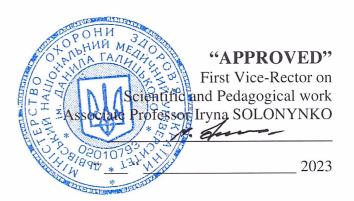
### DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY

### Infectious Diseases Department



# DISCIPLINE PROGRAM OK 21.1 INFECTIOUS DISEASES

(name of the academic discipline)

Second (master's) level of higher education Field of Knowledge 22 "Healthcare" Specialty 221 "Dentistry" Faculty, year: Dentistry, 4<sup>rd</sup> year

Discussed and approved at the educational-methodical meeting of the Infectious Diseases Department Minutes № 27 dated 27.04.2023 Head of the Department Professor Oleksandr ZINCHUK

Sully

Approved by the Profile Metodical Board on Therapeutic Disciplines
Minutes № 3 from 4.05.2023
Head of profiling methodological commission on therapeutic disciplines
Professor Olena RADCHENKO

## DEVELOPED AND INTRODUCED: <u>Danylo Halytsky Lviv National Medical University</u> (full name of the higher educational institution)

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### **INTRODUCTION**

The program of studying the discipline "Infectious diseases" compiled in according to the Standard of higher education of Ukraine of the second (Master) level

Branch of knowledge 22 "Healthcare"

Specialty 221 "Dentistry"

Academic program Master of Dentistry

**Description of the academic discipline (annotation)** Academic discipline "Infectious diseases" provides an opportunity for students of the School of Dental faculty in the **4th year of study** to get knowledge, ability and practical skills, which provide an opportunity for a specialist to quickly and correctly orient themselves in situations where patients have infectious pathology and other urgent conditions, avoid fatal mistakes or time loss, and take priority steps that will save a human life and/or become a good basis for successful further treatment in the hospital. Learning of discipline is based on knowledge that has achieved by students in the learning process of biology, physiology, microbiology, epidemiology and other basic subjects.

In the learning process of the discipline "Infectious diseases" rationale to apply in the educational process modern world developments and standards on the main questions of infectious diseases.

Structure of the	Number of	umber of credits, hours, of which			Year of study	Type of control
discipline	Total	Classroom		IWS	semester	
		Lectures (hours)	Practical classes (hours)	-		
Name of the discipline: ''Infectious diseases''	2 credits / 60 hours	6	24	30	4 course (7 Semester)	Credit

The subject of the discipline is the main manifestations of infectious diseases, the principles of correct interpretation of clinical information obtained during the examination of the patient and the basic principles of treatment of patients with infectious pathology.

**Interdisciplinary connections**: biology, microbiology, epidemiology, immunology.

### 1. The purpose and objectives of the discipline

- 1.1. The purpose of teaching the discipline "Infectious diseases" is the assimilation of theoretical and practical knowledge of etiology, epidemiology, pathogenesis, typical clinical manifestations, methods of diagnosis, treatment of infectious pathology within the limits corresponding to the program of training a dentist, taking into account the peculiarities of his specialty.
- 1.2. The main tasks of studying the discipline "Infectious diseases" is mastering of knowledge, skills and abilities acquisition to ensure the adaptation of students to patients of infectious profile; ability to make a diagnosis, choose appropriate medical and diagnostic manipulations, provide emergency care to patients with infectious pathology.

1.3 **Competences and learning outcomes,** the formation of which is facilitated by discipline (relationship with the normative content of training of higher education applicants, formulated in terms of the results of training in the Standard).

In accordance with the requirements of the standard, discipline ensures that students acquire *competencies*:

*-integrated:* ability to solve complex problems and practical problems in the branch of professional activity <u>22 "Healthcare"</u>, which involves the use of certain theoretical knowledge, skills, practical skills and methods of appropriate professional direction;

### -general:

- 1. The ability to apply knowledge in real situations;
- 2. Conducting researches at the appropriate level;
- 3. The adaptation and actions in new situations, activities in autonomous and command modes,
- 4. Evaluation and assurance quality of work performed;
- 5. Communication in the state language as orally, so in writing, to the search, processing and analysis of information from different sources;
- 6. Identifying and solving problems; making informed decisions, forming basic ideas that contribute to the development of the general culture and socialization of the individual, ethical values, important stages of national history,
- 7. The ability to understand the causal relationships of society with the use of them in professional and social activities on the basis of; the provisions of fundamental sciences, and activities in accordance with the main safe and ethical.

