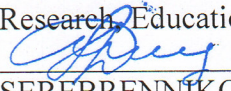


**National Pirogov Memorial Medical University, Vinnytsya**

**“APPROVE”**

Vice – Rector of higher education institution  
Research, Education and Academic Affairs

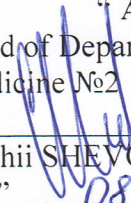
 professor of HEI Oksana

SEREBRENNIKOVA

“31” 08 2022 year

**“AGREED”**

Head of Department of internal  
medicine №2

 professor of HEI

Serhii SHEVCHUK

“30” 08 2022 year

**SYLLABUS**  
**academic discipline**  
**"OCCUPATIONAL DISEASES"**

Specialty	222 Medicine
Educational level	Master's degree
Educational program	OPP "Medicine", 2020
Academic year	2022-2023
Chair	Internal Medicine No. 2
Lecturer	Professor of HEI Nadiya MASIK
Contact Information	<i>intmed2@vnm.edu.ua , 56 Pyrogo St. (morphology building), (0432)570379</i>
Compiler of the syllabus	Ass-professor of HEI Olena KOROBAKO

### 1. Status and structure of the discipline

Discipline status	Mandatory
Code of discipline in OPP and place of discipline in OPP	OK 30, a component of the cycle of disciplines of general training
Course/semester	5th year (IX/X semester)
Scope of the discipline (total number of hours/ number of ECTS credits)	45 hours / 1.5 ECTS credits
The structure of the discipline	Lectures - 6 hours Practical classes - 10 hours Independent work - 29 hours In general: classroom classes - 35.6%, independent work outside the classroom - 64.4%
Number of content modules	5
Language of teaching	Ukrainian
Form of education	Full-time (when implementing quarantine measures or security measures under martial law - remote)

### 2. Description of the discipline

**Short abstract of the course, relevance.** The subject area of the program is the study of the basics of occupational pathology, while the emphasis is on the study of etiology, pathogenesis, clinic, diagnosis, treatment and prevention of the main occupational diseases, the formation of practical skills and abilities: taking an anamnesis, conducting an objective examination of patients, drawing up an examination plan, interpretation of the results obtained during the examination, the appointment of treatment according to modern standards and the development of measures for the prevention of major occupational diseases.

**Prerequisites.** The study of the discipline "occupational diseases" is based on knowledge of the main natural and scientific disciplines: human anatomy, medical biology, histology, cytology and embryology, pathomorphology, physiology, pathophysiology, medical and pathological physics, bioorganic and biological chemistry, microbiology, virology and immunology, pharmacology, clinical pharmacology and clinical pharmacy, radiology and radiation medicine, propaedeutics of internal medicine and integrates with these disciplines.

**The purpose of the course and its importance for professional activity.** The purpose of the discipline is to acquire and deepen knowledge, skills, and other competencies in occupational diseases necessary in professional activity, which are established on the basis of the specialist's educational and professional program.

#### Post-requisites.

In the process of studying the discipline, the foundations are laid for students to study occupational diseases, which involves the integration of teaching with endocrinology, phthiology, clinical immunology, infectious diseases, surgery, obstetrics and gynecology, oncology and the application of knowledge from the above disciplines in the process of further education and professional activity.

### 3. Learning outcomes.

After successfully studying the discipline, the applicant has:

1. Skills of interviewing a patient with an occupational disease.
2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results in a patient with an occupational disease.
3. The ability to establish a preliminary and clinical diagnosis of a patient with an occupational disease.
4. The ability to determine the necessary regime of work and rest when treating a patient with an occupational disease.
5. The ability to determine the nature of nutrition in the treatment of a patient with an occupational disease.
6. Ability to determine the principles and nature of treatment of a patient with an occupational disease.
7. Ability to diagnose emergency conditions in patients with occupational pathology.
8. The ability to determine the tactics of providing emergency medical care to a patient with an occupational disease.
9. Skills in providing emergency medical care to a patient with an occupational disease.
10. Skills in performing medical manipulations on a patient with an occupational disease.
11. The ability to determine the tactics of managing a patient with an occupational disease.
12. The ability to conduct an examination of the working capacity of a patient with an occupational disease.
13. Ability to maintain medical records of a patient with an occupational disease.

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

Module 6. Occupational diseases	9/10 semester 45 hours/1.5 credits	Lectures No. 1-3 Practical classes No. 1-5 Topics for self-study No. 1-9
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The discipline includes 15 topics, which are divided into 5 content modules.

