

SYLLABUS

1. General information on the course

Full course name	Actual Problems of HIV Infection
Full official name of a higher education institution	Sumy State University
Full name of a structural unit	Academic and Research Medical Institute. Кафедра інфекційних хвороб з епідеміологією
Author(s)	Klymenko Natalia, Chemych Mykola Dmytrovych, Svitailo Vladyslav Serhiiovych, Saenko Oleksandr
Cycle/higher education level	The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle
Duration	one semester
Workload	5 ECTS, 150 hours. For full-time course 50 hours are working hours with the lecturer (50 hours of seminars), 100 hours of the individual study.
Language(s)	English

2. Place in the study programme

Relation to curriculum	Elective course available for the students of the specialty 222 "Medicine"
Prerequisites	Microbiology, Virology and Immunology, Latin and Medical Terminology, Propedeutics of Internal Medicine with Care of Patients, Infectious Disease. Epidemiology and principles of evidence-based medicine, Internal medicine, incl. medical genetics, endocrinology, dermatology, venereology, clinical pharmacology, clinical immunology and allergology, phthisiology, Deontology in Medicine, Social Medicine, Public Health and the Basics of Evidence-Based Medicine
Additional requirements	Medical Psychology with the Basics of Narcology, Medical Psychology and the Basics of Sexology, General and Social Psychology, Clinical pharmacology and pharmacotherapy of internal diseases, Palliative and Hospice Medicine
Restrictions	There are no specific restrictions

3. Aims of the course

To improve the quality of physician training, primarily for outpatient health care units, with in-depth mastery of theoretical knowledge and practical skills in etiology, pathogenesis, typical clinical manifestations, early diagnosis, treatment of patients with HIV and emergency care.

4. Contents

Topic 1 The HIV epidemic situation in Ukraine. Regulatory documents on HIV prevention and social protection. The relevance of the HIV problem in the world and in Ukraine. Laws on combating the spread of diseases caused by the human immunodeficiency virus and legal and social protection of people living with HIV, measures for prevention, testing for HIV and prescribing effective treatment methods
Topic 2 Social consequences of the spread of HIV infection. Combating stigma and discrimination in society and healthcare facilities. Social and economic consequences of HIV infection. Community responses to address stigma and discrimination
Topic 3 Etiology and pathogenesis of HIV infection, classification of disease stages. The causative agent of HIV infection, pathogenesis of the disease. Pathogenetic and clinical classification of the disease
Topic 4 Classification of clinical stages, diagnostic criteria - large and small. Clinical manifestation of HIV. Manifestations typical for the 1st, 2nd, 3rd, 4th clinical stage of the disease. Large and small criteria characteristic of HIV infection
Topic 5 The role of HIV infection in the formation of lymphadenopathy syndrome, differential diagnosis of this syndrome. Lymphadenopathy syndrome in HIV infection. Differential diagnosis with infectious diseases accompanied by lymphadenopathy, tuberculosis, oncology, etc.
Topic 6 HIV infection. Basic clinical criteria. General characteristics of opportunistic infections. The main clinical manifestations of HIV infection. AIDS-indicating diseases and opportunistic infections
Topic 7 NeuroAIDS. General issues, peculiarities of diagnosis and treatment. Lesions of the nervous system in HIV infection of viral, bacterial, fungal and protozoal genesis. Brain tumors in patients with HIV infection.
Topic 8 Features of the course, diagnosis and treatment of viral hepatitis in HIV-infected patients. Combination of HIV infection with parenteral viral hepatitis. Hepatitis treatment tactics and peculiarities of ART prescription for patients and convalescents with viral hepatitis B

Topic 9 The main aspects of HIV/tuberculosis coinfection. Forms of tuberculosis depending on the clinical stage of HIV. Features of treatment.

