

MINISTRY OF HEALTH OF UKRAINE
Donetsk National Medical University

*Methodical recommendations for conducting industrial medical practice
(hospital) of 4th year students of the medical faculty of higher medical
education.*

Kropyvnytskyi 2024

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Methodical recommendations are developed for the heads of medical industrial practice (hospital), which is passed by applicants for the second (master's) level of higher education in the specialty 222 "Medicine", 228 "Pediatrics" based on health care institutions. The purpose, objectives and program of the practice, materials on its organization and conduct, samples of the necessary reporting documentation are reflected. The publication contains a methodology for conducting the final modular control.

The material is presented in accordance with the Master's Training Standard 222 "Medicine", 228 "Pediatrics".

INTRODUCTION

Clinical practical training of students in higher medical education is aimed at assessing and consolidating the knowledge and practical skills acquired during the study of basic clinical and theoretical disciplines, as well as at their further development and improvement through practical work in healthcare institutions. It also provides students with an opportunity to become familiar with the organization of medical care and infection prevention and control measures, the principles of medical ethics and deontology, and to consolidate skills in health education and patient education.

Clinical practical training lays the foundation for students' understanding of modern diagnostic technologies used in clinical practice. It promotes the integration of knowledge across different disciplines and the development of students' ability to apply knowledge of modern diagnostic methods during their further education and future professional practice.

1. Description of the educational discipline

The industrial practice of students of the 4th year of the medical faculty is a continuation of the educational process, during which the student for the first time independently (under the control of the basic manager) performs the professional duties of a doctor, conducts the curation of patients with various pathologies, which gives the opportunity to acquire and improve professional medical skills and abilities. The educational discipline "Industrial medical practice" for students of the 4th year of education consists of 4 meaningful modules: 1 - "Main duties and professional actions of a doctor of a therapeutic hospital"; 2 - "Main duties and professional actions of a doctor of a surgical hospital"; 3 - "Main responsibilities and professional actions of a pediatric hospital doctor" and 4 - "Main duties and professional actions of an obstetric hospital doctor" with a duration of 240 hours, which is 8 credits.

2. Aim and Objectives of the Educational Component

The **Aim** of the educational discipline "Industrial medical practice" is the acquisition of knowledge on the formation of the ability to apply acquired knowledge, skills, practical skills to solve typical tasks of a doctor in the field of health care in the relevant position, to use basic and additional research methods in accordance with the educational and professional program (OPP)"Doctor", "Paediatrician" specialist training in specialty **222 "Medicine", 228 "Pediatrics"**.

The Objectives:

- conduct surveys and physical examinations of patients and analyse their results;
- to plan the examination scheme of a specific patient depending on the features of the clinical course of the disease;
- analyse the results of basic laboratory and instrumental research methods;
- determine the leading pathological symptoms and syndromes in the most common diseases;
- carry out differential diagnosis and make a preliminary diagnosis of the most common diseases;
- to plan the examination scheme of a specific pregnant woman depending on features of the clinical course of pregnancy;
- plan the tactics of physiological childbirth and the postpartum period;
- make a preliminary diagnosis of complications of pregnancy, childbirth and the postpartum period;
- interpret the general principles of treatment, rehabilitation and prevention of the most common therapeutic, surgical, pediatric diseases and obstetric pathological conditions;
- participate in the provision of emergency medical aid in urgent cases;

- perform necessary medical manipulations;
- learn the moral and deontological principles of a medical specialist and the principles of professional subordination in the clinic;
- master the necessary medical manipulations.

The Objective of practice is to consolidate the knowledge and skills acquired during the study of the main clinical and theoretical disciplines (examination of the patient, establishment of a clinical diagnosis, prescribing treatment) and further improvement of practical skills, familiarization with the organization of the medical case and working conditions of the doctor in the city and district, as well as consolidation skills of sanitary and educational work.

Upon completion of the clinical medical practical training, the student should know:

- etiological and pathogenetic factors of diseases;
- classify and analyse a typical clinical picture;
- draw up an examination plan and analyse the data of laboratory and instrumental examinations in the typical course of the disease;
- demonstrate mastery of the principles of treatment, rehabilitation and disease prevention;
- diagnose;
- to provide emergency assistance in case of major emergencies;
- carry out differential diagnosis and make a preliminary diagnosis with a typical course of diseases;
- evaluate the prognosis of the disease;
- demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination.

Upon completion of the clinical medical practical training, the student should be able to:

- collect anamnesis;
- examine the patient;
- to plan examination of the patient;
- interpret the results of laboratory and instrumental studies;
- carry out differential diagnosis of the most common diseases with their typical course;
- determine the previous clinical diagnosis;
- determine therapeutic, surgical tactics of treatment;
- to determine the management tactics of a child patient;
- to determine the management tactics of obstetric patients;
- prescribe medical nutrition;
- provide emergency medical care;
- solve situational problems;
- practice practical skills at the patient's bedside;
- keep medical records.

