

**Odessa National Medical University**

**Faculty of Medicine**

**Department of Surgery**

**Syllabus for the elective course:**

**" Liver Diseases. Hepatic Echinococcosis "**

<b>Volume:</b>	Total hours: 90 hours, 3 credits. Semesters: IV 4th year of study.
<b>Days, time, place of classes:</b>	Monday – Friday According to the schedule Department of Surgery auditorium (Odessa regional consultative-diagnostic center, Sudnobudivna St., 1), ORCDC Department of Surgery. Odessa Regional Clinical Medical Center, 1. 3rd floor: Department of Surgery: offices of the Department of Surgery, lecture auditorium; 2. 3rd floor: Associate Professor's office.
<b>Teachers</b>	Head of the Department: Volodymyr Grubnik, M.D., Ph.D., Professor. Professor of the Department: Boris Zaporozhchenko, M.D., Ph.D., Professor. Associate Professor: Ihor Borodaev, M.D., Ph.D., Associate Professor, Surgeon of the Highest Category; Petro Muravyov, M.D., Ph.D., Associate Professor, Surgeon of the Highest Category; Valentin Kolodiy, M.D., Ph.D., Associate Professor, Surgeon of the Highest Category; Valeriy Kachanov, M.D., Ph.D., Associate Professor, Surgeon of the Highest Category.
<b>Contact information</b>	Inquiries by phone: Ihor Borodaev: +38048 7988068 +380 672923236 E-mail: <a href="mailto:xir316@gmail.com">xir316@gmail.com</a> In-person consultations: - Thursday – from 14:00 to 16:00; - Saturday – from 9:00 to 13:00  Online consultations on the platform (Microsoft Teams):

	<ul style="list-style-type: none"> <li>- Thursday – from 14:00 to 16:00;</li> <li>- Saturday – from 9:00 to 13:00</li> </ul> <p>A link for online consultation is provided to each group separately during classes.</p>
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**Communication:** Communication with students is carried out in person. In case of quarantine, it is carried out via MTeams and Viber.

Missed classes made up online in MTeams.

## **COURSE ANNOTATION**

**The subject of study** of the course "Liver Diseases. Hepatic Echinococcosis" includes ethics, methodology, methods of scientific research, etiology of diseases, risk factors, pathogenesis, clinical manifestations, diagnosis, differential diagnosis, principles of surgical treatment of patients, and prevention.

### **Prerequisites and post-requisites of the course (Position of the discipline in the educational program)**

The course is based on the knowledge acquired in human anatomy, medical biology, histology, cytology and embryology, pathomorphology, physiology, pathophysiology, medical and biological physics, bioorganic and biological chemistry, microbiology, virology and immunology, pharmacology, clinical pharmacology and clinical pharmacy, propaedeutics of internal medicine, infectious diseases, general practice (family medicine), gastroenterology, general surgery. This implies "vertical" integration with these disciplines and the formation of skills to apply knowledge in the process of further education and professional activity. The knowledge, skills, abilities, and competencies acquired in the course will form the basis for deepening knowledge in surgery, particularly surgical hepatology, and will lay the groundwork for further continuous postgraduate education.

### **The goal of the course**

The goal is to acquire and deepen knowledge, skills, abilities, and other competencies necessary in professional activities, to develop skills in scientific research, to obtain new facts and implement them in practical medicine and other areas of society's life.

### **The main tasks of the course are:**

- To master the basic principles of diagnosis in liver diseases of different etiology;
- To learn the measures to assist patients with infectious, metabolic, autoimmune liver diseases;
- To acquire knowledge on the interpretation of the dynamics of liver tests depending on the severity of chronic hepatitis and liver cirrhosis;
- To master the knowledge of the complex of therapeutic and diagnostic measures in infectious and non-infectious liver diseases;
- To master the methodology of examination of a patient with hepatitis and cirrhosis of the liver of different etiology;
- To acquire practical skills in providing first medical aid in hepatic coma;
- To learn the basics of diagnosis and assistance in liver failure;
- To learn the assistance at different stages of portal hypertension;
- To form moral-ethical and deontological qualities in professional communication with the patient.

### **Expected results**

As a result of mastering the course content, the student should know:

- and systematically understand the problem of the peculiarities of the diagnosis of surgical diseases of the liver and echinococcosis, the development and progression of the disease for future professional and scientific activities;
- methods and criteria for evaluating the results of research on processes in surgical hepatology;
- the main principles of analysis and generalization of the results of scientific research in the field of liver surgery;
- clinical epidemiology, principles, methods, and achievements of evidence-based medicine in the treatment of hepatic echinococcosis;
- modern research methods, biomarkers of various processes and conditions in surgical hepatology, their informativeness.