Pulmonary tuberculosis in HIV infection - the need for early ART initiation and adjustment of the regimen depending on the anti-tuberculosis drugs the patient is receiving and the need to prevent pneumocystis pneumonia. Other manifestations of tuberculosis (lymph node, urinary system, central nervous system, bone): features of detection and treatment

Topic 10 The role of early diagnosis in the spread of HIV infection. Features of the asymptomatic course of the disease.

Screening examinations for HIV infection. Indications for examination. Reasons for detecting patients in late stages.

Topic 11 Rules for pre-test counseling and testing for HIV, educational work. Post-test counseling.

Pre-test and post-test consultation before HIV testing. Features of group testing, testing of children, testing in anonymous rooms

Topic 12 Methods of nonspecific and specific diagnosis of HIV infection.

Clinical and epidemiological indications for HIV testing. In which institutions it is possible to be tested for HIV infection. Options for specific diagnostics and features of modern testing according to WHO recommendations

Topic 13 Algorithm of HIV testing. The main regulatory documents.

Medical documentation required in the facilities/offices where HIV testing is performed. Documents that regulate the rules of examination of patients (pre-test consultation, blood sampling and testing using rapid tests of the third generation at the screening stage, confirmation of diagnosis, post-test counseling), entering into the MIS HIV system, prescribing tests to determine the number of CD4 cells, viral load. Documents that regulate the rules of blood sampling for testing and methods of analysis

Topic 14 Providing psychological and psychiatric counseling to HIV-positive people.

Possibility to provide psychological support to the patient and/or his/her family, if necessary, drug and psychiatric support, and prescription of substitution therapy. Involvement of charitable organizations in social support and patient adherence to treatment

Topic 15 Preparing patients with HIV infection for lifelong antiviral therapy

Documents that regulate the rules of examination of patients, reporting HIV to the MIS system, prescribing tests to determine the number of CD4 cells, viral load, examination for tuberculosis (radiation diagnostics and molecular genetic testing of sputum for MTB), prescribing preventive treatment against tuberculosis and opportunistic infections. Examinations of related specialists clinical blood tests, urine tests, biochemical blood tests, markers of viral hepatitis B and C. Based on the results of instrumental and laboratory tests, the choice of a starting treatment regimen

Topic 16 Principles and approaches to the treatment of patients with HIV infection. General characteristics of groups of drugs used in the treatment of HIV infection. HAART.

General characteristics of drugs used in the treatment of patients with HIV infection. Features of drug selection, possible contraindications and side effects of treatment, indications for changing the treatment regimen. When HAART is prescribed

Topic 17 Indications for changing the treatment regimen for HIV infection Outpatient monitoring of patients receiving ART, monitoring the effectiveness of therapy. Possible reasons for changing the treatment regimen or replacing individual drugs. Rules for filling in the relevant sections in the patient observation card and in MIS HIV
Topic 18 Peculiarities of providing ART to pregnant HIV-infected women, prevention of infection of newborns. The need to adjust treatment for women who started ART long before pregnancy. Options for ART regimens for newly diagnosed HIV infection depending on the gestational age
Topic 19 Features of HIV treatment in children and adolescents Peculiarities of ART prescription in children and adolescents depending on age and comorbidities. Control over the timely detection of complications that require therapy correction and monitoring the effectiveness of treatment
Topic 20 Peculiarities of treatment and counseling for people who inject drugs. Formation of adherence to treatment. Substitution maintenance therapy for injecting drug users. Preventive measures to prevent infection of contacts. The role of NGOs and social services in the support and social adaptation of HIV-positive people from this group
Topic 21 Monitoring the effectiveness of ART therapy. Causes of emergence of resistant strains. Rules for blood sampling to determine viral load. Monitoring the effectiveness of treatment in the first years after ART initiation. Examination tactics in case of suspected ineffectiveness of the chosen regimen. When blood should be sent for the determination of antiretroviral-resistant HIV
Topic 22 Tactics in case of an emergency during the provision of medical care to a patient. Blood emergencies in hospitals and their prevention. Algorithm of actions in case of an emergency. Post-exposure prophylaxis for healthcare workers and further laboratory monitoring
Topic 23 Post-exposure prophylaxis of HIV infection Post-exposure prophylaxis among the population. Criteria for appointment. Tactics when citizens apply after 72 hours after suspected infection
Topic 24 Pre-exposure prophylaxis of HIV infection Identification of high-risk groups for HIV infection. Combined pre-exposure prophylaxis. Drugs and regimens for daily pre-exposure prophylaxis. Medications and regimens for cisgender MSM “VCT if necessary”. Drugs for parenteral HIV prevention. Pre-exposure prophylaxis among military medics in the combat zone
Topic 25 Final modular control Differentiated credit: assessment of theoretical and practical training

