

**Academic programme  
component**

**31.05.01 General Medicine  
(in a foreign language)  
programme**

**B2.O.03 (II)  
practical training code**

## **ASSESSMENT MATERIALS**

**Type of  
practical  
training**

**Practical training:  
externship, diagnostics**

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### 1. Criteria and assessment of competencies and their mastery indicators, formed during practical training

Code and competence name	Code and indicator of competence mastery	Results of practical training		
		<i>To know</i>	<i>To be able to</i>	<i>To have</i>
<b>УК-9.</b> Can apply basics of defectology to social and professional fields	ИД-3УК-9 Takes into account the individual characteristics of persons with disabilities when making social and professional contacts.	individual characteristics of persons with limited health capabilities	plan and carry out professional activities with persons with disabilities	skills of interaction in the social and professional spheres with persons with disabilities.
<b>ОПК-1.</b> Can implement moral and legal norms as well as ethical and deontological principles in professional activities	ОПК-1.3. Applies the principles of medical ethics and deontology in communication between doctor-patient, doctor-medical workers and doctor-patient's relatives.	<ul style="list-style-type: none"> <li>- moral and ethical standards, rules and principles of professional medical behavior, rights of the patient and doctor, basic ethical documents of professional medical associations and organizations;</li> <li>- principles of interaction in the "doctor-patient" system in accordance with the norms of ethics and deontology;</li> </ul>	<ul style="list-style-type: none"> <li>- analyze and evaluate the social situation in a medical institution;</li> <li>- navigate the current regulatory legal acts on labor, apply the norms of labor legislation in specific practical situations;</li> <li>- protect the civil rights of doctors and patients of various ages;</li> </ul>	<ul style="list-style-type: none"> <li>- skills of interaction with patients in accordance with the standards of ethics and deontology.</li> <li>- skills of informing patients of various age groups, their relatives and loved ones in accordance with the requirements of the rules of "informed consent";</li> <li>- skills in building professional relationships with medical workers in accordance with moral and legal standards</li> </ul>
<b>ОПК-2.</b> Can implement measures to promote healthy lifestyle and health education and assess their effectiveness	ОПК-2.3. Develops and participates in the implementation of preventive measures in order to improve the level of health and prevent diseases of the patient (population).	<ul style="list-style-type: none"> <li>- causes and ways of spreading infections of diseases of various etiologies;</li> <li>- techniques, methods for sanitary and hygienic education of the population, for disseminating knowledge about a healthy lifestyle;</li> <li>- principles of carrying out sanitary and educational activities on elements of a healthy lifestyle;</li> <li>- main directions of preventive measures aimed at improving the</li> </ul>	<ul style="list-style-type: none"> <li>- plan anti-epidemic measures and prevention of infectious diseases;</li> <li>- develop, organize and conduct sanitary and educational events in various directions on elements of a healthy lifestyle;</li> </ul>	<ul style="list-style-type: none"> <li>- techniques, methods for sanitary and hygienic education of the population, for disseminating knowledge about a healthy lifestyle;</li> <li>- skills in carrying out preventive measures aimed at improving the level of health and preventing diseases of the population;</li> </ul>

		level of health and preventing diseases of the population;		
<b>ОПК-10.</b> Can fathom the principles of modern IT and apply them to fulfil professional tasks	ОПК-10.1 Knows the capabilities and principles of operation of modern information technologies and uses them to solve problems of professional activity.	<ul style="list-style-type: none"> <li>- the importance of medical organization information systems (MOIS) in information support for the process of providing medical care at the level of a medical organization, including maintaining an electronic medical record of the patient;</li> <li>- the importance of MOIS in the processes of interaction with patients (the ability to record and self-register a patient for an appointment with a doctor, issuing electronic copies of medical documents to the patient);</li> <li>- the importance of MOIS in information interaction between medical institutions for referrals for laboratory and diagnostic examinations, for the provision of medical care;</li> </ul>	<ul style="list-style-type: none"> <li>- apply modern information technologies to solve professional problems; carry out an effective search for information necessary to solve professional problems using reference systems and professional databases;</li> <li>- use the MOIS;</li> </ul>	<ul style="list-style-type: none"> <li>- skills in using modern information technologies, the use of special software and automated information systems, including, for solving standard problems of professional activity</li> </ul>
<b>ПК-2</b> Can diagnose a patient	ПК-2.1. Collects complaints, patient history, and a complete physical examination.	<ul style="list-style-type: none"> <li>- methods of interviewing and examining the patient, the main clinical symptoms of diseases, indications for prescribing an examination;</li> <li>- normal laboratory test results;</li> <li>- normal indicators of instrumental examination of the patient, including X-ray, CT, MRI</li> </ul>	<ul style="list-style-type: none"> <li>- collect anamnesis, conduct an examination, physical examination of the patient, formulate a preliminary diagnosis;</li> <li>- analyze the results of laboratory and instrumental examination of the patient;</li> <li>- draw up an examination plan, prescribe empirical treatment;</li> </ul>	<ul style="list-style-type: none"> <li>- methods of physical examination of the patient;</li> <li>- knowledge of decoding the results of laboratory and instrumental examinations;</li> <li>- knowledge to determine the examination plan, correct the treatment plan, make a final diagnosis, determine the need for consultation with specialists.</li> </ul>

