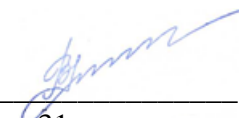


**National Pirogov Memorial Medical University, Vinnytsya**

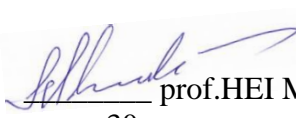
**“APPROVED”**

Acting rector of higher education institution

  
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« 31 » 08 2023  
Victoriia PETRUSHENKO

**“AGREED”**

Head of the Department  
of Internal Medicine №1

  
\_\_\_\_\_  
« 30 » 08 2023  
prof. HEI Mykola STANISLAVCHUK

**SYLLABUS**  
**of academic discipline**  
**" Selected issues of clinical nephrology "**

Specialty	222 Medicine
Educational level	the second (master`s) level
Educational program	EPP Medicine, 2022
Academic year	2023-2024
Department of	Internal Medicine №1
Lecturer	Professor, PhD Stanislavchuk M.A., Ass-professor PhD Ostapchuk O.I., Ass-professor PhD Berko G.K., Ass-professor PhD Burdeina L.V..
Contact information	<i>intmed1@vnm.edu.ua,</i> <i>46 Pirogova Street (building №14), (0432) 509491</i>
Compiler of syllabus	Ass-prof., Ph.D. Savytska O.O., Ass-prof., Ph.D. Ostapchuk O.I.

## 1. Status and structure of the discipline

Discipline status	Optional
Discipline code in EPP/ discipline place in EPP	EC 4.7, discipline of professional training
Course / semester	4rd year (VIII semester)
The amount of discipline ( the total number of hours / number of credits ECTS)	60 hours / 2.0 credits ECTS
Number of content modules	1
The structure of the discipline	Lectures – 14 hours Practical classes - 16 hours Independent work - 30 hours
Language of study	English
Form of study	Full-time (with the introduction of quarantine measures - distance full-time )

## 2. Description of the discipline

**Brief annotation of the course, relevance.** The subject area of the discipline "**Selected issues of clinical nephrology** " is to teach students methods of examination of patients with kidney disease, diagnosis and treatment of the most common kidney diseases, the principles of prevention of diseases of the urinary system, the development of communicative competence. During the clinical examination of the thematic patient the issues of etiology, pathogenesis, clinical presentation, diagnosis, treatment, prevention of diseases of the urinary system are covered.

**Prerequisites.** To successfully master the discipline «Selected issues of clinical nephrology» the student needs knowledge gained in the study of the following disciplines of general and professional training: human anatomy, medical biology, histology, cytology and embryology, pathological anatomy, physiology, pathophysiology, medical and biological physics, bioorganic and biological chemistry, toxicology , pharmacology, clinical pharmacology and clinical pharmacy, propaedeutics of internal medicine.

**The purpose of the course and its significance for professional activities.** The purpose of the discipline "Selected issues of clinical nephrology" is to acquire and deepen knowledge, skills, abilities and other competencies in nephrology, necessary in professional activities, which are established on the basis of the educational and professional program of the specialist.

**Postrequisites.** In the process of studying the discipline, a student acquires knowledge, which is necessary for successful mastering of professional training disciplines, namely: urology, pharmacology, general hygiene, epidemiology, oncology, internal medicine, surgery, pediatrics and other clinical disciplines, which involves the integration of teaching with these disciplines and the application of knowledge, skills and abilities in the process of further education and professional activity.

## 3. Learning outcomes.

After successful study of the discipline, the applicant will be able to:

- Determine the etiological and pathogenetic factors of diseases of the urinary system.
- Classify and analyze the typical clinical picture of the diseases of the urinary system. Identify different clinical variants and complications of the diseases of the urinary system.
- Identify the main syndromes and symptoms in nephrology.
- Substantiate and formulate a preliminary diagnosis of the diseases of the urinary system.
- Make a plan for examination of the patient, interpret the results of laboratory and instrumental

studies in diseases of the urinary system and their complications.

- Carry out differential diagnosis, substantiate and formulate a clinical diagnosis of the diseases of the urinary system.
- To determine the tactics of the management (recommendations regarding the regime, diet, treatment, rehabilitation measures) of a patient with kidney disease.
- Prescribe non-drug and drug treatment (including prognosis-modifying) of the diseases of the urinary system.
- Carry out primary and secondary prevention of the diseases of the urinary system.
- To determine the prognosis and efficiency of patients with diseases of the urinary system.
- Provide emergency care for major emergencies in nephrology.
- Demonstrate mastery of moral and deontological principles of a medical specialist and the principles of professional subordination.
- Keep medical records.