3. Educational Component Program

Content module I: Main duties and professional actions of the doctor in the therapeutic department of the hospital:

- organization principles of planned and urgent therapeutic care in Ukraine;
- improving skills in obtaining anamnesis and physical examination of patients with main diseases of the organs of respiratory, digestive and endocrine systems;

- mastering the skills of interpretation of laboratory and instrumental methods of examination in internal medicine;
- improvement of substantiation skills and formulation of the diagnosis at the basic diseases of organs of respiratory, digestive and endocrine systems;
- appointment of treatment, primary and secondary prevention of main diseases of the respiratory, digestive, hematopoietic organs and endocrine system;
- mastering the skills of emergency care in the clinic of internal medicine;
- application of the principles of ethics and deontology in the practice of the doctor of the therapeutic department.

Content module II: Main duties and professional actions of the doctor in the surgical department of the hospital:

- principles organization of planned and emergency surgical care in Ukraine;
- improvement of skills of clinical, laboratory and instrumental diagnostics and tactics of treatment of the main surgical diseases in the conditions of a hospital;
- mastering the skills of providing emergency medical care for urgent surgical diseases;
- application of the principles of ethics and deontology in the practice of the doctor of the surgical department.

Content module III: Main duties and professional actions of the doctor in the pediatric department of the hospital:

- organization principles of medical care for children in Ukraine. Fundamentals of Ukrainian legislation on child health;
- improvement of skills of clinical, laboratory and instrumental diagnostics and tactics of treatment of the main children's diseases in the conditions of a children's hospital;
- mastering the skills of providing emergency medical care in emergencies in children;
- implementation of the principles of ethics and deontology in the practice of a paediatrician.
-

Content module IV: Main duties and professional actions of the maternity hospital doctor:

- organization principles of medical care for pregnant women, women giving birth and after birth in Ukraine, basics of Ukraine legislation on maternal and child health;
- diagnosis of early and late stages of pregnancy;
- participation in the management of physiological childbirth and the postpartum period;
- clinical, laboratory, instrumental diagnostics in obstetrics;
- diagnosis of complications of pregnancy, childbirth, pathological conditions of the fetus in obstetric hospital (multiple pregnancy, placental dysfunction, fetal distress, fetal development retardation, isoantigenic incompatibility of maternal and fetal blood, early gestosis, hypertensive disorders, preeclampsia, eclampsia, miscarriage);
- tactics for treating complications during pregnancy, childbirth, and the postpartum period, pathological conditions of the fetus in an obstetric hospital (multiple pregnancy, placental dysfunction, fetal distress, fetal development retardation, isoantigenic incompatibility of maternal and fetal blood, early gestosis, hypertensive disorders, preeclampsia, eclampsia, miscarriage);
- mastering the skills of providing emergency medical care in obstetrics;
- application of the principles of ethics and deontology in the practice of the obstetrician department.

4. Management of production practice.

The current educational activities of students are monitored by *departmental practical training supervisors – academic staff members* and by *clinical base practical training supervisors (base supervisors)*.

At the healthcare institutions serving as clinical bases, the overall supervisor of practical training is the Chief Executive Officer (CEO) of the healthcare institution, while the direct supervisors are the heads of the respective clinical departments. Practical training supervisors analyse students' performance in the departments, taking into account their discipline (a student must not have any unexcused absences from practical training), the quality of maintaining the practical training logbook (including justification and formulation of diagnoses, as well as determination of diagnostic and treatment plans), the level of acquisition of clinical, laboratory, and instrumental diagnostic skills, participation in the provision of emergency medical care, and the application of the principles of medical ethics and deontology in clinical practice.

Responsibilities of the **Departmental Practical Training Supervisor:**

Before the beginning of practical training, the departmental supervisor shall:

- familiarize themselves with the educational component program (syllabi) and methodological recommendations concerning the organization and conduct of practical training;
- conduct an assessment and documentation of the clinical base institution;
- obtain the necessary documentation from the Educational and Methodological Department, including student lists, methodological recommendations, and other relevant materials.

On the first day of practical training, the departmental supervisor shall conduct an organizational meeting involving students, the Chief Executive Officer, their deputies, and heads of clinical departments. The following issues shall be addressed:

- characteristics of the clinical base institution;
- the purpose and program of practical training, the schedule of individual content modules, and students' work schedules;
- organization of students' living and working conditions.