### **to be able to:**

- demonstrate knowledge of research methodology and methods in the diagnosis of liver diseases and echinococcosis;
- independently and critically analyze and synthesize scientific data in surgical hepatology;

- choose modern methods of diagnosis, treatment, and prevention of liver diseases, taking into account the patient's condition and age;
- use the results of scientific research in the field of surgical hepatology and pharmaceutical practice;
- present the results of scientific research in oral and written forms in the scientific community, according to national and international standards;
- use ethical principles in working with patients of different age groups and gender, adhere to scientific and medical ethics;
- demonstrate academic integrity and act responsibly regarding the reliability of obtained scientific results.
- evaluate information regarding the diagnosis based on the results of laboratory and instrumental studies, namely, determine the list of necessary clinical-laboratory and instrumental studies and evaluate their results in patients of different age groups and gender.
- determine the principles of treatment of diseases, the necessary regimen of work and rest, and the nature of nutrition in patients of different age groups and gender.

## **COURSE DESCRIPTION:**

### **Forms and Methods of Learning**

The course will be delivered in the form of practical lessons (30 hours) and independent work of higher education students (60 hours).

### **Methods of Learning**

The study of the course is implemented based on the following teaching methods:

- Dominant teaching tools: visual, verbal, practical, independent exploratory-educational work;
- Management of thematic patients;
- Surveys;
- Group discussions on problematic clinical and scientific situations;
- Individual control conversation;
- Situational tasks ("case method");
- Conducting individual clinical studies.

All types of classes are supported by methodological developments, visual teaching tools (presentations), and the department's information resource. Demonstrations of thematic patients, analysis of case histories of thematic patients from the department's bank, and simulation training are used.

At the first practical lesson (PL), the student is provided with a detailed plan of work in the clinic and conditions for its implementation. The plan includes a list of studies that the student must master; a list of thematic patients whose curation he must perform during the study of the course; determination of the time for consultations with the teacher, and time for participation in clinical rounds, practical conferences.

Students are recommended to take simulation training using a simulator and a program of surgical interventions on the liver of a patient, which allows practicing 20 clinical scenarios in hepatosurgery.

## **Content of the Course**

### **Topic 1. Liver: topography, structure, functions.**

Features of metabolism in the liver. Blood circulation of the liver. Main functions of the liver. Age-related changes in liver mass.

**Topic 2. Main laboratory and instrumental methods of research in hepatology.** Clinical examination of patients with liver diseases. Syndromes and methods of examination in hepatology.

**Topic 3. Gallstone disease, Clinical Symptoms, and course of GSD. Treatment of GSD.**

**Topic 4. Parasitic cysts of the liver. Subjective and objective symptoms of parasitic cysts of the liver.** Diagnostic criteria. Parasitic cysts of the liver. Histological examination of liver biopsy. Treatment of parasitic cysts of the liver.

**Topic 5. Autoimmune hepatitis. Definition and nature of the onset of the disease. Main laboratory markers of autoimmune hepatitis.** Instrumental methods of research. Differential diagnosis. The algorithm of the doctor's actions in providing medical assistance to patients with autoimmune hepatitis.

**Topic 6. Toxic Chronic Hepatitis. Definition, main clinical forms.** Laboratory indicators in toxic hepatitis. Instrumental methods of examination. Differential diagnosis of toxic chronic hepatitis. Main actions of the doctor in providing medical assistance to patients with toxic chronic hepatitis.

**Topic 7. Alcoholic liver disease.** Clinical manifestations. Laboratory and imaging examinations. The algorithm of the doctor's actions in providing medical assistance to patients with alcoholic hepatitis (alcoholic liver disease).

**Topic 8. Liver cirrhosis.** Definition and classification of liver cirrhosis. Signs of liver failure. Portal hypertension and ascites: diagnosis and treatment.

**Topic 9. Final lesson. Credit.**

**List of Recommended Literature:**

**Main:**

1. Surgery: textbook / Ya.S. Berezhnytskyi, O.V. Belov, B.S. Zaporozhchenko, et al. // Vinnytsia: Nova Knyha, 2020. - 528 p.
2. Surgery (basic textbook) volume 3 (book 3 - related specialties for surgical interns) Textbook / edited by H.V. Dzyak — Dnipro: RWA "Dnipro-VAL", 2014. — 828 p.
3. Surgery. Textbook edited by M.P. Zakharam, O.I. Poidy, M.D. Kucher. Kyiv, "Medicine", 2014, 656 p.
4. Surgery. Study guide. Part 1 edited by O.B. Kutovyi. Dnipro, 2015, 287 p.

**Supplementary:**

1. Gallstone disease: diagnosis and management. NICE Clinical guideline [CG 188] 2014. Available at <https://www.nice.org.uk/guidance/cg188/chapter/1-recommendations/>
2. Lectures on hospital surgery in 3 volumes. Edited by V.G. Mishalov. "Askania", Kyiv, 2008.
3. Surgical Diseases. Textbook edited by P.G. Kondratenko. Kharkiv, "Fact". — 2006. — 816 p.
4. Surgery: textbook / edited by A.Ya. Kovalchuk. — Ternopil: TDMU, 2010. — 1056 p.