### -special (professional, substantive):

- 1. The ability to collect medical information about the patient and analyze clinical data.
- 2. The ability to interpret the results of laboratory and instrumental research.
- 3. The ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions.
- 4. The ability to plan and carry out measures for the prevention of diseases of the organs and tissues of the oral cavity and maxillofacial region.
- 5. The ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of diseases of the organs and tissues of the oral cavity and maxillofacial region.
- 7. The ability to determine the tactics of disease management with diseases of the organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases.
- 8. The ability to perform medical and dental manipulations.
- 9. The ability to treat the main diseases of the organs and tissues of the oral cavity and maxillofacial region.
- 11. The ability to determine tactics, methods and provision of emergency medical assistance.
- 14. The ability to maintain regulatory medical documentation.
- 15. Processing of state, social and medical information.
- 18. The ability to provide pre-medical care according to the protocols of tactical medicine

Detailed description of competencies according to descriptors of NFQ (National Frame of Qualifications) in the form of "Template of competencies".

Template of competencies

Nº	Competency	Knowledge	Ability	Communication	Autonomy and responsibility	
Integral	l competency	professional activity			in the field of ical knowledge, practical	
General	competencies					
GC.1.	The ability to abstract thinking, analysis and synthesis.	thinking, analysis and	The ability to abstract thinking, analysis and synthesis.	The ability to abstract thinking, analysis and synthesis.	The ability to abstract thinking, analysis and synthesis.	To kno of anal and fur learnin
GC.2.	Knowledge and understanding of the subject area and understanding of professional activity	knowledge of the structure of professional activity.	professional activities that require updating and	form a communication	To bear responsibility for professional development, the ability for further professional training with a high level of autonomy	, [
GC.3.	Ability to apply knowledge in practical activities		Ability to apply knowledge in practical activities	Ability to apply knowledge in practical activities	Ability to apply knowledge in practical activities	Have s concep acquire learnin
GC.4.	Ability to communicate in the national language both orally and inwriting.	elanguage perfectly		language in professional	To be responsible for the development of professional knowledge and skills.	f
GC.6.	Skills in using	gTo have deep alknowledge in the field of information and communication technologies used in professional activities	To be able to use information and communication	communication technologies in professional activities t	To be responsible for the development of professional knowledge and skills.	f
GC.7.	process and analyz	Know the system of cofficial document of the comment of the computer of the compute	Be able to determine the source and location of the required information	information from a specified source and based on its analysis form appropriate conclusions.	Be responsible for the completeness and quality of information analysis and conclusions based on its analysis.	7 S
	(professional) compete					
GC.1.	medical information about the patient and analyze clinical data. Be able to conduct conversation with	nknowledge about the dperson, the child, his eorgans and systems, ato know the methods and standard aschemes of the fsurvey and physical	patient (including a child), on the basis of algorithms and standards, using standard methods to	communication strategy when communicating with the patient.	Effectively form a communication strategy when communicating with the patient. To be responsible for the quality collection of information obtained on the basis of an interview, examination survey,	