The *departmental practical training supervisor* monitors students' completion of practical training in accordance with the educational programs and performs the following duties:

- monitors each student's attendance, performance, discipline, and living conditions;
- provides methodological guidance to students and assigns individual tasks to each trainee;
- assesses the final level of mastery of practical skills in accordance with the established lists of practical skills;
- indicates in the practical training logbook which sections require further improvement by the student;
- assesses practical skills at the patient's bedside and students' ability to interpret the results of clinical, laboratory, and instrumental examinations;
- assesses the quality of maintaining medical documentation;
- signs the student's practical training logbook;
- provides medical and consulting assistance to physicians of the clinical departments;
- participates in clinical and clinico-pathological conferences of the healthcare institution, conducts discussions with patients, and delivers lectures to wider audiences;
- participates in the final assessment scheduled by the program of the respective educational component;
- upon completion of practical training, submits a written report on the results of practical training to the *University Practical Training Supervisor* within three days.

Methodological supervision and final assessment are carried out by academic staff members of the respective departments of DNMU.

The final assessment of each module of clinical practical training is conducted on the last day of the respective module after its completion. The final assessment of each module is conducted by academic staff members of the respective departments appointed in accordance with the Rector's order, together with the University Practical Training Supervisor.

The final assessment of each module is conducted in accordance with the applicable regulatory documents and, where applicable, according to an additional schedule approved by the Educational and Methodological Department.

The **clinical base practical training supervisors** shall:

- familiarize themselves thoroughly with the practical training program (syllabi) and methodological recommendations concerning practical training;
- introduce students to the staff of the clinical departments and familiarize them with the working conditions, including the layout of the premises, number of beds, sanitary and hygienic requirements, patient population, availability of equipment and medicines, and the nature and volume of surgical procedures, where applicable;
- prepare duty schedules for students, where appropriate;
- continuously monitor the scope and level of students' acquisition of practical skills;
- involve students actively in clinical conferences, health education activities among the population, and the social life of the healthcare institution;
- check students' entries in their practical training logbooks daily;
- provide an objective evaluation of each student's performance and prepare an appropriate assessment of their practical training.

5. Terms and deadlines of practice.

The duration of industrial practice for students of the 4th course is 20 working days. Practice consists of 4 cycles (internal medicine, surgery, pediatrics, obstetrics). The duration of cycles is 5 working days. The duration of the working day is 7 hours and 12 minutes. Student working hours are from 8:00 a.m. to 3:45 p.m. (with a 30-minute lunch break). One of the days in the cycles: internal medicine, surgery, pediatrics, obstetrics can be devoted to being on duty at the emergency room, ward or intensive care unit. The sequence of practice in therapeutic, surgical, pediatric departments and the maternity hospital is determined by each educational institution and may change if necessary. Departments of district and city hospitals can act as production practice bases.

6. Legal responsibility of education seekers during industrial practice

Since the applicant, during industrial practice, bears personal responsibility for the assigned work, its results on the same level as full-time employees (doctors and other medical workers), he must be fully aware of the legal significance of his actions and not allow violations on his part.

During practice, the applicant is fully subject to the rules of the internal work schedule of the medical institution. A student of education, as a doctor's assistant, should know that he bears disciplinary responsibility for violations of labour, educational, and industrial discipline. Disciplinary offenses of applicants during practice include failure to comply with the instructions and orders of the heads of medical institutions, instructions and orders of superior health care managers, absenteeism, tardiness, negligent attitude to one's duties. In addition, in case of causing material damage to the medical institution, the applicant-trainee bears full or partial material responsibility, regardless of whether disciplinary sanctions were applied. Disciplinary sanctions include a reprimand, which during practice can be announced by the head of the medical institution by order, and in case of gross violations - expulsion from the university by order of the rector. Disciplinary punishment can be applied no later than one month from the day of its detection and no later than six months from the day of its implementation (Articles 147, 148 of the Code of Criminal Procedure of Ukraine).

Considering all the above, students of education during practice as a physician's assistant need:

- provide timely and qualified medical assistance to patients at the level of the applicant's competence;
- to be attentive to patients' complaints, not to consider them serious enough;

- carefully collect anamnesis, qualitatively examine the patient to prevent false diagnosis and incorrect treatment;
- not to carry out medical manipulations without appropriate training and consultation with your immediate supervisor;
- qualitatively help to draw up medical documentation, do not forge it;
- not to conduct illegal experiments on patients. Knowledge and awareness of the legal consequences of his work as a physician's assistant provides an opportunity to improve the necessary practical skills for the successful use of them in further professional activities.