**Information Resources:**

1. Department of Surgery website: <https://info.odmu.edu.ua/chair/surgery2>
2. Ministry of Health of Ukraine: <http://moz.gov.ua/>
3. National Scientific Medical Library of Ukraine: <http://www.library.gov.ua/>
4. Testing Center of the Ministry of Health of Ukraine: <http://testcentr.org.ua/>
5. English-language web resource for doctors and other healthcare professionals: <http://www.medscape.com>

6. English-language database of medical and biological publications: <http://www.pubmed.com>
7. English-language web resource for doctors and other healthcare professionals: <https://emedicine.medscape.com/pulmology>

### **Evaluation:**

Assessment of ongoing educational activities includes oral questioning, testing, evaluation of execution of practical skills, assessment of communication skills during role-playing, solving situational clinical tasks, and assessing activity in class.

### **Assessment of ongoing educational activities in practical classes**

1. Assessment of theoretical knowledge from the class topic: methods include questioning, solving situational clinical problems - maximum score is 5, minimum is 3, unsatisfactory is 2.
2. Evaluation of practical skills and manipulations from the class topic: methods include evaluating the correctness of practical skill execution - maximum score is 5, minimum is 3, unsatisfactory is 2.
3. Evaluation of work with a patient from the class topic: methods include assessing a) communication skills with the patient, b) correctness of assigning and evaluating laboratory and instrumental studies, c) adherence to the differential diagnosis algorithm, d) justification of the clinical diagnosis, e) developing a treatment plan - maximum score is 5, minimum is 3, unsatisfactory is 2.

The score for a practical class is the arithmetic average of all components and is a whole number (5, 4, 3, 2), rounded according to statistical methods.

### **Criteria for ongoing assessment in practical classes:**

<b>Grade</b>	<b>Evaluation criteria</b>
Excellent «5»	The student demonstrates excellent mastery of the material, actively participates in discussions and solving clinical cases, confidently shows practical skills during patient examination and interpretation of clinical, laboratory, and instrumental data, expresses opinions on the topic, and demonstrates clinical thinking.
Good «4»	The student has a good grasp of the material, participates in discussions and clinical case resolutions, shows practical skills

	with some errors during patient examination and data interpretation, expresses opinions, and demonstrates clinical thinking.
Satisfactory «3»	The student has insufficient mastery of the material, participates uncertainly in discussions and clinical cases, and shows practical skills with significant errors during patient examination and data interpretation.
Unsatisfactory «2»	The student lacks mastery of the material, does not participate in discussions or solving clinical cases, and fails to demonstrate practical skills during patient examination and data interpretation.

*Possibility and Conditions for Additional (Bonus) Points: Not provided.*

Assessment of Individual Tasks: Marks for individual tasks are awarded to students only upon successful completion and defense of the task, contributing to overall performance. Independent Work Assessment: Independent work, as part of the class topic along with classroom work, is evaluated during ongoing control of the topic in the respective class. Mastery of topics assigned for independent study is assessed during exams. During their studies, students complete the SRS notebook (answers to questions, solutions to situational tasks based on the topic for independent analysis).

Final Control - Credit: Eligibility for credit includes attendance of all classes as per the syllabus, completion of KROK-2 database tests (over 90%), case history (during virtual disciplinary training), and the SRS notebook.

## **COURSE POLICY**

**Deadline and Resit Policy:** Students must make up all missed lectures within 2 weeks from the date of absence. Those with no valid reason and no more than 2 absences can make up within 2 weeks without the dean's permission. Students not making up missed classes within 2 weeks from the date of absence are not allowed in classes without the dean's permission. Those with more than 2 unexcused absences are not allowed in classes and make-ups without the dean's permission. Students who missed classes for valid reasons for more than 2 days can make them up according to an individual schedule set by the department and approved by the dean.

Missed practical classes are made up by the student with the next available teacher according to the department's make-up schedule: twice a week during the semester (Tuesday and Saturday - days for make-ups and consultations). On Tuesdays, no

more than 1 class can be made up, and on Saturdays, no more than 3 (note: Thursday – 15:00 – 17:00; Saturday – 10.00-13.00). Students have the right only during the temporary suspension of face-to-face classes (during remote learning) to make up academic debts without the dean's permission. A class is considered made up if the student receives a positive grade.

**Academic Integrity Policy:** Maintaining academic integrity by students implies independently completing educational tasks and current and final control tasks; referencing information sources when using ideas, developments, statements, information. In educational activities, the use of prohibited auxiliary materials or technical means (cheat sheets, summaries, micro earpieces, phones, smartphones, tablets, etc.) during control events is unacceptable.

**Policy on Make-ups and Tardiness:** Mandatory. If a student is late for a class, they can be present but marked absent.

**Mobile Devices:** Using mobile devices during class is prohibited.

**Classroom Behavior:** In the classroom, the student must behave according to the rules of ethics and behavior, defined in the regulations on the organization of the educational process by higher education students at ONMedU and the regulations on the organization of humanitarian education and educational work at Odessa National Medical University.