	standards, using examination of the standard methods to patient. conduct a physical examination of the patient.	the state of health of a person (including a child).		palpation, percussion of organs and systems and for timely assessment of the state of: human health
GC.2.	evaluation of know the principles	results of laboratory and instrumental research and, based on them, to evaluate information about the diagnosis of the patient.	and evaluate the results of laboratory and instrumental research.	
GC.3.	Ability to diagnose: Have specialized determine preliminary, knowledge about a clinical, final, person, a child, its accompanying organs and systems diagnosis, emergency know the algorithm conditions.  One of diagnosis in the conditions of a condition of a condition or condition or condition.	record the leading clinical symptom or syndrome; to establish	documents, to maintain the patient's medical documentation (ambulatory/inpatient card, etc.).	
	The ability to plan and Know the principles carry out measures for and systems of	Be able to organize the		To be responsible for
		preventive and anti-		qualitative analysis of
GC.4.	and tissues of the oral preventive and anti- cavity and maxillofacial epidemic measures area. in typical conditions and in conditions or epidemic adversity.	S S		implementation of relevant preventive and anti-epidemic measures
GC.5.	Ability to design the Have specialized process of providing knowledge of medical care: to algorithms and determine the standard disease approaches, plan, types treatment schemes. and principles of treatment of diseases of the organs and tissues of the oral cavity and maxillofacial region.	principles and nature of disease treatment.	patient and specialists own conclusions	making a decision regarding the principles and nature of treatment of
GC.7.	of patients with diseases algorithms and of the organs and tissues standard schemes for of the oral cavity and the treatment or maxillofacial region diseases.  with concomitant somatic diseases.	the principles and nature of the treatment of the disease.	patient and specialists own conclusions regarding the principles and nature of treatment	making a decision regarding the principles and nature of treatment of the disease
GC.8.	Ability to perform Have specialized medical and dental knowledge about a manipulations. person, his organs and systems anatomophysiological and age-related features	medical manipulations	prove to the patient,	

GC.9.	The ability to treat the main diseases of the organs and tissues of the oral cavity and	knowledge algorithms	of dical lized Be able to of principles and disease tr sease able to d	and nature of eatment. Be etermine the and nature of	patient and specialists own conclusions	regarding the principles and nature of treatment of
GC.11.		legislative framework for provision emergency me aid, in particula Law of Ukraine Emergency Me Aid". l specialized knowledge a	the Be able emergency the (according of principles dical providing or the medical ca "On out organidical diagnostic Have aimed at preserving about uman of	to identify situations to list 3); and tactics of emergency are; to carry izational and measures	and prove to the patien or his legal representative the need to provide emergency care and obtain consentor medical intervention	Be responsible for the correct definition of an emergency condition, its degree of severity, and the tactics of providing temergency medical care.
GC.14.	standard medical documentation	of official documents of official documents of the official documents	ment source and the the require	I location of d information on its type. to process n and analyze received	information from a specified source and based on its analysis form appropriate conclusions.	Be responsible for the completeness and quality of information analysis and conclusions based on its analysis.

#### **Results of studies:**

Integrative final training results, the formation of which is facilitated by discipline: apply knowledge in practical situations; perform experimental research and show skills on professional topics, adapt to new situations, work effectively both autonomously and as part of a team; responsibly treat the work done to achieve the goal; use information and communication technologies to solve various research and professional tasks; search for information in various sources to solve problems of the specialty, make informed decisions with the assessment of their consequences, show the ability to public, business and scientific communications; adhere to the code of professional ethics, moral norms and values, etiquette rules, understand the basic principles of labor protection and life safety in the realm of professional activity; ability to make a diagnosis, choose appropriate medical and diagnostic manipulations, provide emergency care to patients with infectious disease.

Results of training for the discipline: mastering the basic principles of organization of assistance to infectious patients, clinical laboratory and additional methods of diagnosis of infectious pathology; etiology, pathogenesis, clinic, diagnosis and methods of treatment of infectious diseases (within the curriculum); etiological, pathogenetic factors, clinical manifestations and diagnosis of emergency conditions; basic methods of general clinical examination of the patient (survey, examination, palpation, auscultation), determination of the scope of additional studies and analysis of the data obtained to establish a preliminary diagnosis; performing general medical manipulations (injections, gastric lavage, etc.); providing the necessary assistance in case of shock, coma, allergic reactions, asphyxia, conducting of medical documentation.

### 2. Information volume of academic discipline

60 hours of 2 ECTS credits are 60 hours for studying the discipline.

