

SELECTIVE DISCIPLINE

for 3-4 year students of the Medical Faculty №3

2024-2025 academic year

Name of discipline	<b>“Instrumental methods of examination in the clinic of internal medicine”</b>
Department	Propedeutics of Internal diseases
Teachers	prof. Ilashchuk T.O. prof. Prysyazhnyuk V.P. as. prof. Glubochenko O.V. as. prof. Bobkovych K.O. as. prof. Mykytyuk O.P.
A brief description of the content of the discipline	<p><b>The aim of the discipline:</b> to acquire <b>valid</b> knowledge necessary for the appointment of appropriate instrumental investigations of the internal organs diseases, their performance and interpretation of the results obtained. To get familiar with ECG and spirometry recording, ultrasound investigation of the liver, gall bladder and spleen performed taking a <b>unique</b> opportunity to participate during this <b>real-time investigations</b> performed by the <b>proficient experts</b> in the field.</p> <p><b>Tasks:</b> to learn techniques, common indications and contraindicators for instrumental investigations of patients with diseases of internal organs; to gain knowledge considering the results of the appointed methods, to form the appropriate diagnostic program necessary to substantiate the clinical diagnosis, evaluate the results of the investigations;</p> <p><b>The results of the study of the discipline:</b>  <i>The student should know:</i></p> <ol style="list-style-type: none"> <li>1. Instrumental diagnostic methods in the internal medicine practice (cardiology, pulmonology, gastroenterology, etc.);</li> <li>2. Main indications and contraindications to the implementation of instrumental methods of investigation according to the recent recommendations (ECG, Holter monitoring, echocardiography, stress tests, coronary angiography, spirometry, peak flowmetry, pulse oximetry, bronchoscopy, bronchography, ultrasound of the liver, gall bladder, pancreas, kidneys, elastography of the liver; upper gastrointestinal endoscopy and colonoscopy; capsule endoscopy; wireless capsule pH investigations and catheter-based pH studies);</li> <li>3. The diagnostic value of instrumental methods in internal medicine in accordance with UpToDate guidelines;</li> <li>4. Particular symptoms revealed with the help of the mentioned investigations typical for internal diseases;</li> </ol> <p><i>The student should be able to:</i></p> <ol style="list-style-type: none"> <li>1. Determine the range of diagnostic investigations depending on the suspected disease;</li> <li>2. Record ECG and spirometry.</li> <li>3. Interpret the results of the main and novel instrumental methods in therapeutic practice (ECG, Holter monitoring, echocardiography, stress tests, coronary angiography, spirometry, peak flowmetry, pulse oximetry, bronchoscopy,</li> </ol>

	bronchography, ultrasound of the liver, gall bladder, pancreas, kidneys, elastography of the liver; upper gastrointestinal endoscopy and colonoscopy; capsule endoscopy; wireless capsule pH investigations and catheter-based pH studies).
<b>Providing general and professional competencies</b>	GC1 Ability to think abstractly, analyze and synthesize, the ability to learn and be up-to-date. GC2 Ability to apply knowledge in practical situations GC3 Knowledge and understanding of the subject area and understanding of professional activities GC4 Ability to adapt and act in a new situation GC5 Ability to make informed decisions; work in a team; interpersonal skills GC6 Ability to communicate in the state language both orally and in writing; ability to communicate in a foreign language GC7 Skills in the use of information and communication technologies GC8 Determination and perseverance in tasks and responsibilities GC9 Ability to act socially responsibly and consciously PC2 Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results PC3 Ability to establish a preliminary and clinical diagnosis of the disease PC17 Ability to maintain medical records PC18 Ability to conduct epidemiological and medical-statistical studies of public health; processing of state, social, economic and medical information

#### Information for students:

You have already started examining the patient, you have some knowledge of instrumental methods of diagnostic, but you are still not confident in making diagnoses - than you come to us. You have already known that without additional methods of examination it is impossible to substantiate the diagnosis, but you still do it uncertainly – our department is waiting for you. If you want to record an ECG by yourself, try to perform and interpret Holter ECG monitoring, spirogram, ultrasound diagnosis of the abdominal cavity – we invite you to our course. We offer a variety of clinical therapeutic cases with the analysis of the most modern examination methods in therapy. Each lesson - with a proficient expert (cardiologist, gastroenterologist, pulmonologist, rheumatologist).

Cardiovascular pathology ranks first in the structure of over all mortality. Therefore, the task of every doctor is the timely diagnosis of life-threatening events. Remember – understanding electrocardiography is the key to this. We will improve your knowledge and skills in recording and interpreting the ECG for various disorders of excitability, conduction, coronary problems. We will show you the benefits of Holter ECG monitoring. You will be able to observe echocardiography in real time. You will not have any questions about instrumental and laboratory express-diagnostics of acute coronary conditions.

It is impossible to imagine a modern diagnostics of respiratory diseases without using of spirometry. Spirometry is as important in pulmonology as electrocardiography in cardiology. You will know how to record spirometry, how to differentiate functional disorders of the external breathing, how to conduct and interpret the results of pharmacological tests. Current coronavirus pandemic demonstrates importance of pulseoxymetry - an effective method of rapid diagnosis of pulmonary insufficiency in patients with pneumonia. We will study the correct using and interpretation the results of this method. Bronchoscopy allows you to look inside the bronchial tree and recognize its lesions. In practical classes we will use these diagnostic methods in real and

virtual patients. It will be really interesting!!!

We will definitely improve your knowledge in gastroenterology. Our aim is:

- to provide cutting edge knowledge in the field of upper gastrointestinalendoscopy and colonoscopy;
- to educate students with main indications, technics and obtained results of capsuleendoscopy;
- to evaluate experience of wireless capsule pH-investigations and catheter-based pH-studies;
- to get acquainted with modern possibilitie softhe ultrasound and elastography investigation of the liver, gallbladder, pancreas in the diagnostic evaluation of the pathologies of these organs and to earn basic practical skills in these investigations. Students will have an opportunity to take part in real-time ultrasonographic investigations performed by the leading experts in the field.

We will help you become a highly professional specialist and overcome the challenges of the diseases diagnostics!