

**SYLLABUS**  
**Асқорыту жүйесі мен бауыр патологиясы, асқорыту**  
**Патология пищеварительной системы и печени, пищеварение**  
**Pathology of the digestive system and liver, digestion**

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| <b>SECTION A: FINAL.</b>                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |                                                                                                                                    |
| <i>The items in this section may be reviewed and developed by departments/schools as part of the educational program monitoring process.</i>                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |                                                                                                                                    |
|                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |                                                                                                                                    |
| <b>1.</b>                                                                                                                                                                                         | <b>General information about the discipline</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |                                                                                                                                    |
| 1.1                                                                                                                                                                                               | Faculty/School:<br>Graduate School of Medicine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.6  | Credits (ECTS):<br>(a) 5 credits - 150 hours                                                                                       |
| 1.2                                                                                                                                                                                               | Educational Program (EP):<br>6B10114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.7  | Prerequisites:<br>1. Жалпы патология/Общая патология/General pathology<br>2. Науқас және дәрігер/Пациент и врач/Patient and doctor |
| 1.3                                                                                                                                                                                               | Agency and year of accreditation of the EP<br>Eurasian Centre for Accreditation and Quality Assurance in Higher Education and Health Care (ECAQA) 2025                                                                                                                                                                                                                                                                                                                                                                                                       | 1.8  | ISW/IMW/IDW(count):<br>75 hours                                                                                                    |
| 1.4                                                                                                                                                                                               | Title of discipline:<br>Асқорыту жүйесі мен бауыр патологиясы,<br>асқорыту/Патология пищеварительной системы и печени,<br>пищеварение/Pathology of the digestive system and liver,<br>digestion                                                                                                                                                                                                                                                                                                                                                              | 1.9  | ISW/IMW/IDW(count):<br>50 hours                                                                                                    |
| 1.5                                                                                                                                                                                               | ID of discipline: 103502<br>Code of discipline: PPS2217                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1.10 | <b>Required</b> - yes                                                                                                              |
| <b>2.</b>                                                                                                                                                                                         | <b>Description of the discipline</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |                                                                                                                                    |
|                                                                                                                                                                                                   | During the study of the course to form the students' abilities:<br>The discipline includes the study of pathogenesis, pathomorphology, clinical presentation of problems (clinical syndromes), and clinically oriented pharmacology of digestive and liver pathology. Training involves the development of clinical reasoning, analytical and problem-oriented thinking, deep understanding of the problem in the clinical context; formation and development of skills of clinical diagnosis of pathology, and reasonable formation of syndromic diagnosis. |      |                                                                                                                                    |
| <b>3</b>                                                                                                                                                                                          | <b>Purpose of the discipline</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |                                                                                                                                    |
| In studying the discipline, students will learn the following aspects:<br>- Apply knowledge of the pathogenesis of gastrointestinal and liver pathology in the process of diagnosis and treatment |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |                                                                                                                                    |

- Obtain the ability to conduct a focused questioning and physical examination of the patient, taking into account age-specific features with pathology of the gastrointestinal tract and liver.
- Define diagnostic and therapeutic interventions relevant to common diseases affecting the gastrointestinal tract and liver.
- Interpret basic laboratory and instrumental examination findings in gastrointestinal and liver pathology
- Integrate knowledge to identify the main syndromes of GI tract and liver damage: dysphagia, abdominal pain, gastric dyspepsia, intestinal dyspepsia, jaundice (cholestasis), gastrointestinal bleeding, hepato-splenomegaly, hepatitis (cytolytic), hepatic cell failure, portal hypertension, diffuse change, volume formation in the liver.
- Describe social, economic, ethnic, and racial factors that play a role in the development, diagnosis, and treatment of gastroenterological diseases;
- Apply the classification of gastroenterological diseases, understand the mechanism of action, and pharmacokinetics, and analyze side effects, indications, and contraindications for the use of agents that affect GI motility, laxatives, pre-and probiotics, antidiarrheal drugs, enzymes, proteolytic enzyme inhibitors, anti-inflammatory, antiviral drugs;
- Demonstrate the ability to conduct an effective medical interview, taking into account the rules and norms of the doctor-patient relationship and knowledge of basic principles of human behavior at different ages, in normal and abnormal behavior, and in different situations;
- Demonstrate a commitment to the highest standards of professional responsibility and integrity; - adhere to ethical principles in all professional interactions;
- Demonstrate a need for continuous professional learning and improvement of their knowledge and skills;
- Demonstrate research skills, a desire to learn new knowledge, and transfer knowledge to others.

| <b>4. Learning Outcomes (LOs) for the discipline (3-5)</b> |                                                                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            | LOs of the discipline                                                                                                               |                       | The LOs for an educational program, with which the LOs in the discipline are connected (No. of LOs from the passport of EP)                                                                                                                                                                                                                                                                |
|                                                            | 1. Apply knowledge of the pathogenesis of gastrointestinal and liver pathology in the process of diagnosis and treatment            | Proficiency level - 2 | 1. Gather information from patients and other sources relevant to the diagnosis, treatment, and prevention of common and emergency conditions, including performing diagnostic procedures.                                                                                                                                                                                                 |
|                                                            | 2. Be able to conduct a focused questioning and physical examination of the patient, taking into account the age characteristics of | Proficiency level - 3 | 2. Identify and interpret clinical symptoms and syndromes, laboratory and instrumental examination data of patients with the most common diseases in their typical manifestation and course in the age-related aspect; interpret, analyze, evaluate, and prioritize relevant data to formulate a diagnosis and disease management plan, including initiation of appropriate interventions. |

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|  | gastrointestinal and liver pathology.                                                                                                                                                                                                                                                                                                      |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  | 3. Identify diagnostic and therapeutic interventions related to common diseases affecting the gastrointestinal tract and liver.                                                                                                                                                                                                            | Proficiency level - 2 | 3. Integrate clinical knowledge and skills to provide an individualized approach in treating a specific patient and promoting their health according to their needs; make professional decisions based on analysis of diagnostic rationality and applying the principles of evidence-based and personalized medicine.                                                                                                                                                                                                                           |
|  | 4. Interpret basic laboratory and instrumental examination findings in gastrointestinal and liver pathology.                                                                                                                                                                                                                               | Proficiency level - 2 | 4. Apply knowledge of basic principles of human behavior for effective communication and the treatment and diagnostic process in compliance with the principles of ethics and deontology; apply knowledge of patient psychology in a culturally and racially sensitive manner; demonstrate skills in teamwork, organization, and management of the diagnostic and treatment process; effectively build dynamic doctor-patient relationships that occur before, during and after medical treatment; effectively communicate medical information. |
|  | 5. Integrate knowledge to identify the major syndromes of GI and liver damage: dysphagia, abdominal pain, gastric dyspepsia, intestinal dyspepsia, jaundice (cholestasis), gastrointestinal bleeding, hepato-splenomegaly, hepatitis (cytolytic), hepatic cell failure, portal hypertension, diffuse change, voluminous mass in the liver. | Proficiency level - 3 | 5. Provide medical care for the most common diseases in patients of all age groups, emergency and life-threatening conditions;                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|  | 6. Describe social, economic, ethnic, and racial factors that play a role in the development, diagnosis, and treatment of gastroenterological diseases;                                                                                                                                                                                                         | Proficiency level - 2 | 6. Analyze and maintain necessary documentation and document management in health care organizations; use modern information technologies and health information systems to solve professional tasks.                                                                                                            |
|  | 7. Apply the classification of gastroenterological diseases, understand the mechanism of action, and pharmacokinetics, and analyze side effects, indications, and contraindications to the use of agents affecting GI motility, laxatives, pre-and probiotics, antidiarrheal drugs, enzymes, proteolytic enzyme inhibitors, anti-inflammatory, antiviral drugs; | Proficiency level - 3 | 7. Analyze and maintain necessary documentation and document management in health care organizations; use modern information and digital technologies and health information systems to solve professional tasks.                                                                                                |
|  | 8. Demonstrate the ability to conduct an effective medical interview, taking into account the rules and norms of the doctor-patient relationship and knowledge of basic principles of human behavior at different ages, in normal and abnormal                                                                                                                  | Proficiency level - 2 | 8. Demonstrate a commitment to the highest standards of professional responsibility and integrity; uphold ethical principles in all professional interactions with patients, families, colleagues, and the community at large, regardless of ethnicity, culture, gender, economic status, or sexual orientation; |

|           |                                                                                                                                                                  |                       |                                                                                                                                                                     |
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|           | behavior, and different situations;                                                                                                                              |                       |                                                                                                                                                                     |
|           | 9. Demonstrate a commitment to the highest standards of professional responsibility and integrity; -observe ethical principles in all professional interactions; | Proficiency level - 2 | 9. Demonstrate a need for continuous professional learning and improvement of their knowledge and skills throughout their professional career;                      |
|           | 10. Demonstrate a need for continuous professional learning and improvement of their knowledge and skills;                                                       | Proficiency level - 3 | 10. Demonstrate scientific inquiry skills, a desire for new knowledge, and the transfer of knowledge to others.                                                     |
|           | 11. Demonstrate scientific inquiry skills, a desire for new knowledge, and the transfer of knowledge to others.                                                  | Proficiency level - 3 |                                                                                                                                                                     |
| <b>5.</b> | <b>Summative assessment methods</b> (mark (yes - no) / indicate your own):                                                                                       |                       |                                                                                                                                                                     |
| 5.1       | MCQs for comprehension and application                                                                                                                           | 5.5                   | Portfolio of research papers                                                                                                                                        |
| 5.2       | Practical skills exam - mini clinical exam (MiniCex) for 3rd year                                                                                                | 5.6                   | Supervision, clinical skills                                                                                                                                        |
| 5.3       | 3. ISW (case, video, simulation OR SRW - thesis, report, article) - assessment of creative assignment.                                                           | 5.7                   | Examination: comprehensive for the whole module of PIC-1 including "Language in Medicine"<br>Stage 1 - MCQ test for comprehension and application<br>Stage 2 - OSCE |
| 5.4       | Case history                                                                                                                                                     | 5.8                   |                                                                                                                                                                     |