##### **Content module 1. Features of diagnosis of occupational diseases. Diseases caused by exposure to industrial aerosols**

Topic 1. General issues of occupational pathology

Topic 2. Pneumoconioses

Topic 3. Chronic bronchitis and chronic obstructive lung disease of dust etiology

##### **Content module 2. Diseases caused by physical factors and overstrain of individual organs and systems**

Topic 4. Vibration disease and sensorineural deafness. Altitude and decompression sickness

Topic 5. Occupational diseases caused by exposure to electromagnetic radiation and ultrasound, adverse factors of the industrial microclimate

Topic 6. Occupational diseases associated with overstrain of individual organs and systems.

##### **Content module 3. Diseases caused by the influence of chemical factors with a predominant effect on the blood system**

Topic 7. Professional intoxication with benzene

Topic 8. Professional intoxication with amino-, nitro-compounds of benzene, carbon monoxide

Topic 9. Professional intoxication with lead, arsenic hydrogen

##### **Content module 4. Diseases caused by the action of chemicals with predominant damage to the respiratory, hepatobiliary, and urinary systems, exposure to agricultural pesticides**

Topic 10. Occupational respiratory diseases of toxic-chemical etiology

Topic 11. Occupational toxic hepatitis and toxic nephropathy

Topic 12. Professional intoxication with toxic chemicals used in agricultural work

**Content module 5.** Diseases caused by the action of chemical substances with predominant damage to the nervous system, the influence of production factors of allergenic and carcinogenic action

Topic 13. Professional neurotoxicosis

Topic 14. Occupational bronchial asthma and exogenous alveolitis

Topic. 15. Occupational cancer

The topics of the lecture course reveal the problematic issues of the relevant sections of occupational pathology.

Practical classes involve theoretical substantiation of the main issues of the topic and the acquisition of the following practical skills:

1) conducting a survey of a patient with occupational diseases, conducting a clinical examination, prescribing an examination plan and interpreting the obtained results of laboratory and instrumental studies, determining the leading syndrome of the disease, the ability to establish a clinical diagnosis according to modern classifications of diseases, conduct a differential diagnosis with other diseases, prescribe treatment and carry out preventive measures;

2) solving situational problems on occupational diseases, which have a clinical and diagnostic direction.

In practical classes, students analyze the subject of the practical class, conduct a clinical examination of the thematic patient, and solve clinically-oriented situational problems and test problems.

The student's independent work involves preparing for practical classes and developing practical skills, studying topics for independent extracurricular work, preparing presentations, tables, studying scientific literature and writing reviews on the given topics for individual work. Control of learning the topics of independent extracurricular work is carried out at the final control of the discipline.

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

The route of receiving materials: Department of Internal Medicine No. 2/Student/Full-time study/Medicine/5th year/Educational and methodological materials/ or via the link [https://www.vnmue.edu.ua/Department of Internal Medicine #2#](https://www.vnmue.edu.ua/Department%20of%20Internal%20Medicine#2#). Access to materials is carried out from the student's corporate accounts [000XXX@vnmue.edu.ua](mailto:000XXX@vnmue.edu.ua).

### 5. Forms and methods of monitoring learning success

Current control in practical classes	Methods: oral or written survey, testing, electronic survey, solving situational problems, conducting a clinical examination of the thematic patient, prescribing an examination and treatment plan.
The final control of the discipline is a differentiated assessment	Methods: computer testing, oral survey (according to the regulations on the organization of the educational process at M.I. Pyrogov VNMU (link <a href="https://www.vnmue.edu.ua/Yamschenkainformation/Main%20documents">https://www.vnmue.edu.ua/Yamschenkainformation/Main documents</a> )
Means of diagnostics of learning success	Theoretical questions, tests, clinically-oriented situational tasks, practical tasks, demonstration of practical skills

### 6. Evaluation criteria

Assessment of knowledge is carried out in accordance with the Regulation on the organization of the educational process at M.I. Pyrogov VNMU  
(link [https://www.vnmue.edu.ua/Yamschenkainformation/Main documents](https://www.vnmue.edu.ua/Yamschenkainformation/Main%20documents))

Current control	According to the four-point system of traditional evaluations:
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	5 "excellent", 4 "good", 3 "satisfactory", 2 "unsatisfactory"
Final control of discipline	Total points for computer testing (15-30 points), oral survey (35-50 points) Grade for differential assessment: 71-80 points - "excellent" 61-70 points - "good" 50-60 points - "satisfactory" Less than 50 points - "not satisfactory"/failed
Evaluation of discipline:	Current academic performance - from 72 to 120 points (conversion of the average traditional grade for practical classes on a 120-point scale): 60% of the grade for the discipline Final control - from 50 to 80 points: 40% of the grade for the discipline Individual work - from 1 to 12 points Total from 122 to 200 points.