#### 4. Content and logistics of the discipline

Module 1. <b>Selected issues of clinical nephrology</b>	8 semester 60 hours / 2.0 credits	Lectures – 1-7 Practical classes – 1-8 Topics for independent work №1-3
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Information volume of the discipline " Selected issues of clinical nephrology " for fourth-year students of the medical faculty for 2023/2024 academic year

**Topic 1. *Main nephrological syndromes.*** The main nephrological syndromes: urinary, nephrotic, acute nephritic, hypertensive.

**Topic 2. *Renal amyloidosis.*** Definition. Etiology and pathogenesis. Classification, clinical picture, diagnosis, differential diagnosis. Treatment, prognosis.

**Topic 3. *Hypertensive and diabetic nephropathy.*** Definition, mechanism of development, morphological manifestations. Classification, clinical picture, diagnosis, differential diagnosis. Clinical and laboratory monitoring of patients. Treatment, prognosis.

**Topic 4. *Renal tubulointerstitial diseases. Infections of the urinary system.***

**Topic 5. *Kidney damage in systemic connective tissue diseases.***

Kidney damage in systemic lupus erythematosus, systemic scleroderma, dermatomyositis. Pathogenesis. Classification, clinical picture, diagnosis, differential diagnosis. Treatment, prognosis.

**Topic 6. *Kidney damage in systemic vasculitis.***

Kidney damage in systemic vasculitis: microscopic polyangiitis, eosinophilic granulomatosis with polyangiitis, granulomatosis with polyangiitis, nodular polyangiitis, hemorrhagic vasculitis. Pathogenesis. Clinical picture, diagnosis, differential diagnosis. Treatment, prognosis.

**Topic 7. *Acute kidney injury.***

Definition. Etiology and pathogenesis. Classification, clinical picture, diagnosis, differential diagnosis. Treatment, prognosis, prevention.

**Topic 8. *Chronic kidney disease and renoprotection. Renal replacement therapy.***

Chronic kidney disease and renoprotection. Definition. Etiology and pathogenesis. Classification, clinical picture, diagnosis, differential diagnosis. Criteria for diagnosis. Treatment, prognosis, prevention.

Renal replacement therapy:

Hemodialysis. Methods of execution, indications and relative contraindications. Complication. Degrees of rehabilitation of patients. Prognosis.

Peritoneal dialysis. Methods of execution, indications and relative contraindications. Complication.

Kidney transplantation. Indications, absolute and relative contraindications. Complication. Patient management tactics, prognosis. The main signs of acute graft rejection.

**Practical classes** according to the method of their organization are clinical and provide the acquisition of the following practical skills is provided:

Skills of interviewing and clinical examination of patients. Ability to determine the required list of laboratory and instrumental studies and evaluate their results. Ability to establish a preliminary and final clinical diagnosis of the disease. Ability to determine the required regime of working and rest in the treatment of diseases. Ability to determine the character of nutrition during the treatment of diseases of the urinary system. Ability to determine the principles of the treatment. Ability to diagnose emergencies. Emergency care skills. Skills to perform medical manipulations. Ability to carry out sanitary and hygienic and preventive measures. Ability to determine the tactics of dispensary supervision. Ability to conduct an examination of working capacity. Maintaining medical records.

In practical classes, students draw up protocols of examination of the patient, formulate a preliminary and clinical diagnosis, make a plan of examination and treatment of the patient, solve situational problems and test tasks.

The student's independent work involves preparation for practical classes and the development of practical skills, preparation of presentations, tables, processing of scientific literature and writing reviews on the topics provided for individual work. The control of mastering the topics of independent extracurricular work is carried out on the final control of the discipline.

Thematic plans of lectures, calendar plans of practical classes, thematic plan of independent work, volume and directions of individual work are published on the site of the department.

The route for obtaining materials: Department of Internal Medicine №1 / Student / Full-time study / Medicine / (4) course / Educational materials / or through the link <https://www.vnmua.edu.ua/> department of Internal Medicine №1 #. Access to the materials is carried out through the student's corporate account [s000XXX@vnmua.edu.ua](mailto:s000XXX@vnmua.edu.ua).