Students of education are obliged to undergo an internship:

- before the start of practice, receive from the educational and methodical department of the higher educational institution, consultations regarding the period of practice, processing of documentation, etc.;
- at the dean's office, get a referral to a basic institution for internship;
- arrive at the practice base on time;
- fully perform all tasks provided for by the practice program and the instructions of its supervisors;
- study and strictly follow the rules of labour protection, safety techniques and industrial sanitation;
- to comply with the rules of internal labour regulations in force in the medical institution;
- bear responsibility for assigned work and its results on a par with full-time employees;
- keep a practice diary, other reporting documentation provided for by the practice program;
- before the beginning of the midwifery cycle, clean the oral cavity (carious teeth), throat (chronic tonsillitis), skin (purulent wounds, paronychia, folliculitis), upper respiratory tract (catarrhal processes) and other sources of chronic infections; pass a bacteriological examination, if pathogenic flora is detected - sanitize;
- after the end of the internship, submit a written report to the head of the educational institution on the completion of all tasks provided for in the program, a completed and signed diary.

7. List of skills and practical skills for the final modular control

Content module I: Basic duties and professional actions of a doctor of a therapeutic department of a hospital.

1. Physical methods of examining the patient (examination, percussion, palpation, auscultation, blood pressure measurement).
2. Diagnosis and choice of treatment tactics.
3. Interpretation of data from laboratory tests of blood, urine, sputum, faeces, pleural and ascitic fluid, duodenal sounding and ph-metry.
4. Registration and analysis of ECG, glucometry.
5. Interpretation of data on the function of external respiration.
6. Ultrasound of abdominal organs, blood vessels, echocardiography
7. Emergency care in urgent situations (conditions) with acute respiratory failure (bronchial asthma attack); anaphylactic reactions (acute urticaria, Quincke's oedema, anaphylactic shock); hepatic colic; diabetic insects (ketoacidosis, hypoglycemic), hyperthyroidism (thyrotoxic crisis); hypothyroidism (hypothyroid coma); acute adrenal insufficiency, etc.;
8. Issuance of medical documentation

Content module II. *The main duties and professional actions of the doctor of the surgical department of the hospital*

1. Clinical, laboratory and instrumental diagnosis of the main surgical diseases in hospital

conditions.

2. Interpretation of data from laboratory tests of blood, urine, ultrasound of abdominal organs, blood vessels, radiography, ultrasound, CT, fibrogastroduodenoscopy, colonoscopy.
3. Diagnosis and choice of treatment tactics.
4. Primary surgical treatment of wounds. Peculiarities of assistance in the dressing room: wound care, drains, dressing change, drain removal, suture removal, wound debridement, surgical treatment of purulent foci.
5. Provision of emergency care for bleeding, septic and haemorrhagic shocks; correction of water-electrolyte disorders and acid-base status, etc.
6. Preparation of medical documentation

Content module III. *The main duties and professional actions of the doctor of the pediatric department of the hospital*

1. Examination of a healthy and sick child, assessment and correction of the child's nutrition in the first year of life.
2. Evaluation of clinical analyses (general blood analysis in children of different ages, general urinalysis, urine analysis according to Zimnytskyi, urinalysis according to Nechiporenko, general analysis of faeces, general analysis of sputum), biochemical analyses (blood protein content and its fractions, alkaline phosphatase, cholesterol, AST, ALT, acute phase indicators, creatinine and blood urea, blood electrolytes, urine analysis for diastasis), serological reactions in autoimmune diseases.
3. Evaluation of fibrogastroduodenoscopy data with ph-metry, urease test results. ECG analysis.
4. Evaluation of spirometry, bronchoscopy. Evaluation of X-ray data of chest organs, digestive system, genitourinary system.
5. Diagnosis and provision of emergency care for children with convulsions, hyperthermic syndrome, exsiccosis and toxicosis in children of the first year of life, dizziness, collapse, oedema of the lungs and larynx, bronchospasm, asthmatic status, heart rhythm disorders, heart failure, infectious and toxic shock, acute kidney and liver failure, complications of vaccination and drug therapy (allergic reactions).
6. Preparation of medical documentation.

Content module IV. *The main duties and professional actions of the doctor of the maternity ward of the hospital*

1. External obstetric examination of pregnant women, Leopold's techniques, measurements of the pelvis, determination of the true conjugate.
2. Establishing the term of pregnancy (according to the anamnesis and objective research).
3. Determination of the gestational age of the fetus and its weight.
4. Determination of the expected date of childbirth.
5. Physiological childbirth, postpartum period.
6. Provision of obstetric care during childbirth and the postpartum period.
7. Determination of the condition of the newborn according to the Apgar scale. Primary care of a newborn.
8. Determination of the principles of treatment of complications of pregnancy, childbirth, pathological conditions of the fetus (placental dysfunction, fetal distress, delayed fetal development, isoantigenic incompatibility of maternal and fetal blood, early gestosis, hypertensive disorders, preeclampsia, eclampsia, miscarriage, multiple pregnancy).
9. Provision of emergency care for severe forms of preeclampsia and eclampsia, fetal distress, newborn asphyxia.
10. Interpretation of the results of clinical, laboratory, and instrumental methods of

examination of pregnant women, women in labour, and the fetus (ultrasound, auscultation, CTG, etc.) to detect complications of pregnancy, childbirth, and the pathological condition of the fetus.

