

SYLLABUS

INTERNATIONAL EUROPEAN
UNIVERSITY



SCHOOL OF
MEDICINE

INFECTIOUS DISEASES AND
EPIDEMIOLOGY

2023



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Discipline		
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INFECTIOUS DISEASES AND EPIDEMIOLOGY

Teacher(s)		
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Lapiy Fedir Ivanovych

Profile of the teacher(s)		
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<https://medicine.ieu.edu.ua/pro-yemsh/kafedry/kafedra-medyko-profilaktychnykh-dystsyplin>

Consultations	
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Face-to-face consultations



First Monday of the month from 15:00 to 16:00

Online consultations



Second Wednesday of the month from 15:00 to 16:00

Contact phone number		
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+380503810892

E-mail		
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Discipline page		
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<https://medicine.ieu.edu.ua/pro-yemsh/kafedry/kafedra-medyko-profilaktychnykh-dystsyplin>

Form of final control	offset	differentiated offset	exam
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1 Brief summary of the discipline

The discipline "Infectious Diseases and Podemiology" enables students in the 5th year of study to acquire knowledge, skills and practical skills that enable a specialist to quickly and correctly navigate situations in patients with infectious pathology and other emergency conditions, avoid fatal mistakes or loss of time and take priority steps that will save a person's life and/or become a good basis for their successful further treatment in a hospital. Mastering the discipline is based on the knowledge gained by students in the process of studying biology, physiology, microbiology, epidemiology and other basic subjects.

2 Prerequisite for the course

The course is based on the basic principles and knowledge of anatomy, histology, biology (general, molecular and medical), normal physiology, microbiology previously studied by students. In the course of mastering the discipline "Infectious Diseases and Epidemiology", it is rational to introduce modern world developments and standards on the main issues of infectious diseases into the educational process.

3 Purpose and objectives of the discipline

The purpose of teaching the discipline "Infectious Diseases" is to master theoretical and practical knowledge of etiology, epidemiology, pathogenesis, typical clinical manifestations, methods of diagnosis, treatment of infectious pathology within the limits corresponding to the dental training programme, taking into account the peculiarities of his specialty.

The main objectives of studying the discipline "Infectious Diseases" are to acquire knowledge, skills and abilities to ensure students' adaptation to patients with infectious diseases; the ability to make a diagnosis, choose appropriate treatment and diagnostic procedures, and provide emergency care to patients with infectious diseases.

4 Learning outcomes

PLR-1	Have a thorough knowledge of the structure of professional activity. Be able to carry out professional activities that require updating and integrating knowledge. To be responsible for professional development, the ability to further professional training with a high level of autonomy.
PLR-3	Specialised conceptual knowledge that includes scientific achievements in the field of healthcare and is the basis for research, critical thinking in the field of medicine and related interdisciplinary issues.
PLR-4	Identify and identify the leading clinical symptoms and syndromes (according to list 1); using standard methods, using preliminary data from the patient's history, examination of the patient, knowledge of the person, his/her organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).
PLR-5	Collect complaints, anamnesis of life and disease, assess the patient's psychomotor and physical development, the state of organs and body systems, and evaluate information on the diagnosis (according to List 4) based on the results of laboratory and instrumental studies, taking into account the patient's age.
PLR-6	To establish the final clinical diagnosis by making an informed decision and analysing the obtained subjective and objective data of clinical, additional examination, differential diagnosis, following the relevant ethical and legal standards, under the supervision of a supervising physician in a healthcare facility (according to list 2).
PLR-7	Prescribe and analyse additional (mandatory and optional) methods of examination (laboratory, functional and/or instrumental) (according to list 4), patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
PLR-8	Determine the main clinical syndrome or what causes the severity of the victim's/injured person's condition (according to list 3) by making an informed decision and assessing the person's condition in any circumstances (in a healthcare facility, outside it), including in an emergency