3. Structure of the discipline Infectious diseases

№	Themes	Lectures	Practical class	IWS
	oduction to infectology. Infectious diseases with fecal-oral rone mechanism of transmission	ute of trans	mission and	with air-
1.	Infectious process and infectious diseases: definition. Methods of diagnosis, prevention and immune prevention.  Complications of treatment with medicinal preparations.		3	15
2	Diarrheal syndrome, caused by bacterias. Nontyphoidal salmonellosis. Food Poisoning, emergency care. Diseases caused by helminths. Shigellosis. Viral infections of the Gastrointestinal tract. Enterovirus and rotavirus infection. Poliomyelitis. Botulism. Travelers diarrhea.		3	
3	Infections of the respiratory tract. Prevention, immune prevention of influenza. COVID-19. Meningococcal nasopharyngitis. Prevention, immune prevention of the meningococcal infection.		3	
4	Peculiarities of pediatric infectious diseases in adults (measles, rubella, mumps). Immune prevention of measles, rubella, mumps. Clinical characteristics of tonsillitis. Diphtheria. Immune prevention of diphtheria.	2	3	
5	Herpes-virus infections – HSV, VZV, EBV, CMV. Clinical characteristic of herpes simplex infection. Methods of treatment and prevention. Differential diagnosis of diseases of oral cavity.		3	
pred	ctious diseases with a predominance of the parenteral lominance of the contact mechanism of transmission. In rnational medical and sanitary rules.			
	Viral hepatitides with the parenteral mechanism of transmission. Manifestations, methods of laboratory diagnosis, treatment prevention, immune prevention of viral hepatitides A and B. Peculiarities of acquiring infection in practical work of dentists. Personal, planned and emergency prevention. AIDS-associated infections with impairment of oral cavity mucosa.	2	3	15
7	Leptospirosis. Zoonotic diseases with impairment of oral cavity mucosa: Tularemia, Anthrax, Aphtae epizooticae, Listeriosis. Malaria. Lyme disease, methods of diagnosis. Definition of transmissive infections regulated by international medical and sanitary rules: Lassa hemorrhagic fever, Marburg hemorrhagic fever, Ebola Hemorrhagic fever	2	3	
8	Emergency cases at infectious diseases in dentist's practice.  Prevention of infectious diseases in dentist's practice.		3	
	Total	6	24	30

### 4. Thematic plan of lectures

No	Theme	Hours
1	Diarrheal syndrome. Nontyphoidal salmonellosis. Food Poisoning, emergency care.	2
2	Infections of the respiratory tract. Influenza. Herpes-virus infections – HSV, VZV, EBV, CMV. Clinical characteristic of herpes simplex infection.	2
3	Viral hepatitides with the parenteral mechanism of transmission. AIDS-associated infections and invasions.	2
	Total	6

5. Thematic plan of practical classes

№	Theme	Hours
1	Infectious process and infectious diseases: definition. Classification, methods of diagnosis, treatment and prevention and immune prevention. Complications of treatment with medicinal preparations.	3
2	Diarrheal syndrome. Nontyphoidal salmonellosis. Food Poisoning, emergency care. Diseases caused by helminths. Shigellosis. Viral infections of the Gastrointestinal tract. Enterovirus and rotavirus infection. Poliomyelitis. Botulism. Travelers diarrhea.	3
3	Infections of the respiratory tract. Prevention, immune prevention of influenza. COVID-19. Meningococcal nasopharyngitis. Prevention, immune prevention of the meningococcal infection.	3
4	Peculiarities of pediatric infectious diseases in adults (measles, rubella, mumps). Immune prevention of measles, rubella, mumps. Clinical characteristics of tonsillitis. Diphtheria. Immune prevention of diphtheria.	3
5	Herpes-virus infections – HSV, VZV, EBV, CMV. Clinical characteristic of herpes simplex infection. Methods of treatment and prevention. Differential diagnosis of diseases of oral cavity.	3
6	Viral hepatitides with the parenteral mechanism of transmission. Manifestations, methods of laboratory diagnosis, treatment prevention, immune prevention of viral hepatitides A and B. Peculiarities of acquiring infection in practical work of Dentists. Personal, planned and emergency prevention. AIDS-associated infections with impairment of oral cavity mucosa.	3
7	Leptospirosis. Zoonotic diseases with impairment of oral cavity mucosa: Tularemia, Anthrax, Aphtae epizooticae, Listeriosis. Malaria. Lyme disease, methods of diagnosis. Definition of transmissive infections regulated by international medical and sanitary rules: Lassa hemorrhagic fever, Marburg hemorrhagic fever, Ebola Hemorrhagic fever.	3
8	Emergency cases at infectious diseases in dentist`s practice.  Prevention of infectious diseases in dentist`s practice.	3
	Total	24

