased complexity, is able to summarize the material, has the methods of laboratory tests to the required extent.

**11.4-13.5 points per topic and 61-70 points per diff. credit ("good" on the national scale, B and C on the ECTS scale)** - the student correctly answered 70-89% of the KROK-2 tests. Correctly and essentially answers the standardized questions of the current topic, lecture course and independent work or exam ticket. Demonstrates performance (knowledge) of practical skills. Correctly uses theoretical knowledge in solving practical problems. Is able to

solve easy and medium situational problems. Has the necessary practical skills and techniques to perform them in excess of the required minimum.

**8,7 - 11.4 points per topic and 50-60 points for diff. credit ("satisfactory" on the national scale, D and E on the ECTS scale)** the student correctly answered 50-69% of the tests of the KROK-2 format. Incomplete, with the help of additional questions, answers standardized questions of current activity, lecture course and independent work or exam ticket. Not can independently build a clear, logical answer. During the answer and demonstration of practical skills, the student makes mistakes. The student solves only the easiest problems, has only a mandatory minimum of research methods .

**Less than 8,7 points per topic and 50 points per diff. credit ("unsatisfactory" on the national scale, Fx and F on the ECTS scale)** - the student correctly answered less than 50% of the tests of the KROK-2 format . Does not know the material of the current topic or questions of the exam ticket, can not make a logical answer, does not answer additional questions, does not understand the content of the material. Makes significant, gross mistakes when answering and demonstrating practical skills .

## 7. Recommended literature

### 7.1. Basic

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6. Vozianov SO Transurethral resection of the prostate gland in the treatment of benign hiperplaziyi.- Lviv: Quart, 2005.
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### 7.2 Additional

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