## 5. Forms and methods of monitoring the success of training

Current control in practical classes	Methods: oral or written survey, testing, examination and report of the thematic patient, interpretation and evaluation of laboratory and instrumental methods (patient examination protocol), solving situational and emergency tasks, medical manipulations.
Final control (credit)	According to the Regulation of the Academic process in VNMU named after M.I. Pirogov (link <a href="https://www.vnmua.edu.ua/General">https://www.vnmua.edu.ua/General</a> information)
Learning success diagnostic tools	Theoretical questions, tests, conducting of physical examination of the patient, situational tasks KROK-2, clinical tasks, demonstration of practical skills

## 6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in VNMU named after M.I. Pirogov ( link <https://www.vnmua.edu.ua/General> information)

Continuous assessment	On a four point system of traditional assessments: 5 «excellent», 4 «good», 3 «satisfactory», 2 «unsatisfactory»
Midpoint separation assessment	On a four-point system of traditional assessments
Final control of the discipline (Credit)	On a 200-point scale (conversion of the average traditional assessment of practical class on points) Credited: 122 to 200 points Not credited: less than 122 points (see Score Scale)evaluation

**Discipline assessment scale: national and ECTS**

Points for all types of educational activities	Grade ECTS	Grade on a national scale	
		for exam, course project (work), practice	for credit
<b>180-200</b>	A	excellent	credited
<b>170-179,9</b>	B	good	
<b>160-169,9</b>	C		
<b>141-159,9</b>	D	satisfactory	
<b>122-140,99</b>	E	satisfactory	
<b>0 - 121,99</b>	FX	unsatisfactory with the possibility of reassembly	not credited with the possibility of reassembly
	F	unsatisfactorily with the mandatory repeated study of discipline	not credited with compulsory repeated study of the discipline

## 7. Policy of discipline / course

The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified tutoring during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in VNMU named after M.I.Pirogov and the principles of academic integrity ( link <https://www.vnmu.edu.ua/General> information).

### **Adherence to the rules of VNMU, safety techniques in practical classes.**

Observance of the rules of the VNMU regulations, safety precautions at practical classes. Instruction on biosafety, safety of handling chemical reagents and burners is conducted at the first practical lesson by the teacher. The instructed students are registered in the Safety Instruction Journal. A student who has not been instructed is not allowed to perform practical work.

### **Requirements for preparation for practical classes.**

The student should be prepared for a practical lesson, testing tasks for the current topic should be solved in a workbook, diagrams and tables are filled.

A student should come to class on time, without delay. A student who is more than 10 minutes late is not allowed to the practical class and must work it in the prescribed manner.

In practical classes, the student must be dressed in a work uniform (medical gown, hat). Students who do not have a work uniform are not allowed to practice.

The student must follow the rules of safety in practical rooms and at the department.

When discussing theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace should be kept in order and be cleaned after performing practical work.

### **Usage of mobile phones and other electronic devices.**

The use of mobile phones and other electronic devices in the classroom is allowed only during electronic testing or surveys.

**Academic integrity.** When studying the discipline, the student must be guided by the Code of Academic Integrity and Corporate Ethics of VNMU named after M.I. Pirogov (link : <https://www.vnmu.edu.ua/General> information)/ Code of Academic Integrity).. In case of violation of the norms of academic integrity during the current and final controls student receives a grade of

"2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory assessment).

**Missed classes.** Missed classes are working out in the manner prescribed by Regulations of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnmu.edu.ua/General> information) at the time of work out schedule (published on the website of the department <https://www.vnmu.edu.ua/> Department of Internal Medicine №1#) to the teacher on duty. To work out missed lesson student must provide a protocol workbook with recipes for the topic, take a test and answer questions in writing or orally to the topic of the lesson.

**The procedure for admission to the discipline final control** is given in the Regulation of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnmu.edu.ua/General> information). Students who do not have missed practical classes and lectures and received an average traditional grade of at least "3" are allowed to final control.

**Additional points.** Individual points in the discipline that student can receive for individual work, is determined by the results of his individual work according to Regulation of the Academic process in VNMU named after M.I. Pirogov (link <https://www.vnmu.edu.ua/General> information) and policy of the course.