5. Intended learning outcomes of the course

After successful study of the course, the student will be able to:

LO1	Be able to collect medical information about the patient and analyze clinical data
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LO2	Justify and determine the necessary list of laboratory and instrumental studies and evaluate their results in HIV infection
LO3	Perform clinical and laboratory differential diagnosis of opportunistic infections in HIV/AIDS
LO4	Be able to determine the principles and nature of HIV/AIDS treatment and medical procedures
LO5	To apply in practice algorithms for examination and management of patients with emergency conditions, to master methods of treatment of emergency conditions in patients with HIV infection
LO6	Conduct general and individual prevention of HIV transmission

8. Teaching and learning activities

Topic 1. The HIV epidemic situation in Ukraine. Regulatory documents on HIV prevention and social protection. pr.tr.1 "The HIV epidemic situation in Ukraine. Regulatory documents on HIV prevention and social protection." (full-time course) The relevance of the HIV problem in the world and in Ukraine. Laws on combating the spread of diseases caused by the human immunodeficiency virus and legal and social protection of people living with HIV, measures for prevention, testing for HIV and prescribing effective treatment methods
Topic 2. Social consequences of the spread of HIV infection. Combating stigma and discrimination in society and healthcare facilities. pr.tr.2 "Social consequences of the spread of HIV infection. Combating stigma and discrimination in society and healthcare facilities." (full-time course) Social and economic consequences associated with HIV infection. Measures in society to combat stigma and discrimination
Topic 3. Etiology and pathogenesis of HIV infection, classification of disease stages. pr.tr.3 "Etiology and pathogenesis of HIV infection, classification of disease stages." (full-time course) The causative agent of HIV infection, pathogenesis of the disease. Pathogenetic and clinical classification of the disease
Topic 4. Classification of clinical stages, diagnostic criteria - large and small. Clinical manifestation of HIV. pr.tr.4 "Classification of clinical stages, diagnostic criteria - large and small. Clinical manifestation of HIV." (full-time course) Manifestations typical of the 1st, 2nd, 3rd, 4th clinical stage of the disease. Large and small criteria characteristic of HIV infection
Topic 5. The role of HIV infection in the formation of lymphadenopathy syndrome, differential diagnosis of this syndrome.

