

COURSE UNIT (MODULE) DESCRIPTION

Course unit (module) title	Code
Infectious diseases and dermatovenerology	

Lecturer(s)	Department(s) where the course unit (module) is delivered
Coordinator: prof. dr. L.Jančorienė Other(s): All other teachers (lecturers) from Clinic of Infectious Diseases and Dermatovenerology Institute of Clinical Medicine	Clinic of Infectious Diseases and Dermatovenerology, Institute of Clinical Medicine, Medical Faculty, Vilnius University, Santariškių street 14, 08406 Vilnius, Lithuania

Study cycle	Type of the course unit (module)
Cycle (integrated studies)	Compulsory

Mode of delivery	Period when the course unit (module) is delivered	Language(s) of instruction
Face-to-face lectures, seminars, workshops	VI and VII semesters	English

Requirements for students	
Prerequisites: A student must have completed the following courses: Human anatomy, Physiology, Microbiology, Pharmacology, Pathologic anatomy, Introduction to internal diseases	Additional requirements (if any): N/A

Course (module) volume in credits	Total student's workload	Contact hours	Self-study hours
10 credits Infec+dermo	270 Infec+dermo	132 Infec+dermo	138 Infec+dermo
7,5 - credits infec	202,5 infec	100 infec	102,5 infec
2,5 – credits dermo	67,5 dermo	32 dermo	35,5 dermo

Purpose of the course unit (module): programme competences to be developed		
To present the background of basic principles and methods of epidemiology, including of basic concepts of infectious, skin diseases and sexually transmitted infections epidemiology. This course is designed to teach students on the pathogenesis, clinical features, diagnostics, differential diagnostics and treatment of infectious skin diseases and sexually transmitted infections. At the end of this course students should be able to collect the relevant information about the history and the course of the disease, the epidemiological data, be able to perform the physical examination, to identify the symptoms and signs of the disease, to collect and process specimen for the identification of infectious agents, to evaluate the results of laboratory tests and to perform the instrumental procedures, to get samples for the microbiological cultures, to evaluate the indications for the hospitalization, to know the principles of diagnostics and differential diagnostics of infectious, skin diseases and sexually transmitted infections, to initiate the optimal treatment and to provide the appropriate prophylactic measures. To know the etiology, epidemiology, pathogenesis, clinical features, diagnostics and optimal therapy of common infectious, skin diseases and sexually transmitted infections in Lithuania and worldwide.		
Learning outcomes of the course unit (module)	Teaching and learning methods	Assessment methods
General competences After the successful completion of this module the students will be able:		

To act honestly in all professional activities and meet the standards of ethical obligations, to be empathetic, to think critically and self-critically, be creative, proactive, to achieve the goals, to communicate with the people in the society.	Workshops in different departments and laboratory of the Infectious diseases centre and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre.	Continued evaluation of practical skills in the infectious diseases department wards, emergency department, intensive care unit, clinical diagnostic laboratory and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre.
To evaluate the limits of the competence and, if necessary, to seek for a help, to solve problems and make decisions, communicate and be team orientated and work in a team with the specialists of other medical specialties and other science experts.	Workshops in different departments and laboratory of the Infectious diseases centre and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre.	Continued evaluation of practical skills in the infectious diseases department wards, emergency department, intensive care unit, clinical diagnostic laboratory and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre.
Subject competences After the successful completion of this module the students will be able:		
To examine the patient with suspected infectious, skin disease and sexually transmitted infection: to collect the data about the medical history (disease and life history), to perform patient's physical examination, to assess the disease severity, to establish the primary diagnosis, to differentiate and rule out other diseases and justify and compose a plan of diagnostic examinations and treatment. To inform the patient about his condition assessment, diagnosis, prevention measures, to support the patient and obtain the patient's confidence.	Workshops in different departments and laboratory of the Infectious diseases centre and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre. Analysis of clinical cases and clinical situations during the seminars.	Continued evaluation of practical skills in the infectious diseases department wards, emergency department, intensive care unit, clinical diagnostic laboratory and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre. Evaluation of the analysis of clinical cases and clinical situations during the seminars. At the end of the course - written exam.

