

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Department of INTERNAL MEDICINE No.2

Vice-rector for scientific and pedagogical work

September, 01, 2024

APPROVED



**WORK PROGRAM
PRACTICAL OUTPATIENT MEDICAL TRAINING
“INTERNAL MEDICINE”**

Educational qualification «Master of Medicine»
Branch of knowledge 22«Health Care»
Speciality 222 «Medicine»
Educational and professional program "Medicine"

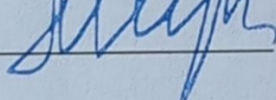
The work program is based on the educational and professional program "Medicine" for the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health Care", approved by the Academic Council of ONMedU (Minutes No. 10 of June 27, 2024).

Developed by:

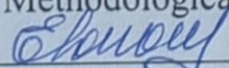
- Shtanko V.A. - PhD in Medicine, Associate Professor, Head of the Department of Internal Medicine No.2;
- Tykhonova S.A. - Doctor of Medicine, Professor of the Department of Internal Medicine No. 2;
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Work program approved at the meeting of the Department of Internal Medicine No. 2 Minutes No. 1 dated August 27, 2024.

A.i. Head of the Department  Olena KHYZHNYAK

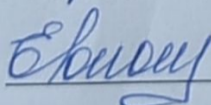
Agreed with the guarantor of the EPP  Valeriia MARICHEREDA

Approved by the Subject-Cycle Methodological Commission for Therapeutic Disciplines of ONMedU
Minutes No. 1 dated August 30, 2024.

Chairman of the Subject-Cycle Methodological Commission for Therapeutic Disciplines, Doctor of Medicine, Professor  Olena VOLOSHYNA

Revised and approved at the meeting of the Department of Internal Medicine #2
with postgraduate training

Minutes No. 1 dated "02" September 2024 p.

Head of the Department  OLENA VOLOSHYNA

Revised and approved at the meeting of the _____
Minutes No. ____ dated "____" _____ 20__ p.

Head of the Department _____

1. Description of the course

Indicators	Branch of knowledge, specialty, specialization, level of higher education	Характеристика навчальної дисципліни
Total amount: Credits: 1 Hours: 30	Branch of knowledge 22«Health Care»	<i>Full time form study</i> <i>Mandatory discipline</i>
	Speciality 222 «Medicine»	<i>Study year: 5</i>
	Level of higher education	<i>Semesters IX - X</i>
	Second «Master of Medicine»	<i>Lectures (0 h.)</i>
	“Practical outpatient	<i>Seminars (0 h.)</i>
	medical training”	<i>Practical’s (18 h.)</i>
		<i>Laboratory (0 h.)</i>
		<i>Independent Work (12 h.)</i>
		<i>incl. individual task (0 h.)</i> <i>Form of final control – CPE</i>

2. The aim and objectives of the discipline, competencies, program learning outcomes.

Aim: Mastering by the applicant of higher education the practical skills acquired in the study of basic clinical and theoretical disciplines and their further deepening and improvement during work in health care facilities, as well as familiarization with the work of medical personnel of all levels in the conditions of future activities at the bases of health care facilities.

Objectives:

Improvement of skills and abilities in the work of medical workers of all levels in medical institutions of therapeutic profile.

The process of practice is aimed at forming elements of the following competencies:

General (GC):

GC3. Ability to apply knowledge in practical situations.

GC4. Knowledge and understanding of the subject area and understanding of professional activities.

GC5. Ability to adapt and act in a new situation.

GC6. Ability to make informed decisions.

GC7. Ability to work in a team.

GC 12. Determination and perseverance in tasks and responsibilities.

Special (SC):

SC1. Ability to collect medical information about the patient and analyze clinical data.

SC2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.

SC3. Ability to establish a preliminary and clinical diagnosis of the disease.

SC4. Ability to determine the necessary mode of work and rest in the treatment and prevention of diseases.

SC5. Ability to determine the nature of nutrition in the treatment and prevention of diseases.

SC6. Ability to determine the principles and nature of treatment and prevention of diseases.

SC7. Ability to diagnose emergency conditions.

SC8. Ability to determine the tactics and provision of emergency medical care.

SC9. Ability to carry out sanitary and evacuation measures.

SC10. Ability to perform medical manipulations.