pr.tr.5 "The role of HIV infection in the formation of lymphadenopathy syndrome, differential diagnosis of this syndrome." (full-time course) Lymphadenopathy syndrome in HIV infection. Differential diagnosis with infectious diseases accompanied by lymphadenopathy, tuberculosis, oncology, etc.
Topic 6. HIV infection. Basic clinical criteria. General characteristics of opportunistic infections.
pr.tr.6 "HIV infection. Basic clinical criteria. General characteristics of opportunistic infections." (full-time course) The main clinical manifestations of HIV infection. AIDS-indicating diseases and opportunistic infections
Topic 7. NeuroAIDS. General issues, peculiarities of diagnosis and treatment.
pr.tr.7 "NeuroAIDS. General issues, peculiarities of diagnosis and treatment." (full-time course) Lesions of the nervous system in HIV infection of viral, bacterial, fungal and protozoal genesis. Brain tumors in patients with HIV infection.
Topic 8. Features of the course, diagnosis and treatment of viral hepatitis in HIV-infected patients.
pr.tr.8 "Features of the course, diagnosis and treatment of viral hepatitis in HIV-infected patients." (full-time course) Combination of HIV infection with parenteral viral hepatitis. Hepatitis treatment tactics and peculiarities of ART prescription for patients and convalescents with viral hepatitis B
Topic 9. The main aspects of HIV/tuberculosis coinfection. Forms of tuberculosis depending on the clinical stage of HIV. Features of treatment.
pr.tr.9 "The main aspects of HIV/tuberculosis coinfection. Forms of tuberculosis depending on the clinical stage of HIV. Features of treatment." (full-time course) Pulmonary tuberculosis in HIV infection - the need for early ART initiation and adjustment of the regimen depending on the anti-tuberculosis drugs the patient is receiving and the need to prevent pneumocystis pneumonia. Other manifestations of tuberculosis (lymph node, urinary system, central nervous system, bone): features of detection and treatment
Topic 10. The role of early diagnosis in the spread of HIV infection. Features of the asymptomatic course of the disease.
pr.tr.10 "The role of early diagnosis in the spread of HIV infection. Features of the asymptomatic course of the disease." (full-time course) Screening examinations for HIV infection. Indications for examination. Reasons for detecting patients in late stages
Topic 11. Rules for pre-test counseling and testing for HIV, educational work. Post-test counseling.

pr.tr.11 "Rules for pre-test counseling and testing for HIV, educational work. Post-test counseling." (full-time course) Pre-test and post-test consultation before HIV testing. Features of group testing, testing of children, testing in anonymous rooms
Topic 12. Methods of nonspecific and specific diagnosis of HIV infection.
pr.tr.12 "Methods of nonspecific and specific diagnosis of HIV infection." (full-time course) Clinical and epidemiological indications for HIV testing. In which institutions it is possible to be tested for HIV infection. Options for specific diagnostics and features of modern testing according to WHO recommendations
Topic 13. Algorithm of HIV testing. The main regulatory documents.
pr.tr.13 "Algorithm of HIV testing. The main regulatory documents." (full-time course) Medical documentation required in the facilities/offices where HIV testing is performed. Documents that regulate the rules of examination of patients (pre-test consultation, blood sampling and testing using rapid tests of the third generation at the screening stage, confirmation of diagnosis, post-test counseling), entering into the MIS HIV system, prescribing tests to determine the number of CD4 cells, viral load. Documents that regulate the rules of blood sampling for testing and methods of analysis
Topic 14. Providing psychological and psychiatric counseling to HIV-positive people.
pr.tr.14 "Providing psychological and psychiatric counseling to HIV-positive people." (full-time course) Possibility to provide psychological support to the patient and/or his/her family, if necessary, drug and psychiatric support, and prescription of substitution therapy. Involvement of charitable organizations in social support and patient adherence to treatment
Topic 15. Preparing patients with HIV infection for lifelong antiviral therapy
pr.tr.15 "Preparing patients with HIV infection for lifelong antiviral therapy" (full-time course) Documents that regulate the rules of examination of patients, reporting HIV to the MIS system, prescribing tests to determine the number of CD4 cells, viral load, examination for tuberculosis (radiation diagnostics and molecular genetic testing of sputum for MTB), prescribing preventive treatment against tuberculosis and opportunistic infections. Examinations of related specialists clinical blood tests, urine tests, biochemical blood tests, markers of viral hepatitis B and C. Based on the results of instrumental and laboratory tests, the choice of a starting treatment regimen
Topic 16. Principles and approaches to the treatment of patients with HIV infection. General characteristics of groups of drugs used in the treatment of HIV infection. HAART.
pr.tr.16 "Principles and approaches to the treatment of patients with HIV infection. General characteristics of groups of drugs used in the treatment of HIV infection. HAART." (full-time course) General characteristics of drugs used in the treatment of patients with HIV infection. Features of drug selection, possible contraindications and side effects of treatment, indications for changing the treatment regimen. When HAART is prescribed