SYLLABUS



	situation and hostilities, in the field, in conditions of lack of information and limited time.
PLR-9	Determine the nature and principles of treatment of patients (conservative, surgical) with diseases (list 2), taking into account the patient's age, in a health care facility, outside it and at the stages of medical evacuation, including in the field, based on a preliminary clinical diagnosis, following the relevant ethical and legal standards, by making an informed decision according to existing algorithms and standard schemes, if necessary, expand the standard scheme, be able to justify personalised recommendations under the supervision of a medical supervisor under the supervision of a supervising physician in a medical institution.
PLR- 10	Determine the necessary work, rest and nutrition regime based on the final clinical diagnosis, in compliance with relevant ethical and legal standards, by making an informed decision based on existing algorithms and standardised schemes.
PLR- 14	Determine the tactics and provide emergency medical care for urgent conditions (according to list 3) in a time-limited environment in accordance with existing clinical protocols and treatment standards.
PLR- 17	Perform medical manipulations (according to List 5) in a healthcare facility, at home or at work based on a preliminary clinical diagnosis and/or patient's condition indicators by making an informed decision, following the relevant ethical and legal standards.
PLR-18	Determine the state of functioning and limitations of a person's vital activity and the duration of disability with the preparation of relevant documents in a healthcare facility based on data on the disease and its course, peculiarities of a person's professional of the person's professional activity, etc. Maintain medical records for the patient and the population on the basis of regulatory documents.
PLR- 19	Plan and implement a system of anti-epidemic and preventive measures, against the emergence and spread of diseases among the population.
PLR-20	Analyse the epidemiological situation and implement measures of mass and individual general and local prevention of infectious diseases.
PLR- 21	Find the necessary information in professional literature and databases from other sources, analyse, evaluate and apply this information.
PLR- 22	Apply modern digital technologies, specialised software, statistical methods of data analysis to solve complex healthcare problems.
PLR-23	Assess the impact of the environment on human health to assess the the state of morbidity of the population.
PLR- 24	To organise the necessary level of individual safety (own and of persons under his/her care) in the event of typical dangerous situations in the individual field of activity.
PLR- 25	Clearly and unambiguously communicate own knowledge, conclusions and arguments on healthcare and related issues to specialists and non-specialists.
PLR- 27	Communicate fluently in the state language and English, both orally and in writing, to discuss professional activities, research and projects.
PLR- 29	Plan, organise and implement measures for the specific prevention of infectious diseases, including in accordance with the National Vaccination Schedule, both mandatory and recommended. Manage vaccine surpluses, organise additional vaccination campaigns, including immunoprophylaxis activities.

5

Credits ECTS

The discipline takes 210 hours and 7 ECTS credits to study.