SC11. Ability to solve medical problems in new or unfamiliar environments with incomplete or limited information, taking into account aspects of social and ethical responsibility, including early intervention.

SC13. Ability to carry out sanitary and hygienic and preventive measures.

SC14. Ability to plan and implement preventive and anti-epidemic measures against infectious diseases.

SC16. Ability to maintain medical records, including electronic forms.

SC26. Ability to determine the tactics of management of persons subject to dispensary supervision.

Program learning outcomes (PLOs):

PLO3. Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for research, critical thinking in the field of medicine and related interdisciplinary problems, including the system of early intervention.

PLO4. To distinguish and identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data from the patient's history, examination data, knowledge of the person, his/her organs and systems, to establish a preliminary clinical diagnosis of the disease (according to list 2).

PLO5. Collect complaints, anamnesis of life and disease, assess the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies to evaluate information on the diagnosis (according to list 4), taking into account the patient's age.

PLO6. To establish the final clinical diagnosis by making an informed decision and analyzing the obtained subjective and objective data of clinical, additional examination, conducting differential diagnosis, adhering to the relevant ethical and legal standards, under the supervision of a supervising physician in a health care institution (list 2).

PLO7. To prescribe and analyze additional (mandatory and optional) methods of examination (laboratory, functional and/or instrumental) (according to the list 4), patients with diseases of organs and body systems for differential diagnosis of diseases (according to the list 2).

PLO8. Determine the main clinical syndrome or symptom that determines the severity of the victim's/injured person's condition (according to list 3) by making an informed decision about the human condition under any circumstances (in a health care facility, outside it), including in an emergency situation and hostilities, in the field, in conditions of lack of information and limited time.

PLO9. Determine the nature and principles of treatment of patients (conservative, surgical) with diseases (list 2), taking into account the patient's age, in a health care facility, outside it and at the stages of medical evacuation, including in the field, based on a preliminary clinical diagnosis, adhering to relevant ethical and legal standards, by making an informed decision on existing algorithms and standard schemes, if necessary, expand the standard scheme to be able to justify personalized recommendations under the supervision of a doctor-manager

PLO10. Determine the necessary regimen of work, rest and nutrition based on the final clinical diagnosis, adhering to the relevant ethical and legal standards, by making an informed decision based on existing algorithms and standard schemes.

PLO14. Determine the tactics and provide emergency medical care in case of emergency conditions (according to the list 3) in a limited time according to existing clinical protocols and standards of treatment.

PLO15. To organize the provision of medical care and medical evacuation measures to the population and military personnel in emergency situations and hostilities, including in the field.

PLO17. Perform medical manipulations (according to the list 5) in a medical institution, at home or at work on the basis of a preliminary clinical diagnosis and/or indicators of the patient's condition by making an informed decision, adhering to the relevant ethical and legal standards.

PLO18. Determine the state of functioning and limitations of a person's vital activity and the duration of disability with the preparation of relevant documents in a health care facility based on data on the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical records for the patient and the population on the basis of regulatory documents.

PLO19. To plan and implement a system of anti-epidemic and preventive measures against the

emergence and spread of diseases among the population.

PLO24. To organize the necessary level of individual safety (own and persons under their care) in the event of typical dangerous situations in the individual field of activity.

PLO30. Determine the tactics of management of persons subject to dispensary supervision (children, pregnant women, workers whose professions require mandatory dispensary examination).

PLO31. Determine the tactics of management of persons with chronic infectious diseases subject to dispensary supervision.

As a result of studying the discipline the applicant for higher education must:

Know:

- Fundamentals of the organization of therapeutic care for the population of Ukraine.
- Basic functional responsibilities of healthcare professionals of all levels.
- Structure and functions of a therapeutic hospital.
- Structure and functions of the polyclinic.
- Moral and deontological principles of a medical worker and principles of professional subordination
- Rules for filling out medical records in various departments of medical institutions.
- Principles of diagnosis, treatment, rehabilitation and prevention of diseases in the field of internal medicine.
- Provision of emergency care in case of emergencies.
- Organization of medical evacuation measures.