11. Completion of medical documentation in obstetrics.

After completing the industrial practice, the student provides the heads of practice from the departments with:

- a formal diary of production practice;
- consolidated digital report.

The applicant's personal documentation is a practice diary (Appendix 1) in which he enters in chronological order all the data about the work performed: personally, or by participating in it. Based on the entries in the diary, a final report is drawn up for each discipline (Annexes 2-5), which summarizes the total number of performed manipulations, procedures, operations, the number of admitted patients, etc. The records of the work performed are checked and approved daily by the head of the practice from the base and 3 times a week by the head of the higher education institution.

At the end of each cycle of industrial practice, a description of the intern's work is recorded in the diary, which is signed by the general director (medical director) of the medical institution, managers from the base and higher education institution, and certified by the seal of the medical institution. All documents are certified by the general director (medical director, department head) with the signature and seal of the medical institution.

In case of internship in another country, the student provides a certificate of the established model.

In the process of work, the student of education draws up an individual work schedule for each cycle, in which he details the work performed.

Annex 1.

Diary of HDL in internal medicine

(from surgery, pediatrics, obstetrics)

Student of the _____ faculty _____, Cours _____ group

Practice term: from 20 _ years to 20 _ years. Place of internship: city _____

Hospital _____

Base manager _____

General director _____

(signature, stamp)

Number, time	Content of the completed work	Completed skill
8.00-9.00	Organizational meetings. Participation in visiting patients with the head of the department.	
9.00-12.00	Curation in the department of 5 patients. 1. Khryi N., 60 years old. D-z: CHD: angina pectoris 111 FC. Post-myocardial infarction, extrasystolic arrhythmia CH 2B Examination... Treatment... 2. X-th V., 55 years old. D-z: Hypertensive h-ba 2 st. Examination... Treatment...	Physical examination of 5 patients (questioning, examination, blood pressure measurement). Completion of medical documentation of incoming patients. Evaluation of clinical, biochemical and instrumental studies.
12.00-14.00	ECG analysis under the guidance of a doctor.	ECG registration and analysis

14.00-15.00	Participation in conducting FGDS	Examination of the mucous membrane of the stomach
	But others	

8. Control of educational achievements

Methods and means of standardized assessment current educational activities and final control

Assessment of independent practical work of students of education (SRS) based on practice and final control (FC) are carried out on the last day of practice. FC is accepted by the commission (according to the order of the rector of DNMU) consisting of the head of Practice from the University and employees of specialized departments.

The grade for the module is defined as the sum of the grades of the current control for the content modules (in points), which is assigned during the assessment of practical skills in accordance with the list determined by the practice program.

The maximum number of points awarded to students for learning a module (credit) is 200, including 120 points (60%) for ongoing activities, 80 points (40%) based on the results of the final control.

Evaluation of the individual work of the student of education

Points for individual tasks are awarded to the student only under the conditions of their successful completion and defence. The grade for individual independent work is calculated as the average score when mastering the entire list of skills and abilities of each of the four content modules: internal medicine, surgery, obstetrics, pediatrics. (see annexes 2-5). Arithmetic average of evaluations of content modules is converted into points (in accordance with the KSM evaluation instructions). The total number of points for SRS varies from 72 to 120 points. Students who have completed the industrial practice program, have properly prepared reporting documents and received at least 72 points for their current activity are admitted to the final inspection.

Evaluation criteria for final control (FC)

Evaluation of the FC is carried out in accordance with the Regulation on the organization and conduct of control measures, making up for missed classes and improving the rating of DNMU students, enacted by the Order of DNMU No. 397 dated September 02, 2019.

[Regulations on the Organization and Conduct of Assessment Procedures, Make-up of Missed Classes, and Improvement of Students' Academic Ranking • Donetsk National Medical University](http://dnmu.edu.ua) (dnmu.edu.ua)

The final control for the protection of practice is standardized and is presented as an arithmetic mean score (according to a 4-point system) considering the following stages:

- 1) evaluation of the results of the knowledge, skills and practical skills of the students of education by the practice base based on evaluations from the diary and production characteristics (see annexes 2-5);
- 2) assessment of the correctness of the management and preparation of the reporting documentation of the students of education (diary, final report);
- 3) the results of the knowledge assessment of the students during the interview for the defence of practice (oral interview, use of tests and/or situational tasks) and practical training.

