

**Odessa National Medical University
Department of Internal Medicine No. 2**

**Syllabus of the course
HEPATO-BILIARY HOMEOKINESIS
IN PRACTICE OF PHYSICIANS AND RESEARCHERS**

Обсяг	4 credits / 120 hours
Семестр, рік навчання	IV semester 2 nd
Дні, час, місце	Monday - Friday 4 - 6 acad. hours, according to the schedule Auditoriums of the Center for Reconstructive and Recovery Medicine (University Clinic) ONMedU, Department of Internal Medicine No 2
Викладач (-і)	Head of the department: Shtanko Vasyl Andriyovych, MD, Ph.D, Associate Professor, Honored Doctor of Ukraine. Associate Professor of the department: Perepeliuk Mykola Mykolayovych, MD, Ph.D, Associate Professor, therapist of the highest category
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Робоче місце	Center for Reconstructive and Recovery Medicine (University Clinic): 1. 4 th floor: department of Internal Medicine: room No. 24, 31, lecture audience 2. basement floor - docent's room; 1. 3. 1 st floor: room for practicing practical skills.
Консультації	On-site: Thursday - 14.00 - 16.00; Saturday - 09.00 - 13.00 Online (on Microsoft Teams platform): Thursday - 14.00 - 16.00; – Saturday - 09.00 - 13.00

COMMUNICATION

On-site in the department's classrooms, remotely on the Microsoft Teams platform, in individual cases with prior warning - in Viber groups.

COURSE ANNOTATION

Subject of discipline study

The subject of study of the elective educational discipline (EED) "HEPATO-BILIARY HOMEOKINESIS IN PRACTICE OF PHYSICIANS AND RESEARCHERS" for postgraduate students of the III educational and scientific level is typical, untypical and concomitant syndromes and nosologies of hepatobiliary system pathology in the clinic of any human diseases.

Prerequisites and post-requisites of the course (The place of the discipline in whole educational program)

EED is based on the acquired knowledges from the educational programs "Internal Medicine", "Propaedeutics of Internal Medicine", propaedeutics of pediatrics, general surgery and basic disciplines (human anatomy and pathomorphology, physiology and pathophysiology, microbiology, virology and immunology, radiology and pharmacology).

In addition, the study of EED provides the holders of the PhD with deepening of knowledge in the following disciplines: "Academic integrity", "Professional ethics of scientific activity in the field of health care" and "Pedagogy of higher education".

Acquired knowledge, skills, abilities and competences from EED will become the basis for deepening knowledge in Internal Medicine, especially in cardiology, and will form the basis for further continuous postgraduate education.

The purpose of the course

The aim of EED is to form specialist who are capable of competently solving complex problems in the field of professional and research innovative activities when planning and carrying out their own research, and to prepare PhD doctors for the high-quality performance of functional duties related to the selection of optimal non-medicamental and medicament strategies and tactics of management in gastroenterological profile patients with hepatobiliary pathology, which should increase the efficiency and safety of treatment, improve patient's quality of life and survival.

Tasks of the discipline

The main tasks of the EED are to provide the holders of PhD degree with knowledge about:

- diversity of hepatobiliary pathology, it's interaction with others organs and systems and different influence on them;
- differential diagnosis of diseases of hepatobiliary system with pathology/ies of other localization;
- prediction of interaction between drugs in terms of impact on metabolic and detoxification liver's functions, prevention of drug induced liver injury and negative effects of polypharmacy;
- holistic view of the human body in the interplay of the physical and mental, looking for an organ-specific solution using a systems approach.

Expected results

As a result of training the EED, the candidate for tPhD degree *should know*:

- structural and functional properties and features of the hepato-biliary system and approaches to the diagnosis and treatment of various liver and gastrointestinal disorders;
- methods and criteria for assessing disorders of the hepato-biliary system;
- prospects for the development of treatment methods/technologies for liver and gastrointestinal pathology;
- basic principle analysis and summary of the results of scientific research in the field of hepatology;

should be able to:

- perform syndromic diagnostics to change the diagnostic hypothesis of hepatic and gastrointestinal pathology, regardless of the applicant's professional specialisation;
- evaluate the impact of liver and gastrointestinal pathology on other organs and systems;
- be familiar with the groups of drugs that are indicated for any liver or gastrointestinal pathology and assess the interactions between different groups of drugs and their possible toxic effects on the liver;
- demonstrate knowledge of research methodology and methods in hepatology;
- independently and critically analyze and synthesize scientific data in the field of hepatology and use the results of these scientific research in practice;
- demonstrate academic integrity and act responsibly regarding the reliability of the obtained scientific results.