Topic 17. Indications for changing the treatment regimen for HIV infection
pr.tr.17 "Indications for changing the treatment regimen for HIV infection" (full-time course) Outpatient monitoring of patients receiving ART, monitoring the effectiveness of therapy. Possible reasons for changing the treatment regimen or replacing individual drugs. Rules for filling in the relevant sections in the patient observation card and in MIS HIV
Topic 18. Peculiarities of providing ART to pregnant HIV-infected women, prevention of infection of newborns.
pr.tr.18 "Peculiarities of providing ART to pregnant HIV-infected women, prevention of infection of newborns." (full-time course) The need to adjust treatment for women who started ART long before pregnancy. Options for ART regimens for newly diagnosed HIV infection depending on the gestational age
Topic 19. Features of HIV treatment in children and adolescents
pr.tr.19 "Features of HIV treatment in children and adolescents" (full-time course) Peculiarities of ART prescription in children and adolescents depending on age and comorbidities. Control over the timely detection of complications that require therapy correction and monitoring the effectiveness of treatment
Topic 20. Peculiarities of treatment and counseling for people who inject drugs.
pr.tr.20 "Peculiarities of treatment and counseling for people who inject drugs." (full-time course) Formation of adherence to treatment. Substitution maintenance therapy for injecting drug users. Preventive measures to prevent infection of contacts. The role of NGOs and social services in the support and social adaptation of HIV-positive people from this group
Topic 21. Monitoring the effectiveness of ART therapy. Causes of emergence of resistant strains.
pr.tr.21 "Monitoring the effectiveness of ART therapy. Causes of emergence of resistant strains." (full-time course) Rules for blood sampling to determine viral load. Monitoring the effectiveness of treatment in the first years after ART initiation. Examination tactics in case of suspected ineffectiveness of the chosen regimen. When blood should be sent for the determination of antiretroviral-resistant HIV
Topic 22. Tactics in case of an emergency during the provision of medical care to a patient.
pr.tr.22 "Tactics in case of an emergency during the provision of medical care to a patient." (full-time course) Blood emergencies in hospitals and their prevention. Algorithm of actions in case of an emergency. Post-exposure prophylaxis for healthcare workers and further laboratory monitoring
Topic 23. Post-exposure prophylaxis of HIV infection

pr.tr.23 "Post-exposure prophylaxis of HIV infection" (full-time course) Post-exposure prophylaxis among the population. Criteria for appointment. Tactics when citizens apply after 72 hours after suspected infection
Topic 24. Pre-exposure prophylaxis of HIV infection
pr.tr.24 "Pre-exposure prophylaxis of HIV infection" (full-time course) Identification of high-risk groups for HIV infection. Combined pre-exposure prophylaxis. Drugs and regimens for daily pre-exposure prophylaxis. Medications and regimens for cisgender MSM "VCT if necessary". Drugs for parenteral HIV prevention. Pre-exposure prophylaxis among military medics in the combat zone
Topic 25. Final modular control
pr.tr.25 "Final modular control" (full-time course) Differentiated credit: assessment of theoretical and practical training

9. Teaching methods

9.1 Teaching methods

Course involves learning through:

TM1	Practical training
TM2	Electronic learning
TM3	Case-based learning
TM4	Team Based Learning
TM5	Self-study

The discipline is taught using modern teaching methods (CBL, TBL), which contribute not only to the development of professional skills but also stimulate creative thinking. Practice-oriented training and case studies allow students to simulate a real-life situation that requires planning a patient's examination and interpreting the results of tests to diagnose and provide care.

Students acquire soft skills throughout the entire period of studying the discipline. The ability to analyze and critically think, work in a team, and persevere is formed during team, practical, and case-based learning. E-learning stimulates the ability to use information technology.