The total number of points scored by the student in the discipline is defined as the average score for the current educational activity, translated on a 200-point scale (in accordance with the

KSM assessment instructions).

The regulations for conducting FCs provide for the assimilation and demonstration of skills and abilities in accordance with the program on industrial medical practice of students of the 4th year from four content modules: internal medicine, surgery, obstetrics, pediatrics (on dummies).

According to the results of FC, the student receives four grades: in internal medicine, surgery, pediatrics, obstetrics. From these four grades, the average grade for FC in industrial medical practice is calculated. The grade point average is then converted into FC points. The final module test is considered to be passed if the student scored at least 60% of the maximum number of points for FC (that is, at least 48 points, this number of ECTS points is equal to the sum of traditional grades "3").

Evaluation on a multi-point (200) scale	Evaluation on a four-point scale
From 180 to 200 points	"5"
From 150 to 179	"4"
From 120 to 149	"3"
Below 120	"2"

Annex 2.

A sample of a digital report based on the results of production practice.

General digital report on the results of passing the practice in internal medicine

Student of education _____ 4 course of the Faculty of Medicine No. group ____
based on m/l No. _____ city _____

List of skills and abilities	Number of skills	Score in points
1. Conducting a survey and physical examination of patients with the main diseases of the respiratory, digestive and endocrine systems, formulating a clinical diagnosis (Palpation of the chest, atrial region, joints, lymph nodes, thyroid gland, abdomen, blood vessels, determination of the pulse; percussion of the lungs, heart, abdomen; auscultation of the lungs, heart, blood vessels and abdomen)	4–6–8	3-5
2. Daily curation of patients in a hospital	4–6–8	3-5
3. Shifting in the intensive care unit or intensive care unit; (work in the unit – grade 3; duty in the unit – grade 4, duty in the intensive care unit – grade 5)	1	3-5
4. Participation in the provision of emergency aid in urgent situations (conditions): acute respiratory failure (bronchial asthma attack); anaphylactic reactions (acute urticaria, Quincke's oedema, anaphylactic shock); hepatic colic; diabetic insects (ketoacidosis, hypoglycaemic), hyperthyroidism (thyrotoxic crisis); hypothyroidism (hypothyroid coma); acute adrenal insufficiency, etc.	4–6–8	3-5
5. Blood pressure measurement on the upper and lower extremities	15–25–30	3-5
6. Evaluation of clinical, biochemical and bacteriological studies of blood, urine, faeces, sputum, gastric juice and duodenal research, ph-metry	15–25–30	3-5
7. ECG registration and analysis; glucometry	10–15–20	3-5

8. Data analysis of external breathing function	1-3-5	3-5
9. Analysis of radiographs	8-10-12	3-5
10. Analysis of endoscopic research data	3-5-8	3-5
11. Analysis of echocardiography data, ultrasound of abdominal organs, blood vessels	3-5-8	3-5
GPA		72-120

Signature of the manager _____

Annex 3.

General digital report on the results of passing the practice in surgery

Student of education _____ 4 course of medical faculty No. __, group

_____ based on m/l No. _____ city _____

List of skills and abilities	Number of skills	Score in points
1. Daily curation of patients in a hospital (Palpation chest, joints, lymph nodes, thyroid gland, mammary glands, abdomen, blood vessels; percussion of the lungs, abdomen; auscultation of the lungs, blood vessels and abdomen)	4-6-8	3-5
2. Examination of patients, formulation of clinical diagnosis, preparation of medical history	4-6-8	3-5
3. Shifting in the department on an emergency day or intensive care unit, trauma center; (work in the unit – grade 3; duty in the unit – grade 4, duty in the department on an urgent day – grade 5)	1	3-5
4. Peculiarities of assistance during emergency and planned operations	3-4-5	3-5
5. Evaluation of clinical tests (total blood and urine test) and biochemical blood tests (total bilirubin and fractions, blood proteins, amylase, blood electrolytes, coagulogram, etc.) in the surgical department	10-15-20	3-5
6. Evaluation of instrumental research data (x-ray, CT, sonography of abdominal organs, fibrogastro-duodenoscopy, colonoscopy, etc.) in the surgical department	10-15-20	3-5
7. Peculiarities of assisting in the dressing room: wound care, drainage, dressing change, surgical treatment of purulent wounds	1-3-5	3-5
8. Assisting in the dressing room: wound care, suture removal	1-3-5	3-5
9. Participation in the preparation of the patient for surgery; (venipuncture, determination of blood group, rhesus type, testing for individual and biological compatibility, transfusion of blood components and blood substitutes)	4-6-10	3-5
10. Participation in the provision of emergency care for bleeding, septic and haemorrhagic shock; correction of water-electrolyte disorders and acid-base status, etc., digital examination of the rectum, catheterization of the urinary	1-3-5	3-5

bladder with a soft catheter		
GPA		72-120

Signature of the manager _____

Annex 4.