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| 6.                 | Detailed information about the discipline                                         |                  |                             |                                                                                                                          |                                                                                                                                                                            |
| 6.1                | Academic Year:<br>2025-2026                                                       |                  | 6.3                         | Schedule (class days, times):<br>C 8.00 a.m. to 2.00 p.m.                                                                |                                                                                                                                                                            |
| 6.2                | Semester:<br>5 semester                                                           |                  | 6.4                         | Location<br>(academic building, classroom, platform, and reference to the DOT training meeting):<br>SCB NO. 1, SCB NO. 7 |                                                                                                                                                                            |
| 7.                 | Leader of the discipline                                                          |                  |                             |                                                                                                                          |                                                                                                                                                                            |
| Position           |                                                                                   | Full name        | Departm<br>ent              | Contact<br>information<br>(tel., e-mail)                                                                                 | Consultations before exams                                                                                                                                                 |
| Senior<br>lecturer |                                                                                   | Abdykassymova M. | Clinical<br>disciplin<br>es | 8 (777) 666-22-25                                                                                                        | Before the examination session within 60 minutes.                                                                                                                          |
| 8.                 | Discipline content                                                                |                  |                             |                                                                                                                          |                                                                                                                                                                            |
|                    | Title of the topic                                                                |                  | Number of hours             |                                                                                                                          | Form of conducting                                                                                                                                                         |
| 1.                 | Dysphagia syndrome and esophageal motor function disorders                        |                  | 6                           |                                                                                                                          | Formative assessment:<br>1. Use of active learning methods: TBL, CBL<br>2. Work with the patient<br>3. Training in the simulation center<br>4. Mini-conference ISW topics. |
| 2.                 | Gastric dyspepsia syndrome, gastric and/or duodenal ulcer syndrome, pain syndrome |                  | 6                           |                                                                                                                          | Formative assessment:<br>1. Use of active learning methods: TBL, CBL<br>2. Work with a patient<br>3. Training in a simulation center.                                      |
| 3.                 | Intestinal dyspepsia syndrome, colonic motor dysfunction syndrome                 |                  | 6                           |                                                                                                                          | Formative assessment:<br>1. Use of active learning methods: TBL, CBL<br>2. Working with a patient<br>3. Training in a simulation center.                                   |
| 4.                 | Maldigestion and malabsorption syndrome, pain syndrome in pancreatic lesions      |                  | 6                           |                                                                                                                          | Formative assessment:<br>1. Use of active learning methods: TBL, CBL                                                                                                       |

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|                          |                                                                             |    | 2. Work with a patient<br>3. Training in the simulation center.                                                                                                        |
| <b>Rubric 1</b>          |                                                                             |    | Summative assessment:<br>2 stages:<br>Stage 1 - MCQ testing for understanding and application - 40%<br>Stage 2 - Mini Clinical Examination (MiniCex) - 60%.            |
| 5.                       | Cytolysis and mesenchymal inflammatory syndrome                             | 12 | Formative assessment:<br>1. Use of active learning methods: TBL, CBL<br>2. Work with patient<br>3. Training in a simulation center<br>4. Mini-conference of ISW topics |
| 6.                       | Jaundice and cholestasis syndrome, hepato-splenomegaly syndrome             | 12 | Formative assessment:<br>1. Use of active learning methods: TBL, CBL<br>2. Work with patient<br>3. Training in a simulation center<br>4. Mini-conference of ISW topics |
| 7.                       | Liver cell failure syndrome, portal hypertension, gastrointestinal bleeding | 12 | Formative assessment:<br>1. Use of active learning methods: TBL, CBL<br>2. Work with patient<br>3. Training in the simulation center                                   |
| 8.                       | Diffuse changes and volume formation syndrome in the liver                  | 12 | Formative assessment:<br>1. Use of active learning methods: TBL, CBL<br>2. Work with patient<br>3. Training in a simulation center<br>4. Mini-conference of ISW topics |
| <b>Rubric 2</b>          |                                                                             |    | Summative assessment:<br>2 stages:<br>Stage 1 - MCQ testing for understanding and application - 40%<br>2nd stage - mini clinical exam (MiniCex) - 60%                  |
| <b>Final Assessment:</b> |                                                                             |    | Summative assessment:<br>2 stages:<br>1st stage - MCQ testing for understanding and application - 50%                                                                  |

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|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2nd stage - OSCE - 50%                                                                                                   |
| <b>Total</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>100</b>                                                                                                               |
| <b>9.</b>                | <b>Teaching methods for the discipline</b><br>(Summarize the teaching and learning approaches to be used in teaching)<br>Use of active learning methods: TBL, CBL                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                          |
| 1                        | <b>Formative assessment methods:</b><br>TBL – Team-Based Learning ( <a href="https://classroom.google.com/w/MzM5OTU5MjU0OTM0/t/all">https://classroom.google.com/w/MzM5OTU5MjU0OTM0/t/all</a> )<br>CBL – Case Based Learning ( <a href="https://www.queensu.ca/ctl/resources/instructional-strategies/case-based-learning#:~:text=What%20is%20Case%2DBased%20Learning,group%20to%20examine%20the%20case.">https://www.queensu.ca/ctl/resources/instructional-strategies/case-based-learning#:~:text=What%20is%20Case%2DBased%20Learning,group%20to%20examine%20the%20case.</a> ) |                                                                                                                          |
| 2                        | <b>Summative assessment methods (from item 5):</b><br>1. MCQ testing for comprehension and application<br>2. Practical skills exam - mini clinical exam (MiniCex) for year 3 students<br>3. ISW (case study, video, simulation OR SRW - thesis, report, paper) - creative assignment assessment<br>4. Case history<br>5. Portfolio of scientific works<br>6. Supervision, clinical skills                                                                                                                                                                                        |                                                                                                                          |
| <b>10.</b>               | <b>Summative assessment (indicate grades)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                          |
| <b>Nº</b>                | <b>Class</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>% of total %</b>                                                                                                      |
| 1                        | Supervision, clinical skills                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20%                                                                                                                      |
| 2                        | ISW (case study, video, simulation OR SRW - thesis, report, article)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10%                                                                                                                      |
| 3                        | Rubric 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 70% (1st stage - MCQ testing for understanding and application - 40%;<br>2nd stage - Mini Clinical Exam (MiniCex) - 60%) |
| <b>Total of Rubric 1</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20 + 10 + 70 = 100%                                                                                                      |
| 5                        | Case history                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20%                                                                                                                      |
| 6                        | ISW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10%                                                                                                                      |
| 7                        | Border control 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 70% (1st stage - MCQ testing for understanding and application - 40%;<br>2nd stage - Mini Clinical Exam (MiniCex) - 60%) |
| <b>Total of Rubric 2</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20 + 10 + 70 = 100%                                                                                                      |
| 9                        | Exam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>2 stages:</b><br>Stage 1 - MCQ testing for understanding and application - 50%<br>2nd stage - OSCE - 50%              |



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| 10           | Final Assessment:                                                                          |                                                                                 | OAR 60% + Exam 40% (Stage 1 - MCQ testing for understanding and application - 40%; Stage 2 - OSCE - 60%)                   |
| 10.          | Evaluation                                                                                 |                                                                                 |                                                                                                                            |
| Letter grade | Numerical equivalent                                                                       | Points (% content)                                                              | Description of the assessment<br>(changes to be made only at the decision level of the Faculty Academic Quality Committee) |
| A            | 4,0                                                                                        | 95-100                                                                          | Excellent. Exceeds the highest standards of the assignment.                                                                |
| A-           | 3,67                                                                                       | 90-94                                                                           | Excellent. Meets the highest standards of the assignment.                                                                  |
| B+           | 3,33                                                                                       | 85-89                                                                           | Good. Very good. Meets the highest standards of the assignment.                                                            |
| B            | 3,0                                                                                        | 80-84                                                                           | Good. Meets most standards of the assignment.                                                                              |
| B-           | 2,67                                                                                       | 75-79                                                                           | Good. More than adequate. Shows some reasonable mastery of the material.                                                   |
| C+           | 2,33                                                                                       | 70-74                                                                           | Good. Acceptable. Meets the basic standards of the assignment.                                                             |
| C            | 2,0                                                                                        | 65-69                                                                           | Satisfactory. Acceptable. Meets some basic standards of the assignment.                                                    |
| C-           | 1,67                                                                                       | 60-64                                                                           | Satisfactory. Acceptable. Meets some basic standards of the assignment.                                                    |
| D+           | 1,33                                                                                       | 55-59                                                                           | Satisfactory. Minimally acceptable.                                                                                        |
| D            | 1,0                                                                                        | 50-54                                                                           | Satisfactory. Minimally acceptable. The lowest level of knowledge and performance on the assignment.                       |
| FX           | 0,5                                                                                        | 25-49                                                                           | Unsatisfactory. Minimally acceptable.                                                                                      |
| F            | 0                                                                                          | 0-24                                                                            | Unsatisfactory. Very low productivity.                                                                                     |
| 11.          | Learning Resources (use full reference and indicate where texts/materials can be accessed) |                                                                                 |                                                                                                                            |
| Literature   |                                                                                            | General<br>Available in the library                                             |                                                                                                                            |
|              |                                                                                            | Author                                                                          | Name of book, publisher                                                                                                    |
|              |                                                                                            | Nicholas J Talley, Brad Frankum & David Currow. Essentials of Internal Medicine | Elsevier. 3d edition, Chapter 12, p 320-323 – 1 book                                                                       |
|              |                                                                                            |                                                                                 | Year of publication                                                                                                        |
|              |                                                                                            |                                                                                 | 2014                                                                                                                       |

**Not available in the library**

| <b>Author</b>                                                                                                 | <b>Name of book, publisher</b>                                                                                              | <b>Year of publication</b> |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------|
| И.В. Маев, А.А. Самсонов, Д.Н. Андреев.                                                                       | Болезни желудка — М.: ГЭОТАР-Медиа                                                                                          | 2015                       |
| Флок Мартин Х., Питчумони К.С., Нил Р. Флок                                                                   | Гастроэнтерология с иллюстрациями Неттера                                                                                   | 2021                       |
| Под ред. Н.А. Буна, Н.Р. Колледжа, Б.Р. Уолкера, Д.А.А. Хантера; Пер. с англ.; Под ред. В.Т. Ивашкина         | Гастроэнтерология. Гепатология. Учебное пособие.                                                                            | 2009                       |
| Гастроэнтерология. Стандарты медицинской помощи. Критерии оценки качества. Фармакологический справочник. — М. | ГЭОТАР-Медиа                                                                                                                | 2020                       |
| под ред. Б.Е. Лэйси, М.Д. Кроуэлла, Дж.К. ДиБайза; пер. с англ. под ред. С.В. Демичева                        | Функциональные расстройства желудочнокишечного тракта. Практический подход на основе клинического опыта. — М.: ГЭОТАР-Медиа | 2017                       |
| ред. Д.Дж. Штайн, Р. Шейкер; пер. с англ. под ред. И.Л. Халифак                                               | Воспалительные заболевания кишечника. Клиническое руководство. — М.: ГЭОТАР-Медиа                                           | 2019                       |
| В.Ф. Учайкин, Т.В. Чередниченко, А.В. Смирнов                                                                 | Инфекционная гепатология: руководство для врачей. — М.: ГЭОТАР-Медиа                                                        | 2014                       |