Be able to:

- Possess communication and clinical examination skills. Collect data on patient's complaints, medical history, and life history.
- Evaluate information regarding the diagnosis using a standard procedure, based on the results of laboratory and instrumental studies.
- Determine the list of necessary clinical, laboratory and instrumental studies and evaluate their results (list 4).
- Identify the leading clinical symptom or syndrome (list 1).
- Establish a preliminary diagnosis, carry out differential diagnosis and determine the clinical diagnosis of the disease (list 2).
- Determine the principles of treatment of diseases, the necessary regimen of work and rest, the nature of nutrition (list 2).
- Diagnose emergency conditions (list 3).
- Determine the tactics and provide emergency medical care in case of emergencies (list 3).
- Perform medical manipulations (according to list 5).
- Maintain medical records.
- To comply with the requirements of ethics, bioethics and deontology in their professional activities.
- Plan and carry out sanitary and hygienic and preventive measures.

3. CONTENT OF THE PRACTICAL OUTPATIENT MEDICAL TRAINING “INTERNAL MEDICINE

Topic 1. Organization of planned and emergency therapeutic care at primary and secondary levels. Principles of organization and structure of planned therapeutic care in Ukraine. Basic normative acts. Main responsibilities and professional actions of a general practitioner - family medicine in the conditions of the primary health care center and interaction with therapeutic specialists.

Topic 2. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine. Principles of organization and structure of emergency therapeutic care in Ukraine. Basic normative acts. The main duties and professional actions of a general practitioner - family medicine to provide emergency medical care in a primary health care centre.

4. STRUCTURE OF THE PRACTICAL OUTPATIENT MEDICAL TRAINING “INTERNAL MEDICINE”

Topic title	Total	Practical lessons	IW
Topic 1. Organization of planned and emergency therapeutic care at primary and secondary levels	14	8	6
Topic 2. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine	14	10	4
Preparation for CPE	2	-	2
Total	30	18	12

5. TOPICS OF LECTURES / SEMINARS/ PRACTICAL LESSONS / LABORATORY CLASSES

5.1. Topics of lectures

Lectures are not provided

5.2. Topics of seminars

Seminars are not provided

5.3. Topics of practical lessons

№	Topic title	Hours
1	Practical lessons 1-4. Organization of planned and emergency therapeutic care at primary and secondary levels	8
2	Practical lessons 5-9. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine	10
	Total	18

5.4. Topics of laboratory classes:

Laboratory classes are not provided.

6. INDEPENDENT WORK OF AN APPLICANT FOR MASTER’S DEGREE

№	Topic title / types of tasks	Hours
1	Preparation for the practical lesson 1-4. Organization of planned and emergency therapeutic care at primary and secondary levels	6
2	Preparation for practical lessons 5-9. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine	4
3	Preparation for CPE	2
	Total	12

7. TRAINING METHODS

Practical lessons: conversation, role-playing games, solving clinical situational tasks, developing skills in examining patients, developing skills in performing manipulations according to the list of 5, instruction and development of skills on simulation models, direct work with a patient.

Independent work: independent work with the recommended basic and additional literature, with electronic information resources, completion of reporting documents and a Practice Diary.

8. FORMS OF CONTROL AND ASSESSMENT METHODS (including criteria for assessing learning outcomes after Practical Training)

Current control: surveys, testing, assessment of practical skills, assessment of communication skills during a role play, solving situational clinical problems, assessment of activity in the classroom.

Final control: CPE.

Current control assessment during practical lessons:

- Assessment of theoretical knowledge on the topic of the lesson:
 - methods: survey, solving a clinical case
 - assessment: maximal mark - 5, minimal mark - 3, unsatisfactory mark - 2
- Assessment of practical skills and manipulations on the topic of the lesson:
 - methods: assessment of the correctness of practical skills performed
 - assessment: maximal mark - 5, minimal mark - 3, unsatisfactory mark - 2
- Evaluation of work with a thematic patient:
 - methods: assessment of: a) communication skills with the patient and his relatives, b) completeness and correctness of the appointment and interpretation of laboratory and instrumental studies, c) compliance with the algorithm of differential diagnosis, d) justification of the clinical diagnosis, e) composing a treatment plan in accordance with modern standards
 - maximal mark - 5, minimal mark - 3, unsatisfactory mark – 2

The mark for one practical lesson is the arithmetic mean of all components and can only have an integer value (5, 4, 3, 2), which is rounded by the statistical method.