6

Structure of the discipline

№ з/п	Topic	Lecture	Practice	Ind. work
Introduction to infectious diseases				



SYLLABUS



1	Introduction to the course of infectology. Basic concepts of the pathogen, infectious process, anti-infectious immunity. Features of infectious diseases. Classification. Principles of diagnosis, treatment, prevention. The main clinical syndromes in the clinic of infectious diseases. Principles of diagnosis, treatment and prevention of infectious diseases. Sepsis. Toxic shock syndrome and infectious toxic shock. Cytokine storm.	2	2	2
Diarrhoeal syndrome. Diagnosis and treatment of intestinal infections				
2	Infectious diseases with lesions of the gastrointestinal tract. Diarrhoeal syndrome in the clinic of infectious diseases. Pathophysiological aspects of diarrhoea development. Variants of diarrheal syndrome. The main causative agents of intestinal infections. Differential diagnosis of acute intestinal infections. Modern therapy of diarrhoeal infections. Emergency care in case of dehydration dehydration shock.	2	4	4
3	Bacterial causes of intestinal infections. Typhoid fever. Paratyphi. Bacterial food poisoning. Botulism. Salmonellosis. Shigellosis. Campylobacteriosis. Cholera. Intestinal yersinosis, pseudotuberculosis. Clinic, diagnosis, treatment. Distal spastic haemorrhagic colitis syndrome. Antibiotic-associated diarrhoea. Scheme of diagnosis and treatment.		2	4
4	Viral diarrhoea		2	4
5	Helminthiasis and parasitic infections. Helminthiasis: classification, principles of treatment. Nematodes. Cestodosis (taeniasis/cysticercosis, taenia, hymenolepidosis, echinococcosis). Trematodosis (opisthorchiasis). Nematodes (enterobiasis, ascariasis, trichocephalosis, trichinosis, strongyloidiasis). Clinic, features of laboratory and instrumental diagnostics, differential diagnosis. Treatment regimens. Prevention. Intestinal protozoa. Amoebiasis. Balantidiasis. Giardiasis.	2	2	4
Respiratory infections				
6	Respiratory syndrome in the clinic of infectious diseases. General characteristics of respiratory infections, etiology, clinical forms, principles of diagnosis, treatment and prevention.	2	2	2
7	Acute respiratory viral infections: influenza, parainfluenza, rhinovirus, adenovirus, enterovirus, coronavirus.		2	2
8	Bacterial respiratory infections: streptococcal infection, diphtheria, pneumococcal infection, Hib infection, meningococcal infection. Respiratory mycoplasmosis, ornithosis, legionellosis. Diphtheria: current state of the problem, clinic, diagnosis, treatment and prevention. Differential diagnosis of sore throats.	2	4	2
9	Herpesvirus infections. Classification. Clinic. Diagnosis. Treatment. Prevention.	2	2	4
10	Infectious diseases accompanied by exanthema. Childhood droplet infections in adults. Features of clinical course, diagnosis and principles of treatment. Measles, rubella, parvovirus infection, scarlet fever, chickenpox. Uveitis.	2	2	2
Infectious diseases with damage to the nervous system.				
11	Classification and semiotics of nervous system lesions in the clinic of infectious diseases. Infectious lesions of the central nervous system. Purulent and serous meningitis. Meningococcal infection. Pneumococcal infection. Encephalitis. Emergency conditions: cerebral edema, infectious toxic shock, thrombohemorrhagic syndrome.	2	6	2
12	Poliomyelitis and poliomyelitis-like diseases		2	2
13	Tetanus. Rabies.		4	



SYLLABUS



Viral hepatitis				
14	Classification of viral hepatitis. Pathogenesis and features of the course of viral hepatitis of various etiologies. Acute viral hepatitis. Viral hepatitis A. Viral hepatitis E. Viral hepatitis with contact and vertical transmission mechanism. Pathogenesis. Clinic of the typical form of acute viral hepatitis B, C. Complications. Laboratory and instrumental diagnostics. Principles of treatment. Prevention.	2	4	4
15	Chronic viral hepatitis.		4	4
HIV infection. AIDS-associated infections and infestations.				
16	HIV infection. Etiology. Pathogenesis. Stages of HIV infection. Principles of diagnosis and treatment. Diagnosis. Treatment.	2	2	4
17	HIV infection. Major opportunistic infections. Toxoplasmosis of the brain. Cryptosporidiosis. Candidiasis. Pneumocystosis. Diagnosis. Treatment.		2	4
18	Підготовка і написання історії хвороби		2	4
Хвороби із вертикальним механізмом передачі. TORCH-інфекції.				
19	TORCH-інфекції: токсоплазмоз; краснуха; цитомегаловірус; герпес 1-го та 2-го типів, парвовірусна інфекція, лістеріоз, вітряна віспа та інші. Тактика ведення вагітної.		2	4
Infectious diseases with a vector-borne transmission mechanism. Zoonotic infections				
20	Characteristics of infectious diseases with a vector-borne transmission mechanism. Transmissible diseases transmitted by tick and mosquito bites. Malaria. Leishmaniasis.	2	4	4
21	Infections and haemorrhagic fevers are especially dangerous.		2	4
22	Zoonotic infections (leptospirosis, tularemia, brucellosis, cat scratch disease, rat bite disease). Prolonged fever syndrome of unknown genesis.		6	2
Tuberculosis				
23	Definition of tuberculosis as a scientific and practical problem. Etiology of tuberculosis, epidemiology of tuberculosis of tuberculosis in Ukraine and the world, pathogenesis of tuberculosis infection.	2	2	4
24	Detection and diagnosis of tuberculosis. General approaches to the diagnosis of tuberculosis. Anamnesis of the disease. Examination, physical examination methods. Laboratory methods of detection of MDR-TB. Tuberculin diagnostics. Functional and instrumental methods of tuberculosis diagnosis. Supervision of patients. Radiological diagnostics of tuberculosis. Radiological diagnostics of tuberculosis of respiratory tuberculosis. Patient management.		2	4
25	Treatment and prevention of tuberculosis.		2	4
26	Primary forms and secondary forms of tuberculosis.		2	2
Epidemiology				
27	Subject and methods of epidemiology. History of development of epidemiology. The concept of epidemiological surveillance	2		4
28	Epidemiological characteristics of different groups of infections. Antiepidemic measures in the centres of infectious diseases. Deratisation. Disinfestation. Disinfection and sterilisation.		2	4
29	Healthcare-associated infections. Anti-epidemic measures in infection centres. Post-exposure prophylaxis. Infection control systems.	2	2	2
30	Sanitary protection of the territory in case of particularly dangerous infections. Anti-epidemic measures in the event of	2	2	2