|                                            |                                                                                               |                                                                                                                                   |      |  |
|--------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------|--|
|                                            | под ред. И.Ю. Мельниковой                                                                     | Детская гастроэнтерология: практическое руководство. — М.: ГЭОТАР-Медиа                                                           | 2019 |  |
|                                            | Т.Г. Авдеева, Л.П. Парменова, Т.В. Мякишева. — 2-е изд., перераб. и доп                       | Детская гастроэнтерология / . — М.: ГЭОТАРМедиа                                                                                   | 2019 |  |
|                                            | М.Ю. Денисов                                                                                  | Младенческая гастроэнтерология: руководство для врачей. — М.: ГЭОТАР-Ме                                                           | 2020 |  |
|                                            | Ройтберг                                                                                      | Внутернные болезни. Система органов пищеварения                                                                                   | 2007 |  |
|                                            | С.К. Жауғашева, С.Б. Жәутікова, М.М. Түсіпбекова және б                                       | «Ас қорыту жүйесі» модулі = модуль «Пищеварительная система»: интеграцияланған оқулық: қазақ және орыс тілдерінде. — М.: Литтерра | 2014 |  |
|                                            | Жаугашева С. К. , Жаутикова С. Б. , Тусупбекова М. М                                          | Ас қорыту жүйесі модулі. - Москва : Литтерра                                                                                      | 2014 |  |
|                                            | Е.М. Ларюшина, Л.Г. Тургунова, А.А. Ким және басқалар; серия редакторы Р.С. Досмағамбетова    | Ішкі аурулар: «Гастроэнтерология»модул                                                                                            | 2016 |  |
|                                            | Harrisson’s Manual of Medicine 20th Edition, Section 6, chapter 40, p. 249-253, p. 2209-2220. |                                                                                                                                   | 2020 |  |
| <b>Additional Available in the library</b> |                                                                                               |                                                                                                                                   |      |  |

|  | Author                                                                                                                             | Name of book, publisher                                     | Year of the publication                                                                                                               |
|--|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|  | Nicholas J Talley, Brad Frankum & David Currow. Essentials of Internal Medicine                                                    | Elsevier. 3d edition, Chapter 12, p 320-323 – <b>1 book</b> | 2014                                                                                                                                  |
|  | Материалы съезда 48-й Ежегодный Съезд Европейской Ассоциации по заболеванию печени                                                 | Европейская Ассоциация по заболеванию печени                | 24-28 апр. 2013 г. : рефераты докладов и сообщений / ред. В. Fulvio ; пер. с англ. М. Хазан, 2013. - 35 с. - Текст : непосредственный |
|  | Mukhamedzhanov R. Pathomorphology of Gastritis : teaching manual / R. Mukhamedzyanov, M. Tussupbekova, E. Kamishanskiy, 58, [1] p. |                                                             | 2016                                                                                                                                  |
|  | Rao, S Devaji. Snapshots in Gastroenterology : [monograph] / S D. Rao,. - 1075 p.                                                  |                                                             | 2016                                                                                                                                  |
|  | Ішкі аурулар гастроэнтерология модулі : оқулық / Е. М. Ларюшина, Л. Г. Тургунова, А. А. Ким, Г. Г.                                 |                                                             | 2016                                                                                                                                  |

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|  | Оспанова ; серия ред. Р. С. Досмағамбетова, 380 б                                                                                                               |                                                                                                          |                            |
|  | Ас қорыту жүйесі модулі : оқулық / [С. К. Жауғашева және т. б.] ; жауапты ред.: С. Б. Жәутікова, С. Б. Нұрсұлтанова ; серия ред. Р. С. Досмағамбетова, - 375 б. |                                                                                                          | 2014                       |
|  | <b>Not available in the library</b>                                                                                                                             |                                                                                                          |                            |
|  | <b>Author</b>                                                                                                                                                   | <b>Name of book, publisher</b>                                                                           | <b>Year of publication</b> |
|  | / под ред. И.В. Маева                                                                                                                                           | Тактика врача-гастроэнтеролога: практическое руководство /: ГЭОТАР-Медиа, ил. — (Серия «Тактика врача»). | 2019                       |
|  | М.К. Бэйтсон, И.А.Д. Бушьер; пер. с англ. под ред. Е.Ю. Плотниковой                                                                                             | . Клинические исследования в гастроэнтерологии                                                           | 2021                       |
|  | В.Т. Ивашкин, И.В. Маев, А.С. Трухманов                                                                                                                         | Справочник по инструментальным исследованиям и вмешательствам в гастроэнтерологии /— М.: ГЭОТАРМедиа     | 2015                       |
|  | И.В. Маев, Г.А. Бусарова, Д.Н. Андреев                                                                                                                          | Болезни пищевода / М.: ГЭОТАР-Медиа                                                                      | 2019                       |
|  | под ред. А.В. Чжао                                                                                                                                              | Холангиоцеллюлярная карцинома, — М.: ГЭОТАР-Медиа                                                        | 2021                       |

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|  | под ред. Б.Е. Лэйси, М.Д. Кроуэлла, Дж.К. ДиБайза; пер. с англ. под ред. С.В. Демичева | Функциональные расстройства желудочнокишечного тракта. Практический подход на основе клинического опыта. — М.: ГЭОТАР-Медиа                              | 2017 |  |
|  | под ред. М.Ф. Ваези; пер. с англ. под ред. В.А. Ахмедова                               | Гастроэзофагеальная рефлюксная болезнь. Диагностика и лечение. — М.: ГЭОТАР-Медиа                                                                        | 2016 |  |
|  | под ред. Е.В. Ших                                                                      | Гастроэзофагеальная рефлюксная болезнь: клинические проявления, медикаментозная терапия. — М.: ГЭОТАРМедиа                                               | 2019 |  |
|  | В.А. Ахмедов, М.А. Ливзан                                                              | Заболевания желудочно-кишечного тракта у беременных. — М.: ГЭОТАР-Медиа                                                                                  | 2016 |  |
|  | С.В. Бельмер, А.И. Хавкин, Д.В. Печкуров                                               | Функциональные расстройства органов пищеварения у детей. Принципы диагностики и лечения (международные и отечественные рекомендации). — М.: ГЭОТАР-Медиа | 2020 |  |
|  | А.М. Запруднов                                                                         | Заболевания кишечника в детском возрасте: руководство для врачей. — М.: ГЭОТАР-Медиа                                                                     | 2018 |  |
|  | А.А. Королев. — 2-е изд., перераб. и доп.                                              | Гигиена питания. Руководство для врачей. — М.: ГЭОТАР-Медиа                                                                                              | 2021 |  |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Д. Джоши, Дж. Кин, Э. Бринд; пер. с англ. Ю.О. Шутьпековой; под ред. Ч.С. Павлова | Наглядная гепатология: учеб. пособие. — М.: ГЭОТАР-Медиа                                | 2018 |
| <p>Link to the literature - <a href="https://classroom.google.com/w/NDIyMDkzNzkwOTI2/tc/NDIyMDk0OTY0MzA4">https://classroom.google.com/w/NDIyMDkzNzkwOTI2/tc/NDIyMDk0OTY0MzA4</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                   |                                                                                         |      |
| <p>General<br/>(fundamental works published earlier than the required period of relevance)</p> <p><b>Available in the library</b></p> <ol style="list-style-type: none"> <li>1. Ішкі аурулар пропедевтикасы Әдістемелік оқу құралы 2013 – 30 books.</li> <li>2. Пропедевтика внутренних болезней: учебник / Мухин Н.А., Моисеев В.С., М.:Геотар Медиа 2020г. – 10 books.</li> <li>3. Ішкі аурулар пропедевтикасы: оқулық — М.: ГЭОТАР-Медиа,2015. — 672 б.: ил. Н.А. Мухин, В.С. Моисеев; қазақтіліндегі редакциясын басқарған Б.Б. Абдахина; жауапты редакторы В.А. Ткачев – 20 books.</li> </ol> <p><b>Not available in the library</b></p> <ol style="list-style-type: none"> <li>4. «Ас қорыту жүйесі» модулі модуль «Пищеварительная система»: Интеграцияланған оқулық: қазақ және орыс тілдерінде / — М.: Литтерра, 2014. —376 б.: ил</li> <li>5. BATES' Guide to Physical Examination and History Taking, 12th edition</li> <li>6. Macleod's Clinical Examination 14th Edition, 2017</li> <li>7. USMLE Step 2 CK Lecture Notes 2020. Internal Medicine</li> <li>8. Lippincott Illustrated Reviews: Pharmacology, 7th Edition, 2019.</li> <li>9. Robbins Essential Pathology, 2021.</li> <li>10. USMLE Step 1 Lecture Notes 2021.Pathology</li> </ol> |                                                                                   |                                                                                         |      |

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| <b>Electronic resources</b> (including but not limited to electronic library catalog, scholarly literature databases, databases, animation, modeling, professional blogs, websites, and other electronic reference materials (e.g., video, audio, digests)) | <b>Internet resources:</b><br>1. Medscape.com - <a href="https://www.medscape.com/familymedicine">https://www.medscape.com/familymedicine</a><br>2. Oxfordmedicine.com - <a href="https://oxfordmedicine.com/">https://oxfordmedicine.com/</a><br>3. Uptodate.com - <a href="https://www.wolterskluwer.com/en/solutions/uptodate">https://www.wolterskluwer.com/en/solutions/uptodate</a><br>4. Osmosis - <a href="https://www.youtube.com/c/osmosis">https://www.youtube.com/c/osmosis</a><br>5. Ninja Nerd - <a href="https://www.youtube.com/c/NinjaNerdScience/videos">https://www.youtube.com/c/NinjaNerdScience/videos</a><br>6. CorMedicale - <a href="https://www.youtube.com/c/CorMedicale">https://www.youtube.com/c/CorMedicale</a> - medical video, animation in Russian.<br>7. Lecturio Medical - <a href="https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q">https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q</a><br>8. SciDrugs - <a href="https://www.youtube.com/c/SciDrugs/videos">https://www.youtube.com/c/SciDrugs/videos</a> - videolecture about pharmacology in Russian. |
| <b>Simulators in the simulation center</b>                                                                                                                                                                                                                  | 1. SAM (Student auscultation manikin) – Student manikin for auscultation of pathology and systems (including digestive system).<br><br>2. Chinese mannequin for teaching percussion, palpation of abdominal organs (liver, spleen)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Special software</b>                                                                                                                                                                                                                                     | 1. Google Classroom - freely available.<br>2. Medical calculators: Medscape, Physician's Desk Reference, MD+Calc - freely available. 3.<br>3. Reference book of diagnostic and treatment protocols for health workers from Republican Center for Health Development, Ministry of Health of the Republic of Kazakhstan (ПЦРЗ, МЗ РК): Dariger - freely available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