6. Thematic plan of students' self-study.

№	Theme	Hours	Type of control
1.	Classification of antibiotics.	5	Current control
2.	Botulism.	5	during practical
3.	Helminthiases.	10	lessons
4.	Total understanding of travelers diseases (Travelers diarrhea, hemorrhagic fevers, Malaria).	10	

Total	30	

### 7. Individual tasks

Individual tasks in the study of the discipline involve the implementation of individual tasks in the form of preparation of reviews of scientific literature and abstracts with in-depth study of relevant topics of choice, creating visual aids, presentations at conferences, and individual research in student groups, participation in national competitions. Create slides according to the thematic plan.

### 8. Teaching methods

*Visual:* In the study of the discipline "Infectious diseases" a set of methods is used: - methods of verbal transmission and auditory perception of educational information (lectures, conversations, stories, explanations, discussions), methods of visual transmission and visual perception of educational information (demonstration and demonstration of slides, videos, study of literary and other sources of educational information, the use of visual means of learning), methods of transmitting educational information through practical, labor actions and tactile perception of it (training tasks and creative exercises). , review of thematic patients).

*Practical methods:* Curation of patients, examination of patients with infectious pathology, solving clinical situational problems and tests, mastering elements of medical equipment for examination of patients.

#### 9. Control methods

The current control is carried out during the training sessions and aims to check the students' perception of educational material on a 4-point (national) scale. Forms of evaluation of current educational activities are standardized and include control of theoretical and practical training. During the assessment of the assimilation of each topic for the current educational activity, the student is assessed according to the 4-point (national). At the same time, all types of work provided for by the discipline program are taken into account. The student must receive an assessment on each topic for further conversion of grades into scores on a multi-point (200-point) scale.

### Evaluation criteria for current academic activities:

The **assessment is "excellent"** received by the student who took an active part in discussing the most difficult questions on the topic of the lesson, gave at least 90% of the correct answers to standardized test tasks, answered written tasks without errors, completed a practical task.

The **assessment of "good"** is received by the student who participated in the discussion of the most difficult questions on the topic, gave at least 75% of the correct answers to standardized test tasks, made some minor mistakes in responses to written tasks, completed a practical task with minor errors.

The **assessment is "satisfactory"** received by a student who did not participate in the discussion of the most difficult questions on the topic, gave at least 60% of the correct answers to standardized test tasks, made significant mistakes in responses to written tasks, completed a practical task with errors.

The **assessment is "unsatisfactory"** received by a student who did not participate in the discussion of the most difficult questions on the topic, gave less than 60% of the correct answers to standardized test tasks, made gross mistakes in responses to written tasks or did not answer them at all, did not perform a practical task.

10. Current control: Scores set on the traditional scale are converted into points. The maximum number of points a student can score for current academic activity in the study of discipline is 200 points. The minimum number of points that a student must score for current academic activity for enrollment of the discipline is 120 points.

**The calculation of the number of points** is carried out on the basis of the grades received by the student on the traditional scale during the study of the discipline, by calculation of Arithmetic Mean (AM), rounding to two digits after the comma. Obtained quantity is converted into points according to multipoint scale in the following way:

AM	×	20	0
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 $x = \frac{\phantom{a}}{\phantom{a}}$ 

For convenience, a recalculation table on a 200-point scale is given:

## Recalculation of the average assessment for current activities on a multi-scale for disciplines ending with the passed

4 -	200 -
point	point
scale	scale
5	200
4.97	199
4.95	198
4.92	197
4.9	196
4.87	195
4.85	194
4.82	193
4.8	192
4.77	191
4.75	190
4.72	189
4.7	188
4.67	187
4.65	186

4.62	185
4.6	184
4.57	183
4.52	181
4.5	180
4.47	179
4.45	178
4.42	177
4.4	176
4.37	175
4.35	174
4.32	173
4.3	172
4.27	171
4.24	170
4.22	169
4.19	168
4.17	167
4.14	166
4.12	165
4.09	164
4.07	163