9.2 Learning activities

LA1	Performing practical tasks
LA2	Participation in discussions (group and pair)
LA3	E-learning in systems (Google Meet, Viber, Telegram, MIX learning, Zoom and in the format of a YouTube channel)
LA4	Preparing for the final control
LA5	Self-learning

LA6	Analysis of clinical cases
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10. Methods and criteria for assessment

10.1. Assessment criteria

Definition	National scale	Rating scale
Outstanding performance without errors	5 (Excellent)	$170 \leq RD \leq 200$
Above the average standard but with minor errors	4 (Good)	$164 \leq RD < 169$
	4 (Good)	$140 \leq RD < 163$
Fair but with significant shortcomings	3 (Satisfactory)	$127 \leq RD < 139$
	3 (Satisfactory)	$120 \leq RD < 126$
Fail – some more work required before the credit can be awarded	2 (Fail)	$70 \leq RD < 119$
	2 (Fail)	$0 \leq RD < 69$

10.2 Formative assessment

	Description	Deadline, weeks	Feedback
FA1 Teacher's instructions in the process of performing practical tasks	The guidelines describe methods of pedagogical control over the professional activities of students. Efficiency is determined by compliance with all stages of practical tasks. The effectiveness of the formation of the necessary practical skills depends on the level of practical competence.	During the entire period of studying the discipline	Counseling students in working with and standardizing patients, direct and indirect observation of students' work with further determination of the level of practical training
FA2 Survey and oral comments of the teacher on its results	It provides an opportunity to identify the state of students' learning experience in accordance with the set goals, find out the prerequisites for the state of formation of the results obtained, the causes of difficulties, adjust the learning process, track the dynamics of learning outcomes and predict their development.	During the entire period of studying the discipline	According to the obtained data on learning outcomes, based on their analysis, it is proposed to determine the grade as an indicator of the achievements of students' learning activities

FA3 Tests (automated tests) to monitor the academic achievements of students	A method of effectively checking the level of knowledge, skills and abilities on each topic of the discipline. Testing allows you to check the mastery of educational material on each topic.	During the entire period of studying the discipline	Assessment of the student's ability to think clinically, justify their decisions, clearly express their thoughts, determine the level of theoretical training, which is reflected in the appropriate assessment
FA4 Solving clinical cases	The case method allows to reveal and develop the qualities and abilities of medical students necessary for their future work, forms clinical thinking, analytical skills, independence in decision-making, communication skills, and skills of working with a sufficiently large amount of information.	During the entire period of studying the discipline	Assessment of the student's ability to think clinically, justify their decisions, clearly express their thoughts, determine the level of theoretical training, which is reflected in the appropriate assessment
FA5 Focus group discussions	The method allows all participants to engage in the process of discussing and justifying their own opinions through multilateral communication, develop the ability to conduct a professional discussion, cultivate respect for colleagues and the ability to generate alternative ideas and proposals.	During the entire period of studying the discipline	Evaluation of the student's ability to work in a team, the ability to justify their decisions, determination of the level of theoretical training, which is reflected in the corresponding grade

FA6 Tasks of assessing the level of theoretical training	Assessment of the acquired theoretical knowledge on the subject matter of the discipline. It is carried out at each practical lesson in accordance with the specific objectives of each topic on the basis of a comprehensive assessment of student performance, including control of the level of theoretical training, independent work according to the thematic plan	During the entire period of studying the discipline	Feedback is aimed at supporting students' independent work, identifying shortcomings and assessing the level of acquired theoretical knowledge.
FA7 Final assessment	A method of effective testing of the level of knowledge, skills and abilities in a discipline. Allows you to check learning outcomes upon completion of the discipline.	At the last class in the discipline.	The maximum number of points is 80 points, provided that 100% of the answers are correct. The minimum score for passing the test is 48 points (60% of correct answers)