#### THEMATIC PLAN AND CONTENT OF PRACTICAL TRAINING

| № | Topic             | Content            | Literature                                                                         | Form of conduct       |
|---|-------------------|--------------------|------------------------------------------------------------------------------------|-----------------------|
|   | 2                 | 3                  | 4                                                                                  | 5                     |
| 1 | Dysphagia syndrom | Learning Outcomes: | 1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., | Formative assessment: |



|  |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                     |
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|  | e and esophageal motility disorders | <ul style="list-style-type: none"> <li>- can identify symptoms of digestive system lesions when interviewing a patient</li> <li>- can conduct a technically correct and systematized physical examination of a patient with the pathology of the digestive system.</li> <li>- can identify symptoms of dysphagia - symptoms of gastroesophageal reflux disease, Canker's diverticulum, and esophageal oncopathology.</li> <li>- can confirm the presumed diagnosis by laboratory and instrumental methods.</li> <li>- knows the classification of (GERD, eosinophilic esophagitis, Barrett's esophagus).</li> <li>- Can make a differential diagnosis between (GERD, esophagitis, diverticula, esophageal oncopathology).</li> <li>- can prescribe treatment for a patient with GERD, taking into account the individual characteristics of the patient and the peculiarities of the drugs prescribed (antacids, H2-histamine blockers, prokinetics, proton pump inhibitors, etc.).</li> </ul> <p>ISW: Other forms of esophagitis not related to GERD: eosinophilic, infectious - bacterial, viral, fungal, drug-induced, etc., esophageal rupture - Mallory-Weiss syndrome).</p> | <p>доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178 .</p> <p><b>2. Nicholas J Talley, Brad Frankum &amp; David Currow. Essentials of Internal Medicine Elsevier. 3d edition, Chapter 12, p 320-323 (Электронный ресурс).</b></p> <p>3. Ас коры ту ж үйесі. Жауапты редакторлары профессор С.Б. Жәутікова, доцент С.Д. Нұрсұлтанова</p> <p><b>4. Harrison's Manual of Medicine/ 20th Edition, Section 6, chapter 40, p. 249-253, p. 2209-2220.</b></p> <p>5. <a href="https://geekymedics.com/abdominal-examination/">https://geekymedics.com/abdominal-examination/</a></p> | <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in a simulation center</li> <li>4. Mini-conference of ISW topics</li> </ol> |
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| 2 | Gastric dyspepsia syndrome, gastric and/or duodenal ulcer syndrome, pain syndrome | <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>- Identify and interpret clinical symptoms and syndromes, data of laboratory and imaging examination methods in patients with the most common somatic diseases in gastric dyspepsia syndrome, gastric and/or duodenal ulcer syndrome, and pain syndrome (gastritis: chronic, acute, atrophic, hemorrhagic, erosive, gastric and duodenal ulcer disease, etc.) in their typical manifestation and course taking into account age aspects. etc.) in their typical manifestation and course, taking into account age-related aspects;</li> <li>- Possess the skills of basic medical treatment, diagnostic and preventive measures to provide medical care to the population in diseases of the abdominal cavity organs (CBC, LHC, General urine analysis, Coagulogram, ELISA/IHLA for H. pylori IgM, IgG; Urease test, EFGDS, X-ray fluoroscopy of the stomach, ultrasound-AO, CT-AO, MRI-AO, Biopsy material at EGD);</li> <li>- Possess basic skills in the maintenance of current medical records, including information systems;</li> <li>- Integrates knowledge and skills to provide an individualized approach to the treatment of a specific patient;</li> <li>- Demonstrate communication skills, teamwork skills, organization, and management of diagnostic and treatment processes.</li> </ul> | <p>1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178 .</p> <p><b>2. Nicholas J Talley, Brad Frankum &amp; David Currow. Essentials of Internal Medicine Elsevier. 3d edition, Chapter 12, p. 323-327 (Электронный ресурс).</b></p> <p>3. Ас қоры ту ж үйесі. Жауапты редакторлары профессор С.Б. Жәутікова, доцент С.Д. Нурсултанова.</p> <p><b>4. Harrison’s Manual of Medicine/ 20th Edition, Section 6, chapter 41, p. 253-259, p.2220-2244.</b></p> <p>5. Mechanisms of Clinical Signs Dennis, Bowen, and Cho 2nd edition. 151- 277 стр.</p> <p>6. History and Clinical Examination at a Glance Third edition Jonathan Gleadle 178-179 стр</p> | <p>Formative assessment:</p> <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in the simulation center</li> </ol> |
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| 3 | Intestinal dyspepsia syndrome, a syndrome of impaired colonic motor function | <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>- Identify and interpret clinical symptoms and syndromes, laboratory and imaging findings in patients with the most common of these diseases: Ulcerative colitis. Crohn's disease. Diagnosis of inflammatory bowel diseases. Extraintestinal manifestations and complications of inflammatory bowel disease. Undifferentiated colitis. Celiac disease (gluten enteropathy) in its typical manifestation and course, taking into account age-related aspects;</li> <li>- Possess the skills of basic medical treatment, diagnostic and preventive measures to provide medical care to the population in diseases of abdominal organs (CBC, LHC, General urine analysis, Coagulogram, ELISA/IHLA for ASCA; ANA, ANCA IgM, IgG, Calprotectin, Coprogram, EGD, X-ray colonoscopy, Colonoscopy, Ultrasound-AO, CT-AO, MRI-AO, Biopsy of material at colonoscopy);</li> <li>- Possess basic skills in maintaining current medical record keeping and reporting, including information systems;</li> </ul> | <p>1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178.</p> <p><b>2. Nicholas J Talley, Brad Frankum &amp; David Currow. Essentials of Internal Medicine Elsevier. 3d edition, Chapter 12, p. 327-358 (Электронный ресурс).</b></p> <p>3. Ас коры ту ж үйесі. Жауапты редакторлары профессор С.Б. Жәутікова, доцент С.Д. Нұрсултанова.</p> <p><b>4. Harrison's Manual of Medicine/ 20th Edition, Section 6, chapter 42, p. 259-270, p. 2244-2291, p. 2294-2298.</b></p> | <p>Formative assessment:</p> <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in the simulation center</li> </ol> |

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|   |                                                                                               | <ul style="list-style-type: none"> <li>- Integrates knowledge and skills to provide an individualized approach to the treatment of a specific patient;</li> <li>- Demonstrate communication skills, teamwork skills, organization and management of diagnostic and treatment process;</li> <li>- Apply knowledge of the principles and methods of forming a healthy lifestyle for the individual and family;</li> <li>- Demonstrate a commitment to professional values such as altruism, compassion, empathy, responsibility, honesty, and adherence to the principles of confidentiality;</li> <li>- Demonstrate the ability and need for continuing professional learning and improvement of their knowledge and professional skills;</li> <li>- Demonstrate beginning research skills.</li> </ul> | <p>5. Davidson principles and practices of medicine/ p 837 (Internet resource)</p> <p>6. Mechanisms of Clinical Signs Dennis, Bowen, and Cho 2nd edition. 151- 277 стр.</p> <p>6. <a href="https://geekymedics.com/ulcerative-colitis-uc/">https://geekymedics.com/ulcerative-colitis-uc/</a></p> <p>7. <a href="https://geekymedics.com/coeliac-disease/">https://geekymedics.com/coeliac-disease/</a></p> <p>8. <a href="https://geekymedics.com/small-intestine/">https://geekymedics.com/small-intestine/</a></p> |                                                                                                                                                                                                          |
| 4 | Maldigestion and malabsorption syndrome, pain syndrome in pancreatic lesions, and gallbladder | <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>- To teach to identify the mechanisms of development of pancreatic and gallbladder lesions (chronic pancreatitis. Complications of chronic pancreatitis. Dyskinesia of the gallbladder and bile ducts. Gallstone disease. Acute and chronic calculous cholecystitis);</li> <li>- To teach to apply the skills of physical examination in diseases of the pancreas, gallbladder, and biliary ducts;</li> </ul>                                                                                                                                                                                                                                                                                                                 | <p>1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178 .</p> <p><b>2. Nicholas J Talley, Brad Frankum &amp; David Currow. Essentials of Internal Medicine Elsevier. 3d edition, Chapter 12, p. 358-363 (Internet resource)</b></p>                                                                                                                                                                                                     | <p>Formative assessment:</p> <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in the simulation center</li> </ol> |

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|   | er disease                                               | <ul style="list-style-type: none"> <li>- To teach to interpret and summarize the data obtained during the examination of the patient physical and laboratory-instrumental examination - CBC, General urine analysis, LHC (total protein, albumin, creatinine, urea, glucose, ALT, AST, total bilirubin, direct bilirubin, GGTP, alpha-amylase, lipase) Coprogram, ELISA, PCR, ultrasound-AO, CT-AO, MRI-AO;</li> <li>- To teach to distinguish syndromes - maldigestion and malabsorption, pain syndrome in pancreatic lesions and gallbladder disease;</li> <li>- To train to build treatment tactics in chronic pancreatitis, chronic cholecystitis (calculous/non-calculous), secretory drugs, and choleretic drugs;</li> <li>- Improve interpersonal communication and patient counseling skills;</li> </ul> <p><b>Initial submission of case history with correction of errors with further submission by the end of the discipline.</b></p> | <p><b>4. Harrison's Manual of Medicine/ 20th Edition, p. 2433-2449.</b></p> <p>5. <a href="https://geekymedics.com/acute-pancreatitis/">https://geekymedics.com/acute-pancreatitis/</a></p>                                                                                       |                                                                                                                                                                                                                                                  |
| 5 | Cytolysis syndrome and mesenchymal inflammatory syndrome | <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>- To teach to identify mechanisms of liver damage development in viral hepatitis and non-viral hepatitis (acute viral A, E, chronic viral B, C, D; alcoholic, toxic, autoimmune);</li> <li>- To teach the application of physical examination skills in liver damage;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178.</p> <p><b>2. Nicholas J Talley, Brad Frankum &amp; David Currow. Essentials of Internal Medicine Elsevier. 3d edition, Chapter 12,</b></p> | <p>Formative assessment:</p> <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in a simulation center</li> <li>4. Mini-conference of ISW topics</li> </ol> |