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	emergency situations.			
31	Peculiarities of anti-epidemic measures in peacetime emergencies in the context of the introduction of infections of international importance.		2	4
33	Final control		2	
Total hours 210/7 ECTS credits		30	82	98
Final control		Exam		

7

Signs of discipline

Duration of teaching	Semestr	International disciplinary integration	Course (year of study)	Cycles
0,5 years	IX	Yes	5	Professional training cycle

8

Evaluation system and requirements

Current control is carried out on the basis of control of theoretical knowledge, practical skills and abilities. The forms of current control are: oral questioning (frontal, individual, combined), interview; practical testing of the formed professional skills (conducted on the basis of the results of solving clinical cases, working with medical documentation, performing practical skills, working at the patient's bedside); test control ("open" and "closed" test tasks). Ongoing control is mandatory. When assessing the mastery of each topic in all disciplines of the curriculum, the student is given grades on a 4-point (traditional) scale for current learning activities, taking into account the approved assessment criteria for the discipline. All types of work provided by the curriculum are taken into account. The student must receive a grade for each topic. The teacher conducts a survey of each student in the group at each lesson and gives a grade in the student's attendance and progress record on a traditional scale ("5", "4", "3", "2").

When assessing a student's current learning activities, 20% of the grade is based on the student's independent work, which takes into account the knowledge of the topic of the independent lesson and the work in the notebook.

The final (summative) control is carried out

- in the form of a written test, which includes test tasks, theoretical questions;
- control of practical skills (solving clinical cases, defence of medical history, assessment of the correctness of practical skills - a practice-oriented exam).

In accordance with the specifics of professional training, preference is given to test and practice-oriented control.

QR Code: <https://ieu.edu.ua/docs/pol-ornzvoems.pdf>

9

Conditions for admission to the final control

The final control of the discipline is based on the control of theoretical knowledge, practical skills and abilities.

The exam is a form of final control of the student's mastery of theoretical and practical material in the discipline.

Students who have completed all types of work, tasks provided for in the curriculum for the semester in accordance with the discipline, attended all classes provided for in the curriculum, written and submitted a medical history and have an average score for current academic activities of at least "3" (72 points on a 120-point scale) are admitted to the semester final control.

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10

Discipline policy

A prerequisite for a successful educational process is personal compliance by each student of a higher



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education institution with the rules of conduct accepted both at the university and in society. The future doctor must have a high level of behavioural culture, behave with dignity, tact, and self-control.

The student must be on time for classes and wear academic medical uniform (white coat or surgical suit). The student must adhere to the schedule of the educational process, come to class prepared on the topic of the class. During the class, the student must not leave the classroom without the permission of the teacher; use a mobile phone and other means of communication and information without the permission of the teacher, engage in outside activities, distract other students. When writing different types of papers, students must adhere to the rules of academic integrity.

The teacher must adhere to the implementation of the curriculum, objectively assess students' knowledge and skills. During the educational process, the teacher must be aware of anti-corruption measures and not engage in corrupt activities.

11

Policy on absences and late assignments

A student who, for valid reasons, confirmed by documentary evidence, was not subject to current control has the right to pass the current control within two weeks after returning to study.