Criteria for the current assessment during the practical lesson

Grade	Assessment criteria
Excellent «5»	The applicant is fluent in the material, actively participates in the discussion and solution of a situational clinical problem, confidently demonstrates practical skills. He/she interprets the data of clinical, laboratory and instrumental studies, expresses his/her opinion on the topic of the lesson, demonstrates clinical thinking.
Good «4»	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills. Interprets the data of clinical, laboratory and instrumental studies correctly with some mistakes, expresses his/her opinion on the topic of the lesson, demonstrates clinical thinking.
Satisfactory «3»	The applicant has insufficient knowledge of the material, is not confident in discussing and solving a situational clinical problem, demonstrates practical skills in analyzing and interpreting clinical, laboratory and instrumental research data with significant errors.
Unsatisfactory «2»	The applicant does not know the material, does not participate in the discussion and solution of a situational clinical problem, does not demonstrate practical skills.

The applicant is admitted to the CPE provided that the requirements of the cross-cutting work program of practice are met and if he or she has received at least 3.00 points for current activities.

Evaluation of the results of the applicants' practice during the final control - complex practical examination (CPE).

The methodology for conducting the final control in the form of the CPE is unified and involves the use of standardized forms. The number of practical skills that are submitted to the CPE corresponds to the number of profiles of Practical Medical Training in the relevant course in

the corresponding EPP.

The evaluation of the applicant is carried out according to the checklist. During the CPE, the applicant receives a ticket, and the examiners use a checklist to the corresponding ticket with standard answers and determine which mandatory components of the answer were or were not fulfilled by the applicant.

Each item in the algorithm is assigned a certain number of points depending on its complexity. The proportion (number of points) of each item may vary, depending on the number of items and the complexity of the particular item. Some scenarios may have critical points, if not met, the task is considered incomplete. When formulating the checklist items, ambiguity of understanding should be excluded.

When the applicant performs certain actions, he or she may receive "minus points," specifically:

№	Assessment criteria	Point
1.	An unregulated action or attempt to communicate with the examiner that is not provided for in the task	- 5
2.	The second unregulated action or attempt to communicate with the examiner that is not provided for in the task	- 5
3.	The third unregulated action or attempt to communicate with the examiner, not provided for in the task	-5
4.	The fourth unregulated action or attempt to communicate with the examiner that is not provided for in the task	- 5
5.	More than 4 unregulated actions	- 20
6.	Dangerous action (which will inevitably lead to a deterioration in the patient's condition)	- 20
7.	Unacceptable behavior	- 20
8.	Damage of simulation equipment or inventory	- 20

The maximum score for completing a task at one station is 100 points. The CPE is considered passed if the applicant scores at least 60% of the maximum number of points at each station.

The total grade for the CPE is calculated as the arithmetic mean of all grades received for all profiles. The CPE is held at the Educational and Production Complex of Innovative Teaching Technologies, Informatization and Internal Monitoring of the Quality of Education of the University during the examination sessions at the end of the semester (autumn and spring) according to the schedule.

9. Distribution of points received by applicants for higher education

The obtained average grade point for the discipline for applicants who have successfully completed the work program of the discipline is converted from the traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion of traditional assessment to multi-point scale	
Four-point scale	Multy-point scale
Excellent «5»	185 – 200
Good «4»	151 – 184
Satisfactory «3»	120 – 150
Unsatisfactory «2»	< 120

A multi-point scale (200-point scale) characterizes the actual performance of each student in mastering the educational component. The conversion of the traditional grade (grade point

average for a discipline) into a 200-point scale is performed by the University's Information Technology Department.

Corresponding to the points obtained on a 200-point scale, the achievements of applicants are evaluated according to the ECTS rating scale. Further ranking on the ECTS rating scale allows to evaluate the achievements of applicants in the educational component who study in one course of one specialty, according to the points they received.

The ECTS scale is a relative and comparative rating system that establishes the applicant's belonging to the group of the best or worst among the reference group of fellow students (faculty, specialty). Grade A on the ECTS scale cannot be equal to grade A, and grade B cannot be equal to grade B, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" on the ECTS scale do not coincide with the limits of grades "5", "4", "3" on the traditional scale. Applicants who have received grades "FX" and "F" ("2") are not included in the list of ranked applicants. The grade "FX" is assigned to applicants who have scored the minimum number of points for current academic activities, but who have not been credited with the final control. The grade "F" is assigned to applicants who have attended all classes in the discipline, but have not gained an average score (3.00) for the current academic activity and are not allowed to take the final control.