General digital report on the results of passing the practice in Pediatrics

Student of education _____ 4 course of medical faculty No. __, group ____
based on m/l No. _____ city _____

List of skills and abilities	Number of skills	Score in points
1. Daily care of sick children in a hospital; (Palpation of the chest, atrial region, joints, lymph nodes, thyroid gland, abdomen, vessels, determination of pulse; percussion of the lungs, heart, abdomen; auscultation of the lungs, heart, vessels, and abdomen)	4-6-8	3-5
2. Examination of patients, formulation of clinical diagnosis, preparation of medical history	4-6-8	3-5
3. Shifting in the intensive care unit or intensive care unit; (work in the unit – grade 3; duty in the unit – grade 4, duty in the intensive care unit – grade 5)	1	3-5
4. Participation in the provision of emergency care to children in urgent situations (conditions) with convulsions, hyperthermic syndrome, exsiccosis and toxicosis of children of the first year of life, syncope, oedema of the lungs and larynx, bronchospasm, asthmatic condition, heart rhythm disorders, heart failure, infectious-toxic shock, acute kidney and liver failure, complications of vaccination and medical therapy (allergic reactions), use of medicines: instillation of drops in the eyes, application of ointment behind the eyelid, etc.	4-6-8	3-5
5. Blood pressure measurement on arms and legs	10-15-20	3-5
6. Evaluation of clinical, biochemical, bacteriological and immunological studies of blood, urine, faeces, sputum, etc.	15-25-30	3-5
7. Evaluation of FGDS data with ph-metry, colonoscopy, bronchoscopy	1-3-5	3-5
8. Registration and analysis of ECG	5-10-15	3-5
9 Evaluation of spirometry and echocardiography data	2-4-6	3-5
10 Data analysis of radiographs of chest organs, gastrointestinal tract and urinary systems	4-6-8	3-5
GPA		72-120

Signature of the manager _____

Annex 5.

General digital report on the results of passing the practice in midwifery

Student of education _____ 4 course of medical faculty No. __, group _____
based on m/l No. _____ city _____

List of skills and abilities	Number of skills	Score in points
1. Daily care of pregnant women, women in labour, women in labour	4–6–8	3-5
2. Examination of pregnant women, women in labour and women in labour, participation in the preparation of the birth history, drawing up a birth plan	4–6–8	3-5
3. Diagnosis of early (late) pregnancy, determination of the estimated date of birth, mass fetus (in late pregnancy)	5–7–10	3-5
4. Auscultation of the fetal heartbeat	5–7–10	3-5
5. External obstetric examination of pregnant women (pelvimetry, Solovyov index, Michaelis rhombus techniques according to Leopold)	8–12–15	3-5
6. Internal obstetric research	1–2–3	3-5
7. Participation in the management of physiological childbirth, the postpartum period	1–3–5	3-5
8. Assessment of laboratory and instrumental results examinations of pregnant women, fetuses, women in labour, women in labour, etc., diagnosis of pregnancy complications (hypertensive disorders, isoantigenic incompatibility, pathological conditions of the fetus)	10–15–20	3-5
9. Participation in the primary toilet of the newborn	1–2–3	3-5
10. Participation in the treatment of complications of pregnancy, childbirth, pathological conditions of the fetus in obstetric conditions inpatient (placental dysfunction, distress of the fetus, retardation of fetal development, isoantigenic incompatibility of maternal and fetal blood, early gestosis, hypertensive disorders, preeclampsia, eclampsia, miscarriage, multiple pregnancy). Participation in emergency care in obstetrics (eclampsia, artificial lung ventilation and indirect heart massage in case of newborn asphyxia)	1–2–3	3-5
GPA		72-120

Signature of the manager _____

9. Recommended literature

1. Cvetnic, W. G., & Pino, E. (Eds.). (2019). *Obstetrics/gynecology: Lecture notes*. Kaplan.
2. Robertson, M. Q. (2022). *Obstetrics and gynecology from 10 teachers* (21st ed.).
3. Hryshchenko, V. I., Shcherbina, M. O., Ventskiivskyi, B. M., et al. (2020). *Obstetrics and gynecology: In 2 books. Book 1. Midwifery* (4th ed.). Medicine.
4. Khomazyuk, T. A. (2019). *Propaedeutics of internal medicine: Collection of clinical lectures: The educational and visual guide: In two parts. Part 1*. Gerda.