COURSE DESCRIPTION

Forms and methods of education

EED " HEPATO-BILIARY HOMEOKINESIS IN PRACTICE OF PHYSICIANS AND RESEARCHERS" consists of 4 ECTS credits (120 hours), each credit contains 15 audience hours and 15 out audience (OA). Totaly - 60 audience hours and 60 out audience hours for OA/

The methods of the study

The study of GNI is implemented on the basis of the following teaching methods:

- dominant measures of study: visual, verbal, practical, learning;
- management of thematic patients;
- poll;
- group discussions on problematic clinical and scientific situations;
- individual control interview;
- situational clinical tasks ("case method");
- performance of individual clinical studies.

All types of classes are provided by methodical developments, presentations, information resources of the department. Demonstrations of thematic patients, analysis of disease histories of the thematic patients from the bank of the department.

At the 1st practical lesson (PL), the trainee is provided with a detailed plan of work in the clinic and the conditions for its implementation are provided. The plan includes: a list of studies that the student should master; a list of thematic patients, whose supervision he must perform during the study of the EED; determining the time of consultations with the teacher, and the time to participate in clinical rounds, practical conferences.

Content of studied discipline

Topic 1. Liver, structure, basic functions, clinical and laboratory syndromes of liver parenchyma damage.

Topic 2. Instrumental methods of liver and gastrointestinal tract examination (ultrasound, CT with contrast, MRI, MRI-cholangiography).

Topic 3. Types of liver biopsies. Possibilities and limitations of morphological diagnostics of biopsy material. Non-invasive analogues of liver biopsy.

Topic 4. Chronic hepatitis B and C, current diagnosis and treatment.

Topic 5. Post-exposure manifestations of chronic hepatitis B and C virus infection. Co-infection with hepatitis B, C, and D viruses in the human body.

Topic 6. Other chronic viral hepatitis as a frequent manifestation of TORCH infection.

Theme 7. Autoimmune liver diseases. Cytostatics, systemic and topical steroids. Pleiotropic effects of ursodeoxycholic acid.

Topic 8. Metabolism of drugs in the liver. Fast and slow acetylators. Competition for cytochromes. Medical hepatotoxicity.

Topic 9. Hepatotoxic poisons in daily life, principle of diagnostics and detoxication

Topic 10. Damage to the liver caused by alcohol and its substitutes. Approaches to treatment of chronic alcoholic hepatitis.

Topic 11. Non-alcoholic fatty liver disease and steatohepatitis as an adjunctive factor in polymorbidity. Parallels with insulin resistance.

Topic 12. Rare liver diseases, cryptogenic hepatitis as a stage of diagnostic search.

Topic 13. Gilbert syndrome, the stage of benignness in different patients.

Topic 14. Masks of liver disease. Mask #1 - Hemolytic Anemia.

Topic 15. Masks of liver diseases. Mask #2 – Gallstone disease, pancreatic cancer, pseudopulmonary form of chronic pancreatitis.

Topic 16. Differential diagnosis of hepatoluminal syndrome and gastrointestinal syndrome.

Topic 17: Peculiarities of perioperative management of patients with concomitant liver cirrhosis.

Topic 18. Differentiated use of hepatoprotectors.

Topic 19: Non-invasive stays in the clinic for liver and gastrointestinal pathology.

Topic 20. Psychological features of patients with liver and gastrointestinal disease.

Topic 21: Problems of liver regeneration: theory, practice, perspectives.

Topic 22. Clinical problems in diseases of the liver and gastrointestinal tract.

Topic 23: Case studies on liver and gastrointestinal tract diseases.

Topic 24. Final lesson/test.

List of references:

a) main:

1. Денесюк В.І., Денесюк О.В. Внутрішня медицина. Підручник для студентів закладів вищої освіти III-IV рівня акредитації та лікарів післядипломної освіти на основі рекомендацій доказової медицини/ За ред. В.М.Коваленка. Укл.: Н.М.Шуба, О.Г.Несукай, О.П.Борткевич. – 3-тє вид., переробл. і доповн.. – К.: МОРІОН, 2019. – 960 с. + 8 с.кол.вкл.