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|  |  | <ul style="list-style-type: none"> <li>- To teach to interpret and summarize the data of physical and laboratory-instrumental examination - CBC, General urine analysis, LHC, ELISA, PCR, ultrasound-AO, CT-AO, MRI-AO, Fibroscan, Biopsy;</li> <li>- To teach to distinguish syndromes - cytolytic, mesenchymal-inflammatory, cholestatic; to formulate a clinical diagnosis;</li> <li>- To teach to build treatment tactics in acute and chronic viral hepatitis - antiviral drugs, hepatoprotection, membrane stabilizers, choleretic;</li> <li>- Improve interpersonal communication and patient counseling skills;</li> </ul> <p>ISW: SARS-CoV 2 associated hepatitis. Definition. Peculiarity of strains. Pathogenesis. Role of ACE 2 receptors. Clinical picture. Treatment methods according to the latest recommendations (WHO, CDC).</p> | <p><b>р. 372-384 (Электронный ресурс).</b></p> <p><b>3. Harrison's Manual of Medicine/ 20th Edition, p. 2332-2342, p. 2347-2405.</b></p> <p>4. Davidson's Principles and Practice of Medicine, 22nd edition, pgs 928, 943</p> <p>5. <a href="https://geekymedics.com/hyperlipidaemia/">https://geekymedics.com/hyperlipidaemia/</a></p> <p>6. <a href="https://geekymedics.com/cholesterol-metabolism/">https://geekymedics.com/cholesterol-metabolism/</a></p> <p>7. <a href="https://geekymedics.com/hepatitis-b-serology-interpretation/">https://geekymedics.com/hepatitis-b-serology-interpretation/</a></p> <p>8. <a href="https://geekymedics.com/hyperlipidaemia/">https://geekymedics.com/hyperlipidaemia/</a></p> <p>9. <a href="https://geekymedics.com/interpreting-a-coagulation-screen/">https://geekymedics.com/interpreting-a-coagulation-screen/</a></p> <p>10. <a href="https://geekymedics.com/interpretation-of-liver-function-tests-lfts/">https://geekymedics.com/interpretation-of-liver-function-tests-lfts/</a></p> |  |
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| 6 | Jaundice and cholestasis syndrome, hepatosplenomegaly syndrome | <p><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>- To teach to identify the mechanisms of liver damage development in bile duct lesions (physiologic jaundice of the newborn, NAFLD - non-alkalic fatty liver disease, Viral hepatitis with pureblood cholestatic syndrome, Alcoholic liver disease, Wilson-Kanavalov disease, Hemochromatosis, etc.);</li> <li>- To teach to apply the skills of physical examination in bile duct lesions of the liver;</li> <li>- To teach to interpret and summarize the data of physical and laboratory-instrumental examination - CBC, General urine analysis, LHC, ELISA, PCR, ultrasound-AO, CT-AO, MRI-AO, Fibroscan, Biopsy;</li> <li>- To teach to distinguish syndromes - cholestatic; to formulate clinical diagnosis;</li> <li>- To teach to build treatment tactics in acute and chronic viral hepatitis - antiviral drugs, hepatoprotection, membrane stabilizers, choleretic;</li> <li>- Improve interpersonal communication and patient counseling skills;</li> </ul> <p>ISW: Syndrome of obstruction of hepatic sinusoids (veno-occlusive disease) in children.</p> | <p>1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178.</p> <p>2. <b>Nicholas J Talley, Brad Frankum &amp; David Currow. Essentials of Internal Medicine Elsevier. 3d edition, Chapter 12, p. 372-383, p. 400-401 (Электронный ресурс).</b></p> <p>4. <b>Harrison's Manual of Medicine/ 20th Edition, Section 6, chapter 45, p. 276-281, p. 2342-2347, 2422-2433.</b></p> <p>5. Bickley L. Bates' Guide to Physical Examination and History-Taking. Lippincott Williams &amp; Wilkins; 2012</p> <p>6. <a href="https://geekymedics.com/cholangitis/">https://geekymedics.com/cholangitis/</a></p> | <p>Formative assessment:</p> <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in a simulation center</li> <li>4. Mini-conference of ISW topics</li> </ol> |
| 7 | Hepatic cell                                                   | <p><b>Learning Outcomes:</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>1. Мухин Н.А., Моисеев В.С. Пропедевтика внутренних</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Formative assessment:</p>                                                                                                                                                                                                                     |

|   |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                             |
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|   | failure syndrome, portal hypertension, gastrointestinal bleeding | <ul style="list-style-type: none"> <li>- Knows and identifies all clinical and syndromal manifestations of cirrhosis;</li> <li>- Can interpret examination results (CBC, General urine analysis, LHC - total protein, albumin, creatinine, urea, glucose, ALT, AST, total bilirubin, direct/indirect bilirubin, GGTP, alkaline phosphate, Coagulogram, Fibroscag liver elastography, ultrasound-AO, CT-AO, MRI-AO);</li> <li>- Identifies syndromes of liver cirrhosis and determines the sequence of their formation (portal hypertension, mesenchymal-inflammatory, cytolytic, cholestatic, edematous-ascitic, deficiency of coagulation factors and blood systems).</li> <li>- Can determine the degree of severity and prognosis (scales: MELD-Na, Chayle-Turkot-Pugh, Maddrey).</li> <li>- Knows the basic principles of treatment of cirrhosis. Post-syndromic and pathogenetic. Conservative treatment taking into account indications and contraindications (AV, UDCA, membrane-stabilizing, colloid and crystalloid replacement, diuretic, detoxification - MARS therapy, etc.) Surgical treatment takes into account indications and contraindications (laparocentesis, spleen vessel embolization, etc.).</li> </ul> | <p>болезней: учебник. — 2-е изд., доп. и перераб. М.: ГЭОТАР – 2020г, стр 104-178.</p> <p><b>2. Nicholas J Talley, Brad Frankum &amp; David Currow. Essentials of Internal Medicine Elsevier. 3d edition, Chapter 12, p. 384-400 (Электронный ресурс)</b></p> <p><b>4. Harrison's Manual of Medicine/ 20th Edition, Section 6, chapter 44, p. 272-276, p. 281-285, p. 2405-2414.</b></p> <p>5. Talley and O'Connor's Clinical Examination 8<sup>th</sup> edition. Chapter 14, 274-276 стр.</p> <p>6. Dennis Bowen and Cho 2<sup>nd</sup> edition Mechanism of Clinical signs. Chapter 6, 572-641 стр.</p> <p>7. <a href="https://geekymedics.com/acute-management-of-upper-gi-bleeding/">https://geekymedics.com/acute-management-of-upper-gi-bleeding/</a></p> <p>8. <a href="https://geekymedics.com/ascitic-fluid-analysis/">https://geekymedics.com/ascitic-fluid-analysis/</a></p> | <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in the simulation center</li> </ol> |
| 8 | Syndrome of                                                      | <b>Learning outcome:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ol style="list-style-type: none"> <li>1. Bolog N., Andreisek G., Oancea I., Mangra A. CT and</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Formative assessment:                                                                                                                                                       |



|  |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                        |                                                                                                                                                                             |
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|  | diffuse changes and volumetric formation in the liver | <ul style="list-style-type: none"> <li>- To teach to identify the mechanisms of liver lesion development in bile duct lesions (liver tumors: hepatic hemangioma, focal nodular hyperplasia, liver abscess, hepatocellular adenoma, hepatocellular carcinoma, liver cysts: parasitic and solid, etc.);</li> <li>- To teach to apply physical examination skills in the presence of diffuse changes and volumetric masses in the liver;</li> <li>- To teach to interpret and summarize the data of physical and laboratory-instrumental examination - CBC, General urine analysis, LHC, ELISA, PCR, ultrasound-AO, CT-AO, MRI-AO, Fibroscan, liver biopsy;</li> <li>- To teach to distinguish the syndrome of diffuse changes and volume formation in the liver;</li> <li>- To train to build the tactics of treatment - conservative and surgical (indications, contraindications);</li> <li>- To improve the skills of interpersonal communication and patient counseling;</li> </ul> <p><b>Retake the case history with correction of errors and evaluation of the student's skills</b></p> | MR imaging of hepatocellular carcinoma // J. Gastrointestin. Liver Dis. 2011. Vol. 20, №2. P. 181-189. | <ol style="list-style-type: none"> <li>1. Use of active learning methods: TBL, CBL</li> <li>2. Work with a patient</li> <li>3. Training in the simulation center</li> </ol> |
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|---------------------------------|------------------------------------------------------|
| 12.                             | <b>Requirements for the student and bonus system</b> |
| <b>Academic Behavior Rules:</b> |                                                      |

### 1) Appearance:

- ✓ Office style of dress (shorts, short skirts, open t-shirts are not allowed for university visits, and jeans are not allowed in the clinic)
- ✓ clean, ironed gown
- ✓ medical mask
- ✓ Medical cap (or neat hijab with no hanging ends)
- ✓ medical gloves
- ✓ Second pair of shoes
- ✓ neat hairstyle, long hair should be gathered in a ponytail or a bundle, both for girls and guys. Tidy, short-trimmed nails. Bright, dark manicure is forbidden. It is allowed to cover the nails with transparent nail polish.
- ✓ nametag with full name

2) Obligatory phonendoscope, tonometer, centimeter tape, (pulse oximeter can also be provided)

3) **\*Deliberately issued sanitary (medical) book (before the beginning of classes and must be updated in due time).**

4) **\*Having a vaccination passport or other document of a completely Completed COVID-19 and influenza vaccination course.**

5) **Obligatory observance of personal hygiene and safety rules**

6) Systematic preparation for the educational process.

7) Accurate and timely maintenance of reporting documentation.

8) Active participation in therapeutic, diagnostic, and social activities of the departments.

**A student without a health card and immunizations will not be allowed to see patients.**

**Also, a student who emits a strong/sharp odor will not be allowed to see patients, as such an odor may provoke an adverse reaction in the patient (obstruction, etc.2.....)**

### Bonus system:

1. Participation in research work, conferences, Olympiad, and presentations, the student is rewarded using the bonus system in the form of incentives - adding points to the student in one of the forms of summative assessment.