5. Khomazyuk, T. A. (2019). *Propaedeutics of internal medicine: Collection of clinical lectures: The educational and visual guide: In two parts. Part 2*. Gerda.
6. Kovalyova, O. M., & Ashcheulova, T. V. (2020). *Propedeutics of internal medicine: Diagnostics* (5th ed., Pt. 1). Nova Knyha.
7. Abrahamovych, O. O., Petrukh, A. V., Zayats, Z. E., et al. (2007). *Anemic syndrome: Modern principles of diagnosis and treatment*. Kvart.
8. Hlushko, L. V., Fedorov, S. V., Skrypnyk, I. M., et al. (2019). *Internal diseases: In 2 parts. Part 1. Chapters 1–8*. Medicine.
9. Hlushko, L. V., Fedorov, S. V., Skrypnyk, I. M., et al. (2019). *Internal diseases: In 2 parts. Part 2. Chapters 9–24*. Medicine.
10. Amosova, K. M. (Ed.). (2008). *Internal medicine: In 3 volumes. Vol. 1*. Medicine.
11. Svintsytskyi, A. S., Konoplyova, L. F., Feshchenko, Y. I., et al. (2009). *Internal medicine: In 3 volumes. Vol. 2*. K. M. Amosova (Ed.). Medicine.
12. Svintsytskyi, A. S., Abrahamovych, O. O., Bodnar, P. M., et al. (2014). *Internal medicine: General practitioner's advisor*. VSV "Medicine".
13. Todoriko, L. D. (Ed.). (2011). *Differential diagnosis of the main syndromes in diseases of the respiratory organs and additional materials on phthisiology*. Medical University.
14. Todoriko, L. D., Semyaniv, I. O., Shapovalov, V. P., & Boyko, A. V. (2013). *Clinical-radiological atlas for the diagnosis of lung diseases*. Medical University.
15. Amosova, K. M., Bezrodnyi, B. G., Burianov, O. A., Ventskiivskyi, B. M., et al. (2006). *Emergency medical care*. F. S. Glumcher & V. F. Moskalenko (Eds.). Medicine.
16. Perederii, V. G., & Tkach, S. M. (2009). *Basics of internal medicine: In 3 volumes. Vol. 1*. Nova Knyha.
17. Perederii, V. G., & Tkach, S. M. (2010). *Basics of internal medicine: In 3 volumes. Vol. 3*. Nova Knyha.
18. Amosova, K. M., Konoplyova, L. F., Sydorova, L. L., Mostbauer, G. V., et al. (2012). *Practicum in internal medicine*. Ukrainian Medical Bulletin.
19. Svintsytskyi, A. S., Yaremenko, O. B., Puzanova, O. G., & Khomchenkova, N. I. (2006). *Rheumatic diseases and syndromes*. Book Plus.
20. Skrypnyk, I. M. (2017). Gastroenterology. In N. V. Kharchenko & O. Y. Babaka (Eds.), *Gastroenterology: Textbook in 2 volumes* (Vol. 2, pp. 147–191). PP "Polium".
21. Abrahamovych, O. O. (Ed.). (2005). *Modern classifications and principles of formulating diagnoses in the clinic of internal diseases*. PP "Kvart".
22. Gromova, A. M., & Nesterenko, L. A. (Eds.). (2016). *Modern approaches to childbirth and the postpartum period in pathological pregnancy*.
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24. Marcdante, K. J., & Kligman, R. M. (2019). *Basics of pediatrics according to Nelson: Translation of the 8th English edition: In 2 volumes. Vol. 1*. VSV "Medicine".
25. Freizer, M. Sh., & Fuqua, T. (2021). *Essentials of human diseases and conditions* (7th ed.). Elsevier.
26. Knetchel, D., & Opacic, D. (2019). *The physician assistant student's guide to the clinical year: Internal medicine*. Springer Publishing Company.
27. Olshevska, O. V., Olshevskyi, V. S., Husiev, V. M., & Rudikova, V. V. (2023). *Methodological guidelines for mastering practical skills in obstetrics and gynecology for international students of the 4th–6th year of the Medical Faculty—specialties "Medicine", "Dentistry"* (Updated ed.). DNMU.

10. Additional Resources

1. Official website of Donetsk National Medical University — <https://dnmu.edu.ua/en/>
2. V. I. Vernadskyi National Library of Ukraine — <https://www.nbuv.gov.ua/>

3. Testing Board for Professional Competence Assessment of Higher Education Trainees in Medicine and Pharmacy at the Ministry of Health of Ukraine — <https://www.testcentr.org.ua/en/>
4. The World Society of Emergency Surgery
[World Society of Emergency Surgery: studies and statistics \(wses.org.uk\)](http://www.wses.org.uk)
5. PubMed <http://pubmed.ncbi.nlm.nih.gov/>
6. Сайт IRCAD <http://websurg.com/>