2. Гастроентерологія. Підручник: У 2 Т. - Т.2 / за ред. проф Н.В. Харченко, О.Я. Бабака. - Кіровоград: Поліум, 2017. - 432 с.

3. Основи внутрішньої медицини / В.Г. Передерій, С.М. Ткач - К., 2018. ТЗ. «Диф. діагноз в клініці внутрішніх хвороб. Невідкладні стани...»- 1006 с.

4. Гепатопротектори: від теорії до практики - Н.Б. Губергріц, Г.Д. Фадеєнко, Г.М. Лукашевич, П.Г. Фоменко – Донецьк: Лебідь, 2012. -156 с.

5. Evidence-based gastroenterology and hepatology, 4th edition / J.W.D. McDonald, B.G Feagan, R. Jalan, P.J. Kahrilas. - Wiley-Blackwell, 2019. - 816 p.

6. Functional gastroenterology: assessing and addressing the causes of functional gastrointestinal disorders, 2nd edition / S. Sandberg-Lewis. – Steven Sandberg-Lewis, 2017. – 320 p.

b) additional

1. Бісярін Ю.В., Гаврилюк О.М., Кіселик І.О, Чайка Ю.І. Біопсія печінки: клінічні та патоморфологічні аспекти. - Гепатологія – 2009. – № 1 – С. 28–36.

2. Наказ МОЗ України 21.06.2016 № 613. Уніфікований клінічний протокол первинної, вторинної (спеціалізованої), третинної (високоспеціалізованої) медичної допомоги. Вірусний гепатит В у дорослих.

3. Наказ МОЗ України 18.07.2016 № 729. Уніфікований клінічний протокол первинної, вторинної (спеціалізованої), третинної (високоспеціалізованої) медичної допомоги вірусний гепатит С у дорослих.

4. Хаустова О.О. Психосоматичний підхід до порушень вегетативної нервової системи у загальній лікарській практиці// Neuronews. 2016 - №2 - С.35 - Режим доступу: <https://neuronews.com.ua/uploads/files/2016/2-1/1321256216.pdf>

5. European Union HCV Collaborators. Hepatitis C virus prevalence and level of intervention required to achieve the WHO targets for elimination in the European Union by 2030: a modelling study. Lancet Gastroenterol Hepatol 2017;2:325–336.

6. Ye H., Nelson L., Gomez del Moral M. et al. Dissecting the molecular pathophysiology of drug-induced liver injury // World J Gastroenterol. – 2018. – № 24 (13). – P. 1373-1385.

Electronic information resources:

1. Державний Експертний Центр МОЗ України
<http://www.dec.gov.ua/index.php/ua/>
2. Національна наукова медична бібліотека України <http://library.gov.ua/>
3. Національна бібліотека України імені В.І. Вернадського
<http://www.nbuv.gov.ua/>
4. Ресурс по взаємодії лікарських засобів <http://medicine.iupui.edu/flockart/>
5. BMJ Clinical Evidence <http://clinicalevidence.bmj.com>
6. Medscape from WebMD <http://www.medscape.com>
7. Ресурс по прогнозуванню міжлікарських взаємодій (на базі інструкцій FDA, англійською) URL: <http://www.drugs.com>

Informative support:

ONMedU electronic library: links to attached methodological developments of lectures and software, methodological recommendations.

ONMedU repository: scientific journals, abstracts of dissertations

EVALUATION

Control methods of current knowledges:

Control is carried out during PL in accordance with the formulated tasks for each topic.

When evaluating educational activities, preference is given to standardized methods of control: oral survey, evaluation of a report on the clinical analysis of thematic patients, evaluation of the ability to participate in a discussion on problematic issues.

When mastering each topic for the current educational activity, the student is given traditional grades on a 4-point scale.

The current academic success is calculated as the average current score, i.e. the arithmetic average of all grades received by the post-graduate student on a traditional scale, rounded to 2 (two) decimal places, for example 4.75.

Assessment of current knowledges control of discipline

Evaluation criteria:

– ***"excellent"***: the post-graduate student shows special creative abilities, knows how to independently acquire knowledge, finds and processes the necessary information without the help of a teacher, knows how to use the acquired knowledge and skills to solve problems, is able to produce innovative ways of solving problems, convincingly argues answers, independently reveals his own gifts and inclinations.