**Conflict resolution.** In case of misunderstandings and complaints to the teacher because of the quality of educational services, knowledge assessment and other conflict situations, student should submit his / her claims to the teacher. If the issue is not resolved, the student has a right to apply to the head of the department according to Complaints Consideration Procedure (<https://www.vnmu.edu.ua/> General information / Basic documents).

**Politics in terms of remote learning.** Distance learning regulated by the Regulations of the elements of remote learning in VNMU named after Pirogov M.I. (<https://www.vnmu.edu.ua/> General information). The main training platforms for studying are Microsoft Team and Google Meets. The procedure for conducting practical classes and lectures, exercises and consultations during distance learning is published on the website of the department (<https://www.vnmu.edu.ua/> Department of Internal Medicine №1 / Student or <https://www.vnmu.edu.ua/> Department of Internal Medicine №1 / News).

Feedback from teachers is via messengers (Viber, Telegram, WhatsApp) or e-mail (at the teacher's choice) during working hours.

8. **Educational resources** Educational and methodological support of the discipline is published on the website of the department. Route for obtaining materials <https://www.vnmu.edu.ua/> Department of Internal Medicine №1 / Student.

#### **Recommended reading:**

1. Internal medicine : Part 2 : textbook for English-speaking students of higher medical schools / edited by Professor MA Stanislavchuk and Professor VK Sierkova. – Vinnytsya : Nova Knyha, 2019. – 360 p. (Recommended for use by 4th year students in preparation for practical classes Protocol № 19 from 12/22/2018)
2. Harrison's Principles of Internal Medicine 19/E (Vol.1 & Vol.2) 19th Edition. 2017/ Dennis Kasper, Anthony Fauci, Stephen Hauser, Dan Longo, J. Larry Jameson, Joseph Loscalzo
3. Guidelines on Urological Infections / M. Grabe (chairman), TE Bjerklund-Johansen, H. Botto, M. Gek, KG Naber, RS Pickard, P. Tenke, F. Wagenlehner, B. Wullt: European Association of Urology, 2013.
4. Kidney Disease: Improving Global Outcomes (KDIGO) // <https://kdigo.org/guidelines/>

#### **Electronic resources:**

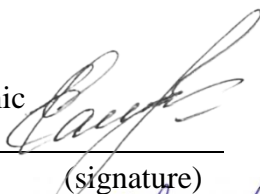
1. National Pirogov Memorial Medical University: <http://vnmu.edu.ua>
2. Library of Vinnytsia National Medical University. E. Pirogov: <http://library.vnmu.edu.ua>
3. Testing Center <https://www.testcentr.org.ua/uk/>
4. Ministry of Health of Ukraine <https://moz.gov.ua/>
5. Public Health Center of the Ministry of Health of Ukraine <https://phc.org.ua/kontrol-zakhvoryuvan>
6. World Health Organization <https://www.who.int/ru/home#>
7. MEDCRAM - Medical Lectures explained clearly  
<https://www.youtube.com/user/MEDCRAMvideos>  
<https://pubmed.ncbi.nlm.nih.gov/>
8. [https://www.dec.gov.ua/wp-content/uploads/2019/11/2016\\_89\\_ykpmd11.pdfVTS](https://www.dec.gov.ua/wp-content/uploads/2019/11/2016_89_ykpmd11.pdfVTS)

Methodical recommendations for practical classes and, Consultations (twice a week according to the schedule of consultations)

9. **The timetable and distribution of groups** with assigned teachers are published on the web page of the department ((<https://www.vnmu.edu.ua> / department of Internal Medicine №1 / student).
10. Questions to the intermediate and final semester control (credit) of the discipline are published on the web page of the department (<https://www.vnmu.edu.ua/> Department of Internal Medicine №1 / student).

The syllabus on discipline "Selected issues of clinical nephrology" discussed and approved at the meeting of the Department of Internal Medicine №1 (record №1, from "30" August 2023)

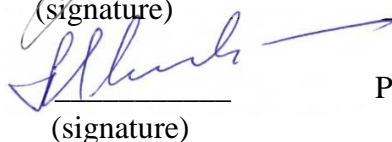
Responsible for the academic  
Discipline \_\_\_\_\_



(signature)

Ass-prof., Ph.D. Olena SAVYTSKA

Head of the department \_\_\_\_\_



(signature)

Prof. Mykola STANISLAVCHUK