<p><b>ПК-5</b> Can gather and analyze academic and R&amp;D information to fulfil professional tasks, take part in research and introduce new methods and practices aimed to protect public health</p>	<p>ПК-5.2. Conducts an analysis of scientific literature and the results of scientific research, assesses the level of evidence of the data obtained.</p>	<ul style="list-style-type: none"> <li>- methods of organizing scientific research and assessing the reliability of the results obtained;</li> <li>- modern scientific research, the basics of using statistical methods in biomedical research;</li> <li>- the role of various modeling methods in the study of pathological processes, their capabilities, limitations and prospects</li> </ul>	<ul style="list-style-type: none"> <li>- formulate a scientific hypothesis, determine the goals and objectives of scientific activity, apply modern theoretical and empirical research methods, make calculations based on the results of their application, carry out statistical processing of the data obtained;</li> <li>- participate in scientific research, solve the problems posed in it, and evaluate the reliability of the data obtained;</li> </ul>	<ul style="list-style-type: none"> <li>- principles of operation of basic laboratory equipment, the basics of using evidence-based medicine methods when conducting scientific research;</li> <li>- skills in solving individual research and scientific-applied problems, methods of statistical processing of research results</li> </ul>
<p><b>ПК-6</b> Can keep medical records and organize the work of paramedical personnel</p>	<p>ПК-6.2. Draws up a work plan, a report on his work, maintains medical documentation, including in electronic form.</p>	<ul style="list-style-type: none"> <li>- regulations and other documents defining the activities of medical organizations and medical workers;</li> <li>- organization of outpatient medical care, including at home;</li> <li>- medical and statistical indicators characterizing the health of the attached population;</li> <li>- rules for processing medical documentation in medical institutions at various levels;</li> <li>- job responsibilities of nursing and junior medical personnel;</li> </ul>	<ul style="list-style-type: none"> <li>- evaluate the organization of outpatient medical care, medical and statistical indicators characterizing the health of the attached population;</li> <li>- correctly draw up medical documentation (including in electronic form), work with personal data of patients, information constituting medical confidentiality;</li> <li>- control the performance of official duties by mid-level and junior medical personnel</li> </ul>	<ul style="list-style-type: none"> <li>- organization of outpatient care for the population, including at home;</li> <li>- methods of assessing and analyzing medical and statistical indicators characterizing the health of the attached population;</li> <li>- skills in preparing medical documentation (including in electronic form), working with personal data of patients, information constituting medical confidentiality;</li> <li>- skills of monitoring the performance of official duties by mid-level and junior medical personnel</li> </ul>

## 2. Assessment of competencies mastery as per the results of practical training (externship: diagnostics)

Practical training stages (stages of competence formation)	Code(s) of competencies	Formative assessment forms	Interim assessment forms
<p><b>Stage 1: Preparation</b></p> <ol style="list-style-type: none"> <li>1. Introducing students to the externship supervisor from the university, the externship base, externship rules, and practice reporting documentation.</li> <li>2. Introducing students to labor protection requirements, safety precautions, fire safety equipment.</li> <li>3. Introducing students to the internal labor regulations of a medical organization.</li> <li>4. Checking the results of medical examination of students</li> <li>5. Introductory briefing</li> <li>6. Distribution to places of practice in hospital departments and assignment to a practice supervisor from the hospital.</li> <li>7. Assigning individual tasks for practical training to students.</li> </ol>	УК-9 ОПК-1 ОПК-2 ОПК-10	Attending introductory briefing and filling in a safety log	Report on practical training
<p><b>Stage 2: Main</b> (undergoing the practical training at the hospital)</p> <ol style="list-style-type: none"> <li>1. Diagnostic, therapeutic and health education activities as an assistant doctor in a hospital therapeutic or surgical department, maintaining medical records.</li> <li>2. Keeping a practice schedule.</li> </ol>	УК-9 ОПК-1 ОПК-2 ОПК-10 ПК-2 ПК-5 ПК-6	Filling in practice schedule; carrying out sanitary educational work	
<p><b>Stage 3: Final</b></p> <ol style="list-style-type: none"> <li>1. Summing up the practice.</li> <li>2. Preparation of reporting documentation on practice.</li> <li>3. Presentation of the practice report.</li> <li>4. Interim assessment.</li> </ol>	ОПК-1 ОПК-2 ОПК-10 ПК-2 ПК-5 ПК-6	Checking the practice reporting documentation (individual assignment, work schedule, practice schedule, practice report, student's characteristics from the practice supervisor from the hospital)	