– ***"good"***: the post-graduate student is fluent in the studied amount of material, applies it in practice, freely solves tasks and problems in standard situations, independently corrects the mistakes made, the number of which is insignificant.

– **"satisfactory"**: the post-graduate student is able to master a significant part of the theoretical material, but mainly in a reproductive form, demonstrates knowledge and understanding of the main provisions, can analyze the educational material with the help of the teacher, correct errors, among which there are a significant number of essential ones.

– **"unsatisfactory"**: the post-graduate student has mastered the material at the level of some fragments, which constitute an insignificant part of the educational material.

Only those post-graduate students who have no academic debt and have an average score for current academic activities of at least 3.50 are admitted to the final certification.

Forms and methods of final control:

The final control is in the form of an individual interview is carried out at the final lesson after successful mastering of all topics of EED.

Post-graduate students who have attended all practical lessons by EED, completed the entire volume of learning and have an average score for the current educational activity of at least 3.51 are admitted to the final control.

The grade for the discipline is the arithmetic average of two components: the average current knowledge score as the arithmetic average of all current grades; and traditional score for final control.

The average score for the discipline is translated into a traditional evaluation of the discipline on a 4-point scale and is considered as the ratio of this arithmetic average to the percentage of assimilation of the required amount of knowledge in the given subject.

Conversion of the traditional grade from the discipline on a multi-point scale: performed by the information and computing center of the University. The obtained average grade for the discipline by multiplying it by 40 (the obtained grade is rounded to whole numbers) is converted into a grade on a 200-point scale, which, in turn, is converted into a traditional grade on a discipline on a 4-point scale.

Average point by discipline	Estimation by 200-point scale	Traditional grade on a discipline on a 4-point scale (traditional)
4,62–5,0	185–200	5
3,77–4,61	151–184	4
3,0–3,76	120–150	3

Applicant's independent work

Takes 50% of the EED volume and includes: pre-auditory and extra-auditory preparation for lectures, PL in accordance with thematic plans; work in clinic departments, including laboratories and the department of functional diagnostics, interpretation of data from laboratory and instrumental investigations related to the problems of gender and age-related cardiology in extracurricular time; learning

practical skills with the help of a phantom, working with patients; individual work: speech at the clinic's scientific and practical conference, writing articles, etc.

The teachers of the department provide the opportunity to carry out this post-graduate student's work, control of it during PL and final control lesson.

COURSE POLICY ("*rules of the game*")

Deadlines and Rescheduling Policy.

Tasks must be completed on time according to the deadline (class schedule). For untimely completion of the assignment, the post-graduate student receives an unsatisfactory grade.

If post-graduate student was absent from practical lesson for any reason, the practice is carried out within the deadlines set by the teacher in accordance with «Положення про організацію освітнього процесу в ОНМедУ» (is available on the university's website: <https://onmedu.edu.ua/wp-content/uploads/2020/01/osvitnijproces.pdf>).

The rescheduling of final control is carried out according with the schedule approved by the dean's office.

Academic Integrity Policy

Політика освітньої компоненти ґрунтується на засадах академічної доброчесності (is available on the university's website: <https://onmedu.edu.ua/wp-content/uploads/2020/07/polozhennja-prodobrochesnist.pdf>) and is determined by the system of requirements that the teacher presents to the post-graduate student when studying the educational component: a) independent performance of tasks, tasks of current and final control of learning results (for persons with special educational needs, this requirement is applied taking into account their individual needs and capabilities); b) references to sources of information in case of use of ideas, developments, statements, information.

Attendance and lateness policy

In order to receive a satisfactory grade, it is mandatory to attend and work during all audience lessons. Late arrivals are not welcome. A postgraduate student is allowed to be late for significant reason for no more than 10 minutes.

Mobile devices

Using phones and computers without permission of the teacher is a violation of discipline. Mobile devices are allowed to be used only during online testing.

Behavior in the audience

The course involves working in a team (group, members of the department's staff, employees of the department's clinical base). All communication environments are friendly, creative, open to constructive criticism. The following values are supported: respect for colleagues; tolerance for others; receptivity and impartiality;

argumentation of agreement or disagreement with the opinion of other participants in the discussion, as well as one's own opinion; respecting the dignity of the opponent's personality during communication; compliance with the ethics of academic relationships

Developers:

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