4.04	162
4.02	161
3.99	160
3.97	159
3.94	158
3.92	157
3.89	156
3.87	155
3.84	154
3.82	153
3.79	152
3.79 3.77	151
3 74	150
3.72	149
3.72 3.7 3.67	148
3.67	147
3.65	146
3.62	145
3.57	143
3.55	142
3.52	141
3.5	140

3.47	139
3.47 3.45	138
3.42 3.4	137
3.4	136
3.37	135
3.35	134
3.32 3.3 3.27	133
3.3	132
3.27	131
3.25	130
3.22	129
3.2	128
3.2 3.17	127
3.15	126
3.12	125
3.1 3.07	124
3.07	123
3.02	121
3	120
Less	Insufficie
than 3	nt

Form of summary control for the discipline is a credit. Maximum amount of points, which the student can gain for ongoing learning activity while studying the discipline is 200 points. Minimum amount of points, which the student has to gain for ongoing learning activity for enrolling the discipline, is 120 points.

Term credit – is a form of the summary control that involves evaluation of the material learned by the student on certain discipline, entirely on the grounds of his performing all the sorts of training activities, expected by the syllabus. Term credit is deducted according to the results of ongoing control.

Points on the discipline for the students, who successfully completed the syllabus, are converted into traditional 4-point scale according to the absolute criteria, given below in the table:

Points for the discipline on 4-point scale

From 170 to 200 points - 5

From 140 to 169 points - 4

From 139 points to the minimum number of points that a student must score - 3

Below minimum amount of points, that the student has to gain is 2

Grade ECTS is not converted into traditional scale as scales ECTS and 4-point are independent. Objectivity of evaluation of Learning activity is checked by statistical methods (coefficient of correlation between grade ECTS and grade on national scale).

### 11. Methodological support

Teaching of the discipline at lectures is provided by methodological developments, (presentations, educational films), information resource of the department. Teaching of the discipline on practical classes

is provided by methodological developments, the topics of independent and individual tasks, presentations, educational films and other means for practicing practical skills, information resource of the department, algorithms for the implementation of practical skills and structured algorithms for controlling skills. Independent and individual work in the studying of academic discipline is provided by methodological developments of the independent work of students.

### 12. Recommended Literature

### Main (basic)

- 1. Infectious Diseases: textbook/ edited by O.A. Holubovska, M.A. Andreichyn, A.V. Shkurba, B.A. Herasun, O.M. Zinchuk et al. Kyiv: AUS Medicine Publishing, 2018. P 664
- 2. Harrison's infectious diseases/Dennis L Kasper; Anthony S Fauci/ New York:McGraw-Hill Education, @2017

### **Additional literature**

- Dennis L. Kasper, Anthony S. Fauci. Harrison's Infectious Diseases, Third Edition. 2016
- Katherine H. West. Infectious Disease Handbook for Emergency Care Personnel, Third Edition 3rd Edition. 2016
- 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.
- Atlas of Infectious Diseases [M.A. Andreychyn, V.S. Kopcha, S.O. Kramarev, etc.]; edition by M.A. Andreychyn 3rd edition. Lviv: Magnolia, 2019.— 296 p.
- Basics of treatment of infectious diseases. O.P.Adamovych, O.B.Vorozhbyt, O.B.Gerasun and others. Lviv: LNMU, 2015. – 124 p.
- Recognition and diagnosis of infectious diseases/Manual for English-speaking students of medical universities. M. KryzhanSCa, O. Zubach, O. Vorozhbyt. Lviv: LNMU, 2018. 95 p.

#### 13. Information resources

- Verkhovna Rada of Ukraine http://www.rada.kiev.ua.
- Cabinet of Ministers of Ukraine http://www.kmu.gov.ua/.
- Ministry of Education, Science, Youth and Sports of Ukraine http://www.mon.gov.ua, www.osvita.com.
- The Ministry of Emergencies and Protection of the Population from the Consequences of the Chornobyl http://www.mns.gov.ua/.
- Ministry of Health http://www.moz.gov.ua/ua/portal/
- The National Security and Defense Council of Ukraine http://www.rainbow.gov.ua/.