### Discipline assessment scale: national and ECTS

Discipline assessment scale: national and ECTS			
The sum of points for all types of educational activities	ECTS assessment	Evaluation on a national scale	
		for an exam, course project (work), practice	for credit
180-200	AND	perfectly	counted
170-179.9	IN	fine	
160-169.9	WITH		
141-159.9	D	satisfactorily	
122-140.99	IS	satisfactorily	-
120-140.99	IS	-	counted
119-61	FX	unsatisfactory with the possibility of reassembly	not counted with the possibility of retaking
1-60	F	unsatisfactory with mandatory repeated study of the discipline	not enrolled with mandatory repeated study of the discipline

### Criteria for evaluating student knowledge

#### Evaluation of oral/written response during ongoing control

**Excellent rating** is presented to a student who has deeply and comprehensively mastered the theoretical material, competently and logically teaches it. He can freely use Latin terminology, clearly answers non-standard questions on the topic of the lesson, knows how to connect the material of this topic with previously studied sections, which indicates mastery of the recommended literature and the ability to analyze the studied material, and also clearly demonstrates the value of the acquired theoretical knowledge for practical of medicine

**Rating "good"** presented to a student who knows and has a good command of the theoretical material, teaches it competently, does not allow inaccuracies in the answer, knows how to reveal the topic from the standpoint of its medical significance and practical application, but at the same time the answers do not go beyond the textbook and methodical recommendations.

**Rating "satisfactory"** is given to a student who knows the basic concepts and definitions of the studied topic, but makes significant inaccuracies or has difficulties in formulating an answer, does not understand the medical aspects of the topic, cannot connect theoretical material with practice.

**Rating "unsatisfactory"** is presented to a student who does not know the theoretical foundations of the topic, makes gross mistakes when answering, does not understand basic concepts and

definitions, cannot explain the meaning of theoretical material for practical medicine.

### **Evaluation of the performance of test tasks during the current control**

**Excellent rating** is issued to a student who during the test control is allowed no more than 10% of incorrect answers (the amount of correct answers is 90-100%). When solving clinically oriented test tasks, provides correct answers to all test questions.

**Rating "good"** is issued to a student who makes no more than 20% mistakes during test control. (the amount of correct answers is 80-89%). When solving clinically oriented test tasks, provides correct answers to most of the test questions.

**Rating "satisfactory"** is presented to a student who makes mistakes in no more than 40% of test tasks (the range of correct answers is 60.5-79%). When solving clinically-oriented test tasks, he gives correct answers only to some questions before the test.

**Rating "unsatisfactory"** is issued to a student who correctly solves less than 60% of the test tasks during the test survey. When solving clinically oriented test tasks, he cannot provide correct answers to the test questions.

### **Evaluation of the oral answer during the final control (differentiated assessment)**

**Excellent rating** is given to a student who answers the questions correctly and in a logical sequence. During the answer, demonstrates the ability to analyze theoretical material, makes general conclusions about the value of theoretical material for practical medicine, provides clear and correct answers to additional non-standard questions.

**Rating "good"** presented to a student who has a good command of the theoretical material and provides answers to questions in a logical sequence, but admits minor inaccuracies, which he quickly corrects when answering the examiner's clarifying questions.

**Rating "satisfactory"** is given to a student who demonstrates knowledge of basic concepts and definitions when answering questions on the exam ticket, makes significant inaccuracies or has difficulties in answering questions, cannot adequately explain the principles of diagnosis, prevention, and treatment of an occupational disease. allows inaccuracies when answering clarifying questions.

**Rating "unsatisfactory"** is presented to a student who does not know the answer to one of the questions, makes gross mistakes when answering, cannot explain basic concepts and definitions, does not know the principles of diagnosis, prevention and treatment of an occupational disease.

The calculation of individual points is carried out on the basis of the Regulation on the organization of the educational process at the M.I. Pirogov Vinnytsia National Medical University (Vinnytsia, 2020). (link [https://www.vnmu.edu.ua/General information/Basic documents](https://www.vnmu.edu.ua/General%20information/Basic%20documents))

*12 points*- are added to the grade in the discipline of a student who received a prize at an inter-university Olympiad in a discipline or a prize at an All-Ukrainian competition of student scientific works or a prize at an inter-university/international scientific conference with the presence of a printed work

*11 points*- are added to the evaluation of the discipline of a student who received 1st place at the intramural Olympiad in the discipline or 1st place at a student scientific conference with the presence of a printed work, or participated in the All-Ukrainian competition of student scientific works

*10 points*- are added to the evaluation of the discipline of a student who received a prize (II-III) at an intramural Olympiad in the discipline or at a student scientific conference with the presence of a printed work; or for participation (without a prize place) in interuniversity Olympiads in the discipline or a prize place at an interuniversity/international scientific conference with the presence of a printed work.