|     |                                                                                                                                                                                                       |
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| 13. | <b>Discipline Policy</b> ( <i>parts highlighted in green, please do not change</i> )                                                                                                                  |
|     | Discipline policies are defined by the University's Academic Policies and the University's Academic Integrity Policy. If the links will not open, you can find up-to-date documents in the Univer IS. |
|     | <b>Discipline:</b>                                                                                                                                                                                    |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|     | <p>1. Late arrivals to class or morning conferences are not allowed. In case of tardiness - the decision on admission to the class is made by the teacher leading the class. If there is a valid reason for tardiness - inform the instructor about the tardiness and the reason by message or by phone. After the third tardy, the student writes an explanatory letter to the head of the department with the reasons for tardiness and is sent to the dean's office for admission to the class. If a student is late without a valid excuse, the instructor has the right to deduct points from the current grade (1 point for each minute of lateness).</p> <p>2. Religious events, holidays, etc. are not a valid reason for absences, tardiness, and distractions of the instructor and the group from work during classes.</p> <p>3. When tardy for a valid reason - do not distract the group and instructor from class and quietly go to your seat.</p> <p>4. Leaving the class before the scheduled time, and staying outside of the workplace during class time is considered as absenteeism.</p> <p>5. Students are not allowed to work extra hours during class time (during practical classes and duty).</p> <p>6. Students who have more than 3 absences without notification of the supervisor and a valid reason shall be reported with a recommendation for expulsion.</p> <p>7. Missed classes are not practiced.</p> <p>8. Students are fully subject to the Internal Regulations of the clinical bases of the department</p> <p>9. Greet the instructor and any senior by standing up (in class)</p> <p>10. Smoking (including the use of vape, and electronic cigarettes) is strictly forbidden on the territory of LPU (outdoors) and the university. The punishment - up to revocation of the boundary control, in case of repeated violation - the decision on admission to classes is made by the head of the department</p> <p>11. Respectful attitude to colleagues regardless of gender, age, nationality, religion, or sexual orientation.</p> <p>12. Have a laptop/laptops/tablets/tablets for studying and taking MCQ tests on TBL, boundary, and final controls.</p> <p>13. Taking MCQ tests on phones and smartphones is strictly prohibited.</p> <p>14. Decision of the Department of Clinical Disciplines (protocol No. 2 of September 5, 2023):</p> <p><b>15. In addition to the requirements for the academic discipline:</b></p> <p>If you miss a class without a good reason, the teacher has the right to deduct points from the current control -</p> <ul style="list-style-type: none"> <li>- 5 points for each missed lesson for 3rd year disciplines</li> <li>- 10 points for each missed lesson for 4-5 year disciplines</li> </ul> <p>Student behavior at exams are regulated by the "Rules for Final Control", "Instructions for the final control of the fall/spring semester of the current academic year" (current documents are uploaded to the IS "Univer" and updated before the beginning of the session); "Regulations on checking text documents of students for borrowings".</p> |
| 14. | <b>Principles of inclusive learning (150 words maximum).</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|     | <p><b>1. Consistently prepares for class:</b><br/>E.g. supports statements with appropriate references, makes summaries<br/>Demonstrates effective teaching skills, assists in teaching others</p> <p><b>2. Takes responsibility for his/her learning:</b><br/>For example, manages his/her learning plan, actively tries to improve, critically evaluates information resources</p> <p><b>3. actively participates in the learning of the group:</b><br/>For example, actively participates in discussion, willingly takes on assignments</p> <p><b>4. Demonstrate effective group skills</b><br/>For example, takes initiative, shows respect and correctness toward others, helps resolve misunderstandings and conflicts</p> <p><b>5. Skillful communication skills with peers:</b><br/>E.g. listens actively, receptive to nonverbal and emotional cues<br/>Respectful attitude</p> <p><b>6. Highly developed vocational skills:</b><br/>Strives to complete tasks, seeks opportunities for more learning, confident and skilled<br/>Adherence to ethics and deontology in dealing with patients and nursing staff<br/>Compliance with chain of command.</p> <p><b>7. High self-awareness:</b><br/>For example, one recognizes limitations in one's knowledge or abilities without becoming defensive or reproachful of others</p> <p><b>8. Highly developed critical thinking:</b><br/>For example, appropriately demonstrates skill in key tasks such as generating hypotheses, applying knowledge to case studies, critically evaluating information, drawing conclusions aloud, explaining the thought process</p> <p><b>9. Fully complies with rules of academic behavior with understanding, and suggests improvements to increase efficiency.</b><br/>Observe ethical communication - both verbal and written (in chats and addresses)</p> <p><b>10. Fully complies with rules with full understanding, encourages other team members to adhere to rules</b><br/>Strictly adheres to the principles of medical ethics and PRIMUM NON NOCER</p> |
| 15. | <p><b>Distance/online learning - prohibited in the clinical discipline</b><br/><i>(parts highlighted in green please do not change)</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|     | <p>1. According to the order of the MES RK №17513 from October 9, 2018. "On approval of the List of directions of training of personnel with higher and postgraduate education, training in which in the form of externship and online learning is not allowed"</p> <p>According to the above normative document, specialties with the code of <b>health disciplines</b>: bachelor's degree (6B101), master's degree (7M101), residency (7R101), doctoral degree, (8D101) - training in the form of externship and online learning - <b>is not allowed</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

Thus, students are prohibited from distance learning in any form. It is allowed only to work off the lesson on discipline in connection with the absence of the student for reasons beyond his control and the presence of a timely confirmation document (for example: health problems and the arrival of a confirmation document - medical certificate, signaling sheet of the emergency room, the statement of consultative appointment with a medical specialist - doctor)

| 16.                                                              | Approval and review                                                               |                |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|
| Department head                                                  |  | Sadykova Sh.S. |
| Committee on the Quality of Teaching and Learning of the Faculty |  | Kurmanova G.M. |

**LEARNING OUTCOMES ASSESSMENT RUBRIC**  
**on summative assessment**

**Rating calculation formula**

**For the 3rd course as a whole - OAR**

|                                                                     |      |
|---------------------------------------------------------------------|------|
| Supervision, clinical skills                                        | 20%  |
| ISW (case, video, simulation OR research - thesis, report, article) | 10%  |
| Rubric 1                                                            | 70%  |
| <b>Total BC1</b>                                                    | 100% |
| Case history                                                        | 20%  |
| ISW                                                                 | 10%  |
| Rubric 2                                                            | 70%  |
| <b>Total BC2</b>                                                    | 100% |

**Final grade: OAR 60% + Exam 40%**

**Exam (2 stages) - testing (50%) + OSCE (50%)**

### Team-based learning – TBL

|                                |             |
|--------------------------------|-------------|
|                                | %           |
| <b>Individual -- (IRAT)</b>    | <b>30</b>   |
| <b>Group -- (GRAT)</b>         | <b>10</b>   |
| <b>Appeal</b>                  | <b>10</b>   |
| <b>Case Evaluation-</b>        | <b>20</b>   |
| <b>Peer evaluation (bonus)</b> | <b>10</b>   |
|                                | <b>100%</b> |

### Case-based learning CBL

|    |                                                         |             |
|----|---------------------------------------------------------|-------------|
|    |                                                         | %           |
| 1  | Interpretation of interview data                        | 10          |
| 2  | Interpretation of physical examination data             | 10          |
| 3  | Preliminary diagnosis, rationale, DDX, examination plan | 10          |
| 4  | Interpretation of lab-instrumental examination data     | 10          |
| 5  | Clinical diagnosis, problem sheet                       | 10          |
| 6  | Management and treatment plan                           | 10          |
| 7  | Rationale for choice of drugs and treatment regimen     | 10          |
| 8  | Evaluation of efficacy, prognosis, prophylaxis          | 10          |
| 9  | Special problems and case questions                     | 10          |
| 10 | Peer evaluation (bonus)                                 |             |
|    |                                                         | <b>100%</b> |

**Score-rating of practical skills at the patient's bedside (maximum 100 points)**

| № | Criteria<br>(evaluated according to a point system) | 10                                                                                                                                                                                                                                                        | 8                                                                                                                                                                                                                                                         | 6                                                                                                                                                                                     | 4                                                                                                                                                                                                                                                                                                                     | 2                                                                                                                                                       |
|---|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                                     | <i>excellent</i>                                                                                                                                                                                                                                          | <i>above average</i>                                                                                                                                                                                                                                      | <i>acceptable</i>                                                                                                                                                                     | <i>requires correction</i>                                                                                                                                                                                                                                                                                            | <i>unacceptable</i>                                                                                                                                     |
|   | <b>PATIENT REVIEW</b>                               |                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                           |                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                         |
| 1 | Communication skills in patient interviewing        | Introduced himself to the patient. Asked how to address the patient. Talked in a friendly tone of voice, sound and clear. Polite wording of questions. Showed empathy for the patient - doctor's posture, approving "whoops". Asked open-ended questions. | Introduced himself to the patient. Asked how to address the patient. Talked in a friendly tone of voice, sound and clear. Polite wording of questions. Showed empathy for the patient - doctor's posture, approving "whoops". Asked open-ended questions. | Introduced himself to the patient. Asked how to address the patient. Talked in a friendly tone of voice, sound and clear. Polite wording of questions. Few open-ended questions asked | Did not fully introduce himself/herself to the patient, did not ask the patient's name, student's speech was slurred, and his voice was not intelligible. Did not ask open-ended questions, patient responds one-syllable. The student did not show consideration for the patient's comfort and did not show empathy. | Communication with the patient is negative. Basic requirements for communication with the patient are not met, and there is no empathy for the patient. |
|   | Collection of complaints                            | Identify the patient's chief and secondary complaints. <b>Identify important details of the illness (e.g., is there nausea, vomiting, abdominal pain? What is the nature of the pain?).</b>                                                               | Identify the patient's chief and secondary complaints. <b>Identify important details of the illness (e.g., nausea, vomiting, abdominal pain? What is the nature of the pain?).</b>                                                                        | Identifies the patient's chief complaints. <b>Identified important details of the disease.</b>                                                                                        | Students cannot distinguish major complaints from minor complaints. <b>Does not identify important details of the illness.</b> Asks erratic questions.                                                                                                                                                                | DOES NOT reveal any details of the disease. The collection of complaints is limited only to the subjective                                              |



|   |                                  |                                                                                                                                                                                                                                             |                                                                                                                                                                                     |                                                                                                                   |                                                                                                                                             |                                                                                                                        |
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|   |                                  | <b>Asked questions related to differential diagnosis.</b>                                                                                                                                                                                   |                                                                                                                                                                                     |                                                                                                                   |                                                                                                                                             | words of the patient himself.                                                                                          |
|   | Collection of case history       | Identify the <b>chronology of the disease</b> , and important details of the disease (e.g., when does abdominal pain occur?). Asked about <b>medications</b> taken for the condition. Asked questions about <b>differential diagnosis</b> . | Identify the <b>chronology of the disease</b> , and important details of the disease (e.g., when does abdominal pain occur?). Ask about <b>medications</b> taken for the condition. | Identified the <b>chronology</b> of the disease. Asked about <b>medications</b> taken for the condition.          | The student is unable to construct a chronology of the development of the disease. Asking chaotic questions.                                | The stage is skipped by the student. Only information self-reported by the patient is available.                       |
|   | Anamnesis vitae                  | Identified allergoanamnesis, chronic diseases, surgeries, blood transfusions, medications taken regularly, family anamnesis, social status of the patient, occupational hazards, and epidemiologic anamnesis.                               | Identified allergoanamnesis, chronic diseases, surgeries, medications are taken regularly, family anamnesis, social status of the patient, occupational hazards, epidanamnesis      | Identified allergy anamnesis, chronic diseases, and family anamnesis.                                             | Identified allergy anamnesis, and family anamnesis.                                                                                         | The stage is skipped by the student. Only information self-reported by the patient is available.                       |
| 2 | Quality of the patient interview | The patient interview is conducted sequentially in order, but depending on the situation and the patient's characteristics, the student varies the order of the interview. At the end summarizes - summarizes                               | Interview the patient sequentially in order.<br><br>At the end summarizes - summarizes all questions and gets feedback from the patient (e.g., let's summarize - you got sick       | The sequence of the interview is broken, but the quality of the information gathered suggests a likely diagnosis. | The sequence of questioning is disrupted. The student repeats the same questions. The collected information is not qualitative and does not | Interviews are not consistently conducted, with the student asking random questions that are not relevant to the given |