A student who was absent from classes without valid reasons, did not participate in the current control activities, did not eliminate academic debt, is not allowed to take the final semester control of knowledge in this discipline, and on the day of the exam, the academic staff member gives the grade "not admitted" in the examination record. Retaking the differentiated test in the discipline is assigned subject to the completion of all types of educational, independent (individual) work provided for in the working curriculum of the discipline and is carried out in accordance with the schedule of liquidation of academic debt approved by the directorate.

QR Code: <https://ie.u.edu.ua/docs/pol-ornzvoems.pdf>

12

Academic integrity policy

Participants in the educational process are guided by the principles of academic integrity

QR Code: <https://ie.u.edu.ua/images/AndreyContent/docs/16.pdf>

13

Recommended sources of information

Main (basic)

1. Infectious diseases. Textbook for students of higher medical schools of IV accreditation level / Golubovska OA, Gerasun BA, Zinchuk OM and others / Edited by OA Golubovska. - K.: VSV "Medicine", 2018. - 688 p.
2. Infectious diseases: textbook: in 2 volumes / edited by V.P. Malyi, M.A. Andreychyn - Lviv: Magnolia 2006, 2018. - Vol. 1. - 718 p.; Vol. 2. - 726 p.
3. Vozianova Zh.I. Infectious and parasitic diseases. - Kyiv: Zdorovye, 2008 - T.1.-854 p.
4. Vozianova Z.I. Infectious and parasitic diseases - Kyiv: Zdorovye, 2008 - T.2.-656 p.

Auxiliary

1. Katherine H. West. Infectious Disease Handbook for Emergency Care Personnel, Third Edition 3rd Edition. 2016
2. Dennis L. Kasper, Anthony S. Fauci. Harrison's Infectious Diseases, Third Edition. 2016
3. Judith A. Aberg, Morton P. Goldman, Larry D., Ph.D. Gray. Infectious Diseases Handbook: Including Antimicrobial Therapy & Diagnostic Tests/Procedures -- 6th Edition (Diagnostic Medicine Series). 2005.
4. Atlas of Infectious Diseases [M.A. Andreychyn, V.S. Kopcha, S.O. Kramarev et al. eds. 3rd ed.
5. Fundamentals of treatment of infectious diseases / O.P.Adamovych, O.B.Vorozhbyt, O.B.Gerasun and others. -Lviv: LNMU, 2015. - 124 p.
6. Recognition and diagnosis of infectious diseases / Textbook for English-speaking medical students. M. Kryzhanska, O. Zubach, O. Vorozhbyt // - Lviv: LNMU, 2018. - 95 p.

Information resources

1. World Health Organisation <https://www.who.int/ru/home#>
2. Testing Centre <https://www.testcentr.org.ua/uk/>



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3. Ministry of Health of Ukraine <https://moz.gov.ua/>
4. Public Health Centre of the Ministry of Health of Ukraine <https://phc.org.ua/kontrol-zakhvoryuvan>
5. Ukrainian Academy of Paediatric Specialties: <https://www.uaps.org.ua/>
6. Scientific and Practical Journal "Laboratory Diagnostics" <http://acclmu.org.ua/ru/journals/>

English:

1. Pubmed portal: <https://pubmed.ncbi.nlm.nih.gov/>
2. UpToDate: <https://www.uptodate.com/home>
3. British Medical Journal Learning: <https://new-learning.bmj.com/>
4. Centre for Disease Control: <https://www.cdc.gov/>
5. The European Academy of Paediatrics: <https://www.eapaediatrics.eu/>
6. The American Academy of Pediatrics: <https://www.aappublications.org/>

14

Tips for successful studying on the course

If you want to be successful in this discipline, you need to:

1. Be active, persistent, inquisitive, consistent
2. Be tidy and polite
2. Systematically prepare for practical classes
3. Perform tasks for independent work and defend them in class.
3. To be present at the class in a medical gown
4. To solve tests and tasks independently, to work actively in class.
5. Prepare presentations and crosswords on the discipline. Participate in student scientific conferences and engage in research work in the department's scientific circles.

I wish you perseverance, dedication and motivation to learn. And then success will come to you! See you in class!

Don't forget your medical gowns!