*9 points*- are added to the grade for the discipline of a student who participated (without a prize) in an intramural Olympiad in the discipline or a student scientific conference with the presence of a printed work

*8 points*- are added to the grade for the discipline of a student who actively participated in the work of a student scientific group, published a printed work based on the results of scientific and practical research, but did not personally participate in a student scientific conference, prepared a poster report.

*6-7 points*- are added to the evaluation of the discipline for a student who produced at least 3 tables, or an educational video to supplement the visual support of teaching the discipline (taking into account the scope and importance of the work performed).

*3-5 points* are added to the grade for the discipline of a student who made at least 2 tables or created a thematic illustrated presentation (at least 2) to supplement the visual support for teaching the discipline (taking into account the scope and importance of the work performed).

## **7. Academic discipline/course policy**

The student has the right to receive high-quality educational services, access to modern scientific and educational information, qualified advisory assistance during the study of the discipline and mastery of practical skills. The policy of the department during the provision of educational services is student-centered, based on regulatory documents of the Ministry of Education and the Ministry of Health of Ukraine, the university charter and the procedure for providing educational services, regulated by the basic provisions of the organization of the educational process at M.I. Pirogov VNMU and the principles of academic integrity

**Observance of the rules of procedure of the VNMU, safety equipment** in practical classes. Instruction on safety techniques when working with medical devices, safety of handling in the conditions of the hospital of the clinical base is conducted at the first practical session by the teacher.

**Requirements for preparation for practical classes.** The student must be prepared for the practical session, the test tasks for the current topic must be solved in the workbook.

You should come to class on time, without being late. A student who is more than 10 minutes late for class is not allowed to attend the last class and must complete it in the prescribed manner.

During practical classes, the student must be dressed in work uniform (medical gown, cap, change of shoes, mask if necessary). Students who do not have a working uniform are not allowed to attend classes.

The student must observe safety rules during practical classes and during his stay in the premises of the department.

During the discussion of theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace must be kept in order and cleaned after the end of the lesson.

**Use of mobile phones and other electronic devices.** The use of mobile phones and other electronic devices in class is allowed only during electronic testing or surveys.

**Academic integrity.** While studying the discipline, the student must be guided by the Code of Academic Integrity of M.I. Pyrogov VNMU (<https://www.vnmdu.edu.ua/general-information/Main-documents/Code-of-academic-integrity>). If the norms of academic integrity are violated during the current and final examinations, the 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 grade.

**Skipping classes.** Missed classes are made up in accordance with the procedure established in the Regulations on the Organization of the Educational Process at M.I. Pyrogov VNMU (link <https://www.vnmdu.edu.ua/General-information/Basic-documents>) at the time determined by the practice schedule (published on the website of the department <https://www.vnmdu.edu.ua/Department-of-Internal-Medicine-No.-2#>) to the regular teacher. In order to make up for the missed class, the student must answer questions on the subject of the class in writing or orally. Workup of missed

lectures is carried out after providing a synopsis of the lecture material, or writing an informative message or preparing your own presentation on the topic of the missed lecture.

**The procedure for admission to the final control** from the discipline given in the Regulation on the organization of the educational process at M.I. Pirogov VNMU (link [https://www.vnmu.edu.ua/Generalinformation/Main documents](https://www.vnmu.edu.ua/Generalinformation/Main%20documents)). Students who have not missed unworked practical classes and lectures and have received an average traditional grade of at least "3" are admitted to the final examination.

**Additional individual points.** A student can receive individual points from a discipline for individual work, the amount of which is published on the department's website in the teaching and methodical materials of the discipline, the number of points is determined based on the results of the IRS according to the Regulations on the Organization of the Educational Process at M.I. Pyrogov VNMU (link [https://www.vnmu.edu.ua/Generalinformation/Main documents](https://www.vnmu.edu.ua/Generalinformation/Main%20documents)).

**Resolution of conflict issues.** In the event of misunderstandings and claims against the teacher due to the quality of educational services, knowledge assessment and other conflict situations, the student must first notify the teacher of his/her claims. If the conflict issue is not resolved, the student has the right to submit an appeal to the head of the department in accordance with the Regulation on consideration of appeals by applicants for higher education at M.I. Pyrogov VNMU ([https://www.vnmu.edu.ua/Generalinformation/Main documents](https://www.vnmu.edu.ua/Generalinformation/Main%20documents)).