|   |                                                                             | <b>10</b>                                                                                                                                                                                                                                              | <b>8</b>                                                                                                                                                                                                                                               | <b>6</b>                                                                                                                                                                                                                                               | <b>4</b>                                                                                        | <b>2</b>                                                                                                                                   |
|---|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                                                             | <i>excellent</i>                                                                                                                                                                                                                                       | <i>above average</i>                                                                                                                                                                                                                                   | <i>acceptable</i>                                                                                                                                                                                                                                      | <i>requires correction</i>                                                                      | <i>unacceptable</i>                                                                                                                        |
| 4 | Communication skills when performing a physical examination of a patient    | Ask the patient (or relatives, parents, or guardians) for consent to the physical examination. Explain to the patient what and how he or she will be examined (e.g., I will listen to your lungs with a stethoscope, check your abdomen with my hand). | Ask the patient (or relatives, parents, or guardians) for consent to the physical examination. Explain to the patient what and how he or she will be examined (e.g., I will listen to your lungs with a stethoscope, check your abdomen with my hand). | Ask the patient (or relatives, parents, or guardians) for consent to the physical examination. Explain to the patient what and how he or she will be examined (e.g., I will listen to your lungs with a stethoscope, check your abdomen with my hand). | Asked the patient (or relatives, parents, or guardians) for consent to perform a physical exam. | Contact with the patient's body without prior consent.                                                                                     |
| 5 | Assessment of the patient's level of consciousness using the Glasgow scale. | Correctly calculates scale scores. Correctly uses medical terminology for the level of consciousness.                                                                                                                                                  | Correctly calculates scale scores. Correctly uses medical terminology for the level of consciousness.                                                                                                                                                  | The error in assessment on the scale is not more than 2 points. Knows the terminology for designating the level of consciousness.                                                                                                                      | Scale score error of more than 3 points. Confused about medical terminology.                    | Does not know the criteria for the Glasgow scale. Doesn't know how to use it. Does not know the differentiation of level of consciousness. |

|   |                                                                          |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                            |
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|   | Assessment of patient's vital signs - RR, HR, BP, body temperature, BMI. | Measures vital signs technically correctly. Correctly uses medical terminology when assessing vital signs (e.g., tachypnea, tachycardia, hypoxia, etc.).                                                                                                                                                                                                            | Measures vital signs technically correctly. Correctly uses medical terminology when assessing vital signs (e.g., tachypnea, tachycardia, hypoxia, etc.).                                                                                                                                                                                                                                        | Minor errors in the technique of measuring vital signs. Measurement results are not distorted. The student can correct any errors in the use of medical terminology.                                                                                          | Gross errors in vital signs measurement techniques, misrepresentation of results. Cannot independently correct errors in medical terminology.                                                                                                                                                                                                    | Does not know the technique of measuring vital signs. Does not know the normative data for assessment of BP, pulse, respiratory rate, saturation, and body temperature.                    |
| 6 | Techniques for performing a physical examination of the patient.         | Physical examination of the patient is systematic, according to the established order, the technique of palpation, auscultation, and percussion is correct.<br><b>Explain to the patient what changes are detected and what should be the norm.</b><br><b>Identifies all-important physical findings (both pathologic and normal) to make a probable diagnosis.</b> | The physical examination of the patient is systematic in order, and the technique of palpation, auscultation, and percussion is correct.<br><b>Explain to the patient what changes are detected and what should be normal.</b><br>Identifies all-important physical findings (both pathologic and normal) to make a probable diagnosis.<br><b>Details the symptoms detected (e.g., have you</b> | A physical examination of the patient was conducted in violation of the systematic order, but without causing discomfort to the patient. The technique of palpation, auscultation, and percussion is satisfactory, requiring minor correction by the teacher. | Physical examination was not performed systematically; the patient stood up, lay down, changed posture, and was uncomfortable several times.<br>Only certain systems were covered,<br>The technique of palpation, percussion, and auscultation - required significant correction from the teacher.<br>Confused in defining normal and pathologic | Gross violations in physical examination - does not know the order and technique of physical examination of the patient.<br><br>Does not know the norm and pathology of physical findings. |

|   |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                  |                                                                                                                                         |                                                                                                                                                                             |                                                                                                                                               |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                                                                                                                                                          | <p><b>The student can change the order of examination depending on the symptoms identified.</b></p> <p><b>Details identified symptoms (e.g., have you noticed swelling in your legs? How long ago did you notice it? Does the swelling get worse in the evening or the morning?)</b></p> <p><b>At the end summarize - the consistency of the identified changes in the physical examination with the patient's complaints and anamnesis.</b></p> | <p><b>noticed swelling in your legs? How long ago did you notice it? Does the swelling get worse in the evening or the morning?)</b></p>                                                                         | <p>The main violations sufficient to make a probable diagnosis were identified.</p>                                                     | <p>changes. Major abnormalities are NOT identified. Not enough data to make a probable diagnosis.</p>                                                                       | <p>Cannot identify any abnormalities.</p>                                                                                                     |
| 7 | <p>Making a preliminary syndromal diagnosis</p> <p>Laboratory and imaging examination plan (CBC, general urine analysis, LHC, pathologic fluids, imaging techniques)</p> | <p>Maximum complete justification and formulation of the preliminary diagnosis with the justification of the data of complaints and physical examination made a differential diagnosis of the main syndromes based on the data of complaints, development of the</p>                                                                                                                                                                             | <p>Maximum complete justification and formulation of preliminary diagnosis with justification of complaints and physical examination data</p> <p>Correct and justified in terms of the underlying pathology.</p> | <p>Justification of the preliminary diagnosis based on complaints and physical examination</p> <p>in terms of underlying pathology.</p> | <p>Template or intuitive formulation of a provisional diagnosis, cannot provide a rationale (i.e. linking complaints, a chronology of symptoms, and physical findings).</p> | <p>Formulation of the diagnosis at random does not understand and does not see the relationship between complaints and patient anamnesis.</p> |

|   |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                                                        |                                                                                                                                                    |
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|   |                                                                                                                                                   | <p>disease, and detected physical abnormalities. Understand the problem in a complex, connect with the characteristics of the patient.</p> <p>Correctly prescribed laboratory and instrumental examination, taking into account the <b>differential diagnosis (i.e. what he prescribes, for what, and expected changes).</b></p> <p>Explained to the patient important points in preparation for the examination (e.g., if the glucose test is on an empty stomach, then do not drink, do not eat, do not brush teeth, etc.).</p> | <p>Conducted differential diagnosis by the main syndromes.</p> <p>Correctly named the necessary laboratory and instrumental examination for diagnosis, named the expected changes. Explained to the patient important points in preparation for the examination.</p> | Determined the basic examination for diagnosis.                                    | The prescribed examination fails to confirm the diagnosis.                                                             | <p>The prescribed examination does not allow to confirm the diagnosis.</p> <p><b>The prescribed examination may harm the patient's health.</b></p> |
| 8 | <p>Interpretation of laboratory and instrumental examination results</p> <p>(CBC, general urine analysis, LHC, biopsies, imaging methods EGD,</p> | Accurate full interpretation using medical terminology, understanding the relationship and/or divergence of identified abnormalities from the preliminary diagnosis                                                                                                                                                                                                                                                                                                                                                               | Accurate full interpretation, using medical terminology                                                                                                                                                                                                              | Identification of major abnormalities in tests, correct use of medical terminology | Incomplete or incorrect interpretation, lack of knowledge of regulatory data, errors in the use of medical terminology | Does not use medical terminology, does not know regulatory data                                                                                    |

|    |                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                               |
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|    | X-ray, CT, MRI, Elastometry, PET, ultrasound, etc.).                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                               |
| 9  | Formulation of the final syndromal diagnosis, with justification based on examination results | <p>The student clearly articulates the underlying disease. Uses the clinical classification of the disease in formulating the underlying disease. Assesses the severity of the disease. Names complications of the underlying disease.</p> <p>The student justifies his/her opinion on objective data (anamnesis, examination results).</p> <p>For example: Out-of-hospital lobular pneumonia, is typical. Moderately severe course. (or severe course, complication - pleural empyema)</p> | <p>The student clearly articulates the underlying disease. When formulating the main disease, use the clinical classification of the disease. Assesses the severity of the disease. Names complications of the underlying disease.</p> <p>The student substantiates his/her opinion on objective data (anamnesis, examination results) For example: Out-of-hospital lobular pneumonia, typical. Moderately severe course. (or severe course, complication - pleural empyema)</p> | <p>The student formulates the underlying disease. <b>The clinical classification is not complete.</b></p> <p>The student justifies his/her opinion on objective data (anamnesis, examination results) For example: Out-of-hospital pneumonia, typical.</p> | <p>Students can only articulate the underlying disease. Cannot fully explain the rationale for the diagnosis.</p> <p>For example: pneumonia (or similarly equivalent answers such as pulmonary thickening syndrome, obstructive syndrome, acute respiratory failure syndrome, etc. are accepted.</p> | Students cannot formulate a diagnosis. Or cannot explain the rationale for the diagnosis (calls the diagnosis at random according to the topic of the lesson) |
| 10 | Principles of treatment                                                                       | Knows the groups of the main drugs for the treatment of the disease, their mechanism of action,                                                                                                                                                                                                                                                                                                                                                                                             | Knows the groups of the main drugs for the treatment of the disease, their mechanism of                                                                                                                                                                                                                                                                                                                                                                                          | Knows only the basic principles of treatment. Names only a group of                                                                                                                                                                                        | Knows only the basic principles of treatment. Can only name a class of drugs (e.g.,                                                                                                                                                                                                                  |                                                                                                                                                               |

|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                       |                                                                                                                                                                                                   |  |
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|  |  | <p>and the classification of these drugs.</p> <p>Reasonably chooses drugs: taking into account the indications and contraindications in the patient. Informs the patient about the most important side effects of the prescribed drugs.</p> <p>Inform the patient about the peculiarities of taking the drug (e.g., after meals, drinking plenty of water, etc.).</p> <p>Determines the criteria for treatment effectiveness, and the expected timeframe for improvement of the patient's condition.</p> <p>Names the terms and methods of treatment monitoring, subjective and objective data, laboratory and visualized treatment monitoring data.</p> | <p>action, and the classification of these drugs.</p> <p>Identifies indications and contraindications in the patient.</p> <p>Informs the patient about the most important side effects of the prescribed drugs.</p> <p>Informs the patient about the peculiarities of taking the drug (e.g., after meals, drinking plenty of water, etc.)</p> <p>Determines the criteria of treatment effectiveness.</p> | <p>the main drugs for the treatment of a given disease (e.g. broad-spectrum antibiotics).</p> <p>Knows the mechanism of action of the main drugs.</p> | <p>antibiotics, or bronchodilators). Does not know the classification of drugs. Explain the mechanism of action in general words at a layman's level (e.g., antibiotics kill bacteria, etc.).</p> |  |
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|  |       |     |    |    |    |    |
|--|-------|-----|----|----|----|----|
|  | TOTAL | 100 | 80 | 60 | 40 | 20 |
|--|-------|-----|----|----|----|----|