## 3. Criteria and grading system of the formative assessment tasks

### 3.1. Criteria and grading system of practical training report quality

The practical training syllabus, list of tasks, report documentation layout recommendations are presented in MAU LMS Moodle.

The quality of the report on practical training and accompanying documentation are assessed during the formative assessment.

<b>Grade</b>	<b>Assessment criteria</b>
<i>Excellent</i>	The material is presented in full, consistently, and competently. Individual practice task(s) is/are completed. Primary documents are attached. Appendices are logically connected with the text part of the report. The report is submitted on time. The practice programme is completed. The review is positive.
<i>Good</i>	The material is presented in full, consistently, and meets the requirements. Some insignificant and stylistic mistakes are made. Appendices are mainly connected with the text part of the report. The report is submitted on time. The practice programme is completed. The review is positive.
<i>Satisfactory</i>	The material is not presented completely. The report is not laid out properly. The text part of the report is not fully connected with appendices. The report is submitted on time. The practice programme has not been completed in full. The review is positive.
<i>Unsatisfactory</i>	The material is not presented completely and systematically. There are errors, the layout does not fully meet the requirements. There are no appendices. The report is submitted on time. The review is negative. The practice programme has not been completed.

### 3.2. Criteria and grading system of individual assignment for practical training

Individual assignment:

Fill out the medical records of two patients with diseases of different organs and systems.

Carry out an analysis of two electrocardiograms and make a conclusion; of two spiromograms and make a conclusion. Draw a sketch of an information leaflet on the prevention of infectious and non-infectious diseases and promotion of a healthy lifestyle (optional): on the prevention of respiratory diseases, on the prevention of arterial hypertension, on the prevention of metabolic syndrome, on the prevention of diabetes, on non-specific prevention of respiratory infections.

#### Doctor-patient conversation topics

Department	Date	Conversation topic	Number of audience members

<b>Grade</b>	<b>Assessment criteria</b>
<i>Excellent</i>	The individual task is completed in full, the student shows a high level of independence and uses creative approach to its implementation
<i>Good</i>	The individual assignment is completed in full, there are some drawbacks in the layout of the presented material
<i>Satisfactory</i>	The task as a whole is completed, however, there are drawbacks when performing individual sections (parts) of the task during practice, there are remarks on the layout of the collected material
<i>Unsatisfactory</i>	The task is only partially completed; there are numerous remarks on the layout of the collected material

### 3.3. Assessment criteria of written reports (writing and public presentation of abstracts during clinical practice as part of independent health education work)

List of report topics:

1. Preparing patients for functional research methods
2. Preparing patients for laboratory research methods
3. Preparing patients for x-ray examination methods

4. Preparing patients for endoscopic examination methods
5. Preparing patients for ultrasound examination
6. Electrocardiographic study definition, methodology, indications, contraindications
7. Echocardiography definition, technique, indications, contraindications
8. X-ray examination definition, methodology, indications, contraindications
9. Ultrasound examination definition, methodology, indications, contraindications
10. Endoscopic examination definition, classification, methodology, indications, contraindications
11. Gastroscopy definition, technique, indications, contraindications
12. Cystoscopy definition, technique, indications, contraindications
13. Bronchoscopy definition, technique, indications, contraindications
14. Laparoscopy definition, technique, indications, contraindications
15. Rectoscopy definition, technique, indications, contraindications
16. Biopsy definition, technique, indications, contraindications
17. Computed tomography definition, classification, methodology, indications, contraindications
18. Magnetic resonance imaging definition, methodology, indications, contraindications
19. Electroencephalography definition, methodology, application of electrodes, indications, contraindications
20. Stress echocardiography definition, methodology, indications, contraindications
21. Rheographic examination definition, methodology, indications, contraindications
22. Doppler ultrasound definition, technique, indications, contraindications