**Policy in the conditions of distance learning.** The distance learning procedure is regulated by the Regulation on the introduction of elements of distance learning at M.I. Pyrogov VNMU ([https://www.vnmu.edu.ua/Generalinformation/Main documents](https://www.vnmu.edu.ua/Generalinformation/Main%20documents)). The main training platforms for conducting training sessions are Microsoft Team, Google Meets. The procedure for conducting practical classes and lectures, exercises and consultations during distance learning is published on the web page of the department ([https://www.vnmu.edu.ua/Department of Internal Medicine/ To the student](https://www.vnmu.edu.ua/Department%20of%20Internal%20Medicine/To%20the%20student) or [https://www.vnmu.edu.ua/Department of Internal Medicine / News](https://www.vnmu.edu.ua/Department%20of%20Internal%20Medicine/News)).

**Feedback** with the teacher is carried out through messengers (Viber, Telegram, WhatsApp) or e-mail (at the choice of the teacher) during working hours.

**8. Educational resources.** Educational and methodological support of the discipline is published on the website of the department. The route of receiving materials [https://www.vnmu.edu.ua/Department of Internal Medicine No. 2/ To the student](https://www.vnmu.edu.ua/Department%20of%20Internal%20Medicine%20No.%202/To%20the%20student).

1) Basic literature:

1. Професійні хвороби / В. А. Капустник, І.Ф. Костюк, Г. О. Бондаренко та ін.; за ред проф. В. А. Капустника, проф І. Ф. Костюк.- 5-е вид., переробл. і доповн. – К. : ВСВ «Медицина», 2017. – 536с.
2. Професійні хвороби / В.С. Ткачишин. – К.: ДП «Інформаційно-аналітичне агентство», 2011. – 895 с.
3. Профессиональные болезни / В. А. Капустник, И .Ф. Костюк, Г. О. Бондаренко и др.; под ред. проф. В. А. Капустника, проф И. Ф. Костюк.- 5-е вид., переробл. і доповн. – К. : ВСИ «Медицина», 2017. – 504 с.
4. Occupational diseases. / V.A. Kapustnik/ I. F. Kostyuk, H. O. Bondarenko et all. ; edited by V.A. Kapustnik, I. F. Kostyuk. – Kyiv : AUS Medicine Publishing, 2016. – 496 p

2) Additional literature:

1. Профессиональные болезни / под ред. В.Г. Артамоновой, Н.А. Мухина – 5-е изд., перераб. и доп. - М.: Медицина, 2006. – 480 с.
2. Профессиональная патология: национальное руководство / под ред. Н. Ф. Измерова. - М.: ГЭОТАР-Медиа, 2011. - 784 с.
3. Професійні хвороби / М.Ю. Коломоєць, О.С. Хухліна – К.: Здоров'я, 2004. – 628 с.
4. Професійні хвороби / В.П. Маленький. – К.: Нова книга, 2005. – 336 с.

3) Electronic resources:

1. Email address of the university website: <http://vnmu.edu.ua>
2. Email address of the website of the university library: <http://library.vnmu.edu.ua>
3. World Health Organization <http://www.who.int/en/>

4. Testing center <https://www.testcentr.org.ua/uk/>
5. Ministry of Health of Ukraine <https://moz.gov.ua/>
6. Public Health Center of the Ministry of Health of Ukraine <https://phc.org.ua/kontrol-zakhvoryuvan>
7. Oxford medical education <http://www.oxfordmedicaleducation.com/>
8. Database manual (in English) <https://www.ueg.eu/guidelines/>
9. <https://empendium.com/>

Lecture presentations, Methodological recommendations for practical classes and SRS, Consultations (twice a week according to the consultation schedule)

9. **Schedule and distribution of groups by teachers** published on the web page of the department ((<https://www.vnmu.edu.ua/> department of internal medicine No. 2/ to the student).
10. **Questions about the final control of discipline** published on the web page of the department ((<https://www.vnmu.edu.ua/> Department of Internal Medicine No. 2/ To the student).

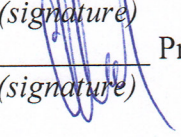
The syllabus for the discipline "Occupational diseases" was discussed and approved at the meeting of the Department of Internal Medicine No. 2 (protocol No. 1, dated "30" "08" 2022)

Responsible for the course

  
(signature)

Ass-professor of HEI Olena KOROBKO

Head of the Department

  
(signature)

Professor of HEI Serhii SHEVCHUK