Students enrolled in the same course (one specialty), based on the number of points gained in the discipline, are ranked on the ECTS scale as follows:

Conversion of traditional grade in the discipline and the sum of points to the ECTS scale

Grade on the ECTS scale	Statistical indicator
A	Top 10% of applicants
B	The next 25% of applicants
C	The next 30% of applicants
D	The next 25% of applicants
E	The next 10% of applicants

10. METHODOICAL SUPPORT

- Work programs of practice
- Silabuses
- Methodical guides for practical classes
- Methodical guides for independent work
- Multimedia presentations
- Situational clinical tasks
- Role-playing scenarios (if necessary)
- Clinical scenarios (if necessary)
- Electronic bank of test tasks

11. LIST OF PRACTICAL SKILLS FOR CPE

1. Interpretation of a standard 12-lead ECG.
2. Interpretation of liver function tests (total protein, total bilirubin and its fractions, aminotransferases, alkaline phosphatase).
3. Interpretation of general urine analysis.
4. Use of pulse oximetry.
5. Conducting peak-flow metry.
6. Emergency care at the primary level (outpatient): hypertensive crisis.
7. Emergency care at the primary level (outpatient): exacerbation of bronchial asthma.
8. Emergency care at the primary level (outpatient): acute heart failure.
9. Emergency care at the primary level (outpatient): acute coronary syndrome.

12. RECOMMENDED LITERATURE

1. Hutchison's Clinical Methods, 24th ed. Editors: Glynn M., Drake M.W. - Elsevier, 2018. – 465 p.
2. Davidson's Principles and Practice of Medicine 23rd Edition. Editors: Stuart Ralston, Ian Penman, Mark Strachan Richard Hobson. Elsevier. - 2018. – 1440 p.
3. Handbook of Liver Disease, 4th ed. Editors: Friedman L.S., Martin P. - Elsevier, 2018. – 512 p.
4. From the Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2022. Available from: goldcopd.org.
5. GINA report, global strategy for asthma management and prevention. Updated 2022. <http://www.ginasthma.org/documents/4>
6. 2018 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death DOI: <http://dx.doi.org/10.1093/eurheartj/ehv316>
7. ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation: The Task Force for the management of acute myocardial infarction in patients presenting with ST-segment elevation of the European Society of Cardiology // *European Heart Journal*. – 2018. Vol. 39, Issue 2. – P.119-177.
8. ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure // *European Heart Journal*. – 2018. Vol. 37, Issue 27. – P. 2129–2200.
9. 2020 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

Additional literature:

1. ЕКГ у практиці=The ECG in Practice: Навч. посіб. для мед. ун-тів, інст., акад. Рекомендовано Вченою радою ІваноФранківського НМУ / Джон Р. Хемптон; за участю Девіда Едлема. — К., 2018. — 560 с., кольор. вид. (англ., укр.)
2. Order of the Ministry of Health of Ukraine from №1269 from 05.06.2019 "On approval and implementation of medical and technological documents for standardization of emergency medical care", "EMERGENCY MEDICAL CARE: PREHOSPITAL STAGE. NEW CLINICAL PROTOCOL".
3. Order of the Ministry of Health of Ukraine dated 05.06.2020 № 1311 "On approval of the Model table of equipment of structural units of the emergency medical care system".
4. 2018 ESC Guidelines for the diagnosis and management of syncope // *European Heart Journal*. – 2018. Vol. 39, Issue 21. – P.1883–1948.

13. ELECTRONIC INFORMATION RECOURSES

1. <https://www.aasld.org> – American Association of Study Liver Diseases
2. <http://www.eagen.org/> - European Association for Gastroenterology, Endoscopy and Nutrition
3. <http://www.ers-education.org/guidelines.aspx> - European Respiratory Society
4. <http://www.gastro.org/> - American Gastroenterological Association (AGA)
5. www.ginasthma.org – Global Initiative for Asthma
6. <http://goldcopd.org>. – Global Initiative for COPD
7. www.ama-assn.org – [American Medical Association](http://www.ama-assn.org)
8. www.who.int – [World Health Organization](http://www.who.int)
9. <http://bma.org.uk> – British Medical Association