Grade	Assessment criteria
<i>Excellent</i>	Content of the report corresponds to the topic stated in the title; the report is formatted in accordance with the general requirements for writing and the technical requirements for preparing a report; has a clear composition and structure; correctly formatted and given in full. A list of used literature and links to the used literature are presented in the text of the report; the report is an independent research, a qualitative analysis of the found material is presented, there are no facts of plagiarism;
<i>Good</i>	Content of the report corresponds to the topic stated in the title; the report is designed in accordance with the general writing requirements, but there are errors in technical design; in general, the report has a clear composition and structure, there are logical violations in the presentation of the material; The list of used literature is presented in full, but there are errors in the design; references to the used literature are not fully presented in the text of the report; in general, the report represents an independent research; an analysis of the found material is presented, there are no facts of plagiarism;
<i>Satisfactory</i>	Content of the report corresponds to the topic stated in the title; the report contains violations of the general requirements for writing a report; there are errors in the technical design; in general, the report has a clear composition and structure, there are logical violations in the presentation of the material; the list of used literature is presented in full, but there are errors in its design; there are spelling and grammatical errors; in general, the report is a fairly independent research; there are isolated cases of plagiarism;
<i>Unsatisfactory</i>	Content of the report does not correspond to the topic stated in the title; there are errors in the technical design; there are violations of composition and structure; there are logical violations in the presentation of the material; the list of used literature is not presented in full, there are errors in its design; there are numerous spelling, stylistic errors; the report is an unprocessed text of another author (other authors).

#### **4. Criteria and grading system of practical training results during the interim assessment**

The interim assessment of students based on the results of the practical training is a graded credit, which is carried out in the form of a presentation of the results of the externship and an interview with the teacher.

Assessment materials include a typical list of questions for report presentation:

1. Rules for obtaining informed voluntary consent for medical intervention, including electronically.
2. Methodology and diagnostic value of assessing the general condition, position, consciousness of a patient.
3. Diagnostic value of visual examination of the skin and mucous membranes shells
4. Diagnostic value of questioning, visual examination, palpation, percussion and auscultation for respiratory diseases
5. Diagnostic value of questioning, visual examination, palpation, percussion and auscultation for diseases of the circulatory system
6. Methodology and diagnostic value of studying blood pressure, palpation and auscultation of arteries
7. Diagnostic value of questioning, visual examination, palpation, percussion for diseases of the stomach and intestines
8. Diagnostic value of questioning, visual examination, palpation, percussion for diseases of the hepatobiliary system
9. Diagnostic value of questioning, visual examination, palpation, percussion for diseases of the urinary system
10. Diagnostic value of questioning, visual examination, palpation, percussion during diseases of the endocrine system
11. Diagnostic value of questioning, visual examination, palpation and examination functions in diseases of the musculoskeletal system
12. Diagnostic value of questioning, visual examination, palpation, percussion during diseases of the hematopoietic system
13. Interpretation of ECG results: heart rhythm disturbances, conduction disturbances, coronary insufficiency
14. Interpretation of general blood test, general urinalysis, laboratory parameters of glucose metabolism
15. Interpretation of coprogram, liver function tests, biochemical parameters
16. Main areas of clinical application of radiological research.
17. Main areas of clinical application of MRI.
18. Main areas of clinical application of ultrasound.
19. The main areas of clinical application of diagnostic angiography.
20. Main areas of clinical application of CT.

Criteria and grading system of practical training report presentation



<b>Grade</b>	<b>Assessment criteria</b>
<b><i>Excellent</i></b>	Student demonstrates a complete understanding of the problem, has versatile skills and techniques for performing practical tasks. All requirements for the task have been met. The content of the report is deep and comprehensive. The layout of the report is at a high level (compliance with requirements, completeness of information, general layout). The work is complete and a creative approach is used.
<b><i>Good</i></b>	Student demonstrates a significant understanding of the problem, correctly applies theoretical principles when solving practical issues and problems, and has the necessary skills to solve practical problems. All requirements for the task have been met. Report layout is at a sufficient level (compliance with requirements, completeness of information, general layout). For the most part, the work is clear and coherent.
<b><i>Satisfactory</i></b>	Student demonstrates a partial understanding of the problem, has knowledge only of the basic material, but has not mastered its details. Many requirements for the assignment have not been met. There is some integration of elements into the whole, but the work is unoriginal and/or unfinished. Report layout - at a low level (compliance with requirements, completeness of information presentation, general layout)
<b><i>Unsatisfactory</i></b>	Student demonstrates complete lack of understanding of the problem. The work is unfinished, partial and logically disconnected and / or is plagiarized. OR No practical training report has been provided.