10.3 Summative assessment

	Description	Deadline, weeks	Feedback
SA1 Oral survey	The level of theoretical training is determined	During the entire period of studying the discipline	The result of the performance of the assignment at each lesson affects the comprehensive grade for the practical lesson
SA2 Assessment of the level of theoretical training	It develops students' skills of independent work, encourages them to seek searching knowledge. Stimulates students to work with the necessary literature, transfers the learning process from the level of passive absorption of information to the level of active transformation	During the entire period of studying the discipline	The result of the performance of the assignment at each lesson affects the comprehensive grade for the practical lesson

SA3 Final control: differentiated credit	Passing a differentiated test. Applicants who have attended all previous classes, successfully mastered the material in the discipline and have passed the practical skills are allowed to take the test.	According to the schedule	An applicant can get 80 points based on the results of the test. The minimum number of points a student must receive is 48 points
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Form of assessment:

		Points	Можливість перескладання з метою підвищення оцінки
The semester of teaching		80 scores	
SA3. Final control: differentiated credit		80	
	Computer control	20	No
	Oral answer	60	No
The first semester of teaching		120 scores	
SA1. Oral survey		96	
	Теми 1-24 (24x4)	96	No
SA2. Assessment of the level of theoretical training		24	
	1-24 (24x1)	24	No

When mastering the materials of the module, the student is assigned 5 points for each practical lesson. Final control: differentiated test, including: theoretical training - 60 points, computer testing - 20 points. The total score in the discipline may not exceed 200 points. There is a possibility of re-crediting points obtained through the non-formal education system in accordance with the Regulations.

11. Learning resources

11.1 Material and technical support

MTS1	Library collections
MTS2	Biological and medical equipment, biomedical products and materials for medical purposes, laboratory equipment and instruments.
MTS3	Information and communication systems
MTS4	University Clinic of Sumy State University, Krasovitsky Medical Clinical Center for Infectious Diseases and Dermatology
MTS5	Computers, computer systems and networks

MTS6	Software (to support distance learning, online surveys, virtual laboratories, virtual patients)
MTS7	Multimedia, video and sound reproduction, projection equipment (video cameras, projectors, screens, smartboards, etc.)

11.2 Information and methodical support

Essential Reading	
1	Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach, WHO, 2021 https://iris.who.int/handle/10665/342899
2	Therapeutic Guidelines for Antiretroviral (ARV) Treatment of Adult HIV Infection, BC-CfE, 2020
Supplemental Reading	
1	Infectious diseases: textbook / O. A. Holubovska, M. A. Andreichyn, A. V. Shkurba etc. ; edit. O.A. Holubovska. — K. : AUS Medicine Publishing, 2018. — 664 p
2	Global guidance on criteria and processes for validation: Elimination of Mother-to-Child Transmission of HIV and Syphilis, 2nd edition https://www.who.int/publications/i/item/global-guidance-on-criteria-and-processes-for-validation-elimination-of-mother-to-child-transmission-of-hiv-and-syphilis
3	Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations. https://www.who.int/publications/i/item/9789240052390
4	Comprehensive package of care for infants and young children exposed to HIV https://www.who.int/publications/i/item/9789240040236
Web-based and electronic resources	
1	Ukrainian Center for Socially Dangerous Diseases Control http://ucdc.gov.ua/
2	International HIV/AIDS Alliance in Ukraine http://www.aidsalliance.org.ua
3	Center for Disease Control http://www.cdc.gov/
4	The World AIDS Program http://www.unaids.org
5	Official website of the Ministry of Health of Ukraine http://www.moz.gov.ua/ua/portal/
6	European Union on HIV http://eacsociety.net/
7	International HIV Association http://www.iasociety.org/
8	Website of the Department of Infectious Diseases with Epidemiology of the Institute of Medicine of Sumy State University http://infection.med.sumdu.edu.ua/