**Score-rating of medical anamnesis management (maximum 100 points)**

| № | Criteria<br>(assessed on a point system)   | 10                                                                                                                     | 8                                                                                                                                                      | 6                                                                      | 4                                                                            | 2                                                                     |
|---|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------|
|   |                                            | <i>excellent</i>                                                                                                       | <i>above average</i>                                                                                                                                   | <i>acceptable</i>                                                      | <i>requires correction</i>                                                   | <i>unacceptable</i>                                                   |
| 1 | Complaints of the patient: major and minor | Complete and systematized, with an understanding of important details                                                  | Accurate and complete                                                                                                                                  | Basic information                                                      | Incomplete or inaccurate, missing some details                               | Misses important details                                              |
| 2 | Collecting anamnesis of the disease        |                                                                                                                        |                                                                                                                                                        |                                                                        |                                                                              |                                                                       |
| 3 | Anamnesis vitae                            |                                                                                                                        |                                                                                                                                                        |                                                                        |                                                                              |                                                                       |
| 4 | Objective status - general examination     | Complete, efficient, organized, with an understanding of important details                                             | Consistently and correctly                                                                                                                             | Identification of basic data                                           | Incomplete or not quite right, not attentive to patient comfort              | Irrelevant data                                                       |
| 5 | Respiratory system                         | Complete, effective, technically correct application of all examination, palpation, percussion and auscultation skills | Complete, efficient, technically correct application of all examination skills, physical examination with minor errors or corrected during performance | Key findings are identified<br><br>Physical examination skills learned | Incomplete or inaccurate<br><br>Physical examination skills need improvement | Important data missed<br><br>Unacceptable physical examination skills |
| 6 | <b>Cardiovascular system</b>               |                                                                                                                        |                                                                                                                                                        |                                                                        |                                                                              |                                                                       |
| 7 | <b>Digestive system</b>                    |                                                                                                                        |                                                                                                                                                        |                                                                        |                                                                              |                                                                       |
| 8 | Genitourinary system                       | Complete, efficient, technically correct application of all special examination skills                                 |                                                                                                                                                        |                                                                        |                                                                              |                                                                       |
| 9 | Musculoskeletal system                     | Complete, efficient, technically correct                                                                               |                                                                                                                                                        |                                                                        |                                                                              |                                                                       |

|    |                                 |                                                                                                                                            |                                                           |                                            |                                                                         |                                                                                      |
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|    |                                 | application of all special examination skills                                                                                              |                                                           |                                            |                                                                         |                                                                                      |
| 10 | Presentation of medical history | <p>Maximizes description and presentation</p> <p>Understands the problem holistically, and relates it to the patient's characteristics</p> | Accurate, focused; selection of facts shows understanding | Form entry includes all basic information; | Many important omissions, often include unreliable or unimportant facts | Lack of mastery of the situation, many important omissions many clarifying questions |

**Score-rating assessment of ISW - creative assignment (maximum 90 points) + bonuses for English and time management**

|          |                                            | <b>20</b>                                                                                                                                          | <b>15</b>                                                                                                                                       | <b>10</b>                                                                                                                                        | <b>5</b>                                                               |
|----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>1</b> | <b>Focusing on the problem</b>             | Organized focused, highlights all relevant to the main problem identified with an understanding of the specific clinical situation                 | Organized, focused, highlights all relevant to the main problem identified, but no understanding of the specific clinical situation             | Unfocused,<br><br>Distracted by issues unrelated to the main problem identified                                                                  | Inaccurate, misses the point, inappropriate data.                      |
| <b>2</b> | <b>Informative, effective presentation</b> | All necessary information on the topic is fully conveyed in a free, consistent, logical manner<br><br>The form of the product is adequately chosen | Delivered all necessary information logically, but with minor inaccuracies                                                                      | All necessary information on the topic is presented chaotically, with minor errors                                                               | Failure to reflect important information on the topic, gross errors    |
| <b>3</b> | <b>Credibility</b>                         | Material is selected based on credible facts.<br><br>Demonstrating understanding by level or quality of evidence                                   | Some findings and conclusions are formulated based on assumptions or incorrect facts. No full understanding of the level or quality of evidence | Insufficient understanding of the problem, some findings and conclusions are based on incomplete and unproven data - questionable resources used | Findings and conclusions are unsubstantiated or incorrect              |
| <b>4</b> | <b>Logic and consistency</b>               | The presentation is logical and coherent, has internal unity, and the provisions in the product follow one another and are                         | Has internal unity, and product statements flow from one to the other, but there are inaccuracies.                                              | No consistency or logic in the presentation, but manages to follow the main idea                                                                 | Jumping from one thing to another, it difficult to grasp the main idea |

|              |                                                                                     |                                                                                                                                                             |                                                                                                                         |                                                                                                                      |                                                              |
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|              |                                                                                     | logically interconnected with each other                                                                                                                    |                                                                                                                         |                                                                                                                      |                                                              |
| 5            | <b>Literature review</b>                                                            | Literature is presented in a logical relationship, demonstrating in-depth elaboration of primary and supplementary information resources                    | Literature data demonstrates the elaboration of the main literature                                                     | Literature is not always relevant, does not support a logical and evidence-based presentation                        | Inconsistent and chaotic presentation of data, inconsistency |
| 6            | <b>Practical relevance</b>                                                          | High                                                                                                                                                        | Meaningful                                                                                                              | Not enough                                                                                                           | Not acceptable                                               |
| 7            | <b>Patient-centered approach</b>                                                    | High                                                                                                                                                        | Oriented                                                                                                                | Not enough                                                                                                           | Not acceptable                                               |
| 8            | <b>Applicability in future practice</b>                                             | High                                                                                                                                                        | Applicable                                                                                                              | Not enough                                                                                                           | Not acceptable                                               |
| 9            | <b>Visibility of the presentation, quality of the report (speaker's evaluation)</b> | Correctly and appropriately used all the features of PowerPoint or other e-gadgets, fluent mastery of the material, confident manner of presentation        | Overloaded or underutilized visual materials, incomplete mastery of material                                            | Visual materials are not informative and do not confidently report                                                   | Does not own the material, does not know how to present it   |
| <b>Bonus</b> | <b>English/Russian/Kazakh language*</b>                                             | The product is fully submitted in English/Russian/Kazakh language (checked by the Head of Department)<br><br>+ <b>10-20 points</b> depending on the quality | Product prepared in English, submitted in Russian/case<br><br>+ <b>5-10 points</b> depending on quality (or vice versa) | English-language sources were used in the preparation of the product<br><br>+ <b>2-5 points</b> depending on quality |                                                              |

|              |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                |                                                                                                                                                                    |                                                                    |                                           |
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| <b>Bonus</b> | <b>Time management**</b>                                                                                                                                                                                                                                                                                                                                                                | Product delivered before the deadline<br><br><b>+10 points</b> | Product delivered on time<br><br><b>no points are awarded</b>                                                                                                      | Delayed delivery without affecting quality<br><br><b>-2 points</b> | Delayed delivery<br><br><b>-10 points</b> |
| <b>Bonus</b> | <b>Rating***</b>                                                                                                                                                                                                                                                                                                                                                                        | Additional points (up to 10 points)                            | Outstanding work, for example:<br><br>Best work in the group<br><br>Creative approach<br><br>Innovative approach to the task<br><br>At the suggestion of the group |                                                                    |                                           |
|              | * - For Kazakh/Russian groups - English language; for groups studying in English - performance of the task in Russian or Kazakh language<br><br>*The deadline is determined by the teacher, as a rule - the day of the final control<br><br>** Thus, it is possible to get a maximum of 90 points, to get more than 90 points - you need to show a result higher <b>than expected</b> . |                                                                |                                                                                                                                                                    |                                                                    |                                           |

**Score-rating assessment of practical skills at the patient's bedside - curation (maximum 100 points)**

| <b>№</b>                    | <b>Evaluation criteria</b>     | <b>10 points</b>                                                                                                                             | <b>8 points</b>                                                      | <b>6 points</b>                                                                                                                                          | <b>4 points</b>                                                                               |
|-----------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>PATIENT INTERVIEW</b>    |                                |                                                                                                                                              |                                                                      |                                                                                                                                                          |                                                                                               |
| 1.                          | Completeness and accuracy      | Accurate, details the manifestations of the disease.<br>Able to emphasize the most important problem.<br><br>Attentive to patient comfort    | Gathers basic information, is accurate, and identifies new problems. | Incomplete or unfocused.                                                                                                                                 | Inaccurate, misses the point, inappropriate data.                                             |
| 2.                          | Detailing                      | Organized, and focused, highlights all clinical manifestations with an understanding of the course of the disease in a particular situation. | Identifies key symptoms                                              | Incomplete data                                                                                                                                          | Demonstrates irrelevant or missing data                                                       |
| 3.                          | Systematicity                  | Prioritizing clinical problems in a relatively short time.                                                                                   | Does not have complete control over the history-taking process       | Allows the patient to take the patient aside, thus lengthening time. Uses leading questions (pushing the patient for an answer that may not be correct). | Incorrectly asks questions or ends history taking early without identifying important issues. |
| 4                           | Time management                | Maximize efficiency in the shortest possible time                                                                                            | History-taking time is delayed                                       | Spends time inefficiently                                                                                                                                | Does not know the whole situation.                                                            |
| <b>PHYSICAL EXAMINATION</b> |                                |                                                                                                                                              |                                                                      |                                                                                                                                                          |                                                                                               |
| 5.                          | Consistency and correctness of |                                                                                                                                              | Knows the sequence, shows reasonable skill in preparing              | Inconsistent, unsure, incomplete examination skills,                                                                                                     | Does not know the order and sequence of                                                       |

|      |                                                          |                                                                                                   |                                                                                                   |                                                                               |                                                               |
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|      | physical examination                                     | Performs correctly with consistency, confidence, and practiced technique of execution.            | and performing the examination                                                                    | refuses to attempt basic examinations                                         | physical examination, does not know its technique             |
| 6.   | Skill of special examination as assigned by the teacher* |                                                                                                   |                                                                                                   |                                                                               |                                                               |
| 7.   | Efficiency                                               | Identifies all basic physical findings as well as details                                         | Identified key symptoms                                                                           | Incomplete data                                                               | Identifies findings that are inconsistent with objective data |
| 8    | Ability to analyze findings                              | Changes order of examination depending on symptoms identified, clarifies, details manifestations. | Assumes a range of diseases with similar changes without specifying and detailing manifestations. | Cannot apply findings from interview and physical examination to the patient. | Does not perform analysis.                                    |
|      |                                                          | <b>20 points</b>                                                                                  | <b>16 points</b>                                                                                  | <b>12 points</b>                                                              | <b>8 points</b>                                               |
| 9-10 | Communication skills                                     | Won the patient's favor even in a situation with a communication problem*                         | Communication is quite effective                                                                  | Satisfactory                                                                  | Fails to establish rapport with the patient                   |