Obtain samples for microbiological tests, to know the methods of laboratory investigations, their characteristics, advantages and disadvantages of a different infectious diseases, to learn the interpretation of test results, to know the basics of antimicrobial resistance, evaluate the antimicrobial resistance. To inspect skin, appendices of skin and visible mucosa, to assess the morphology of lesions, to get acquainted with functional tests and skin patch tests; to learn laboratory tests and invasive methods of diagnosis and treatment of skin, appendices of skin and mucous pathology.	Workshops in different departments and laboratory of the Infectious diseases centre and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre. Analysis of clinical cases and clinical situations during the seminars.	Continued evaluation of practical skills in the infectious diseases department wards, emergency department, intensive care unit, clinical diagnostic laboratory and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre. Evaluation of the analysis of clinical cases and clinical situations during the seminars. At the end of the course - written exam.
To assess the indications for hospitalization and intensive care therapy, to initiate an adequate treatment: according to etiology, pathogenesis, and clinical symptoms. To recommend primary and secondary prevention measures.	Workshops in different departments of the Infectious diseases centre and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre. Analysis of clinical cases and clinical situations during the seminars.	Continued evaluation of practical skills in the infectious diseases department wards, emergency department, intensive care unit. Evaluation of the analysis of clinical cases and clinical situations during the seminars. At the end of the course - written exam.
To define modern epidemiology, understand basic concepts, terms and assumptions of epidemiology, purpose and characteristics of surveillance, infectious, dermatological and sexually transmitted disease control and prevention principles.	Lectures, seminars, group work, open discussion	Participation in seminars, performance during the seminars, evaluation or self-study.
Understand the principles of constructive communication in medical practice: to communicate properly with patients and patient relatives.	Workshops and seminars in different departments of the Infectious diseases hospital and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre.	Continued evaluation practical skills in the infectious diseases department wards and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre. Evaluation of the analysis of clinical cases and clinical situations during the seminars.
Store medical records properly and fully, be able to use a computer as a source of information search, store, and update information.	Workshops in different departments of the Infectious diseases centre and centre of Dermatovenereology. Self-study.	Continued evaluation of practical skills in the infectious diseases department wards, emergency department, intensive care unit, clinical

		diagnostic laboratory and in different consulting rooms in Dermatovenereology Inpatient and Outpatient Departments and Day Care Centre.
--	--	--

Content: breakdown of the topics	Contact hours						Self-study work: time and assignments		
	Lectures	Tutorials	Seminars	Exercises	Laboratory work	Internship/work	Contact hours	Self-study hours	Assignments
1. Infectious disease patterns, the principles of infectious diseases diagnostics and therapy. The main groups of antibiotics. The principles of rational antibiotic therapy and evaluation of it's effectiveness.	2			2			4	4	To prepare for the workshops of infectious diseases about the infectious diseases' characteristics, classification, clinical microbiology, principles of antimicrobial therapy.
2. Principles of modern infectious disease epidemiology. Application of clinical epidemiology to infectious disease medicine.	2		3	2			7	8	Study of selected publications on application epidemiology principles in medicine and public health. Exercises.
3. Principles of infectious disease epidemiology, prevention and management. Hospital-acquired infections and infection control.	2						2	4	Study of selected publications, study questions and exercises.
4. Basics of immunoprophylaxis. Vaccines and vaccination. Pre- and post-exposure prophylaxis. Vaccination recommendations.	2						2	4	Study of selected publications, study questions and exercises.
5. Typhoid fever, paratyphus, salmonella infection and other food borne illnesses. Botulism.	1			1			2	4	To prepare for the workshops about the infections caused by salmonella and botulism, etiology, epidemiology,

									pathogenesis, clinical presentation, diagnosis, treatment and prevention.
6. Cholera, shigellosis, campylobacter infection. Clinical stages of dehydration. Hypovolemic shock.			3	2			5	4	To prepare for the workshops about the infections caused by cholera, shigellosis, campylobacter, infection etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention, clinical stages of dehydration and hypovolemic shock.
7. Yersiniosis, <i>Clostridium difficile</i> infection. Viral gastroenteritis.			3	2			5	4	To prepare for the workshops about the Yersiniosis, <i>Clostridium difficile</i> infection and viral gastroenteritis etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
8. Diseases caused by protozoa: amebiasis, gardiasis, toxoplasmosis and visceral leishmaniasis.			3	1			4	4	To prepare for the workshops about the amebiasis, toxoplasmosis and visceral leishmaniasis etiology, epidemiology, pathogenesis, clinical presentation, diagnosis,

									treatment and prevention.
9. Helminthiasis: trichinellosis, ascariasis, echinococcosis, taeniasis.			3	1			4	4	Prepare for the workshop about ascariasis, echinococcosis, taeniasis etiology, epidemiology, pathogenesis, clinical features, diagnostics, treatment and prevention.
10. Jaundice of infectious origin. Acute and chronic viral hepatitis (A, E, B, C, D).	2		3	2			7	4	Prepare for the workshop about viral hepatitis A, E, B, C etiology, epidemiology, pathogenesis, clinical features, diagnostics, treatment and prevention.
11. Acute viral respiratory infections: influenza, parainfluenza, COVID-19 infection, adenovirus infection, respiratory syncytial virus infection, rhinovirus infection, enterovirus infection.	2			2			4	4	Prepare for the workshop about viral respiratory infections aetiology, epidemiology, pathogenesis, clinical features, diagnostics, treatment and prevention.
12. Diphtheria. Streptococcal tonsillitis.			3	1			4	2	Prepare for the workshop about diphtheria and streptococcal tonsillitis epidemiology, clinical features, diagnostics, differential diagnostics, treatment and prevention.

13. Pneumococcal infection. Legionellosis. Mycoplasma infection. Chlamydial pneumonia.	1		3	3			7	4	Prepare for the workshop about pneumococcal infection, legionellosis, mycoplasma and chlamydial infection aetiology, epidemiology, pathogenesis, clinical features, diagnostics, treatment and prevention; differential diagnostics of „typical“ and „atypical“ pneumonia.
14. Infections in immunosuppressed persons (after organ transplantation, primary and secondary immunodeficiency). Hospital-acquired infections of immunosuppressed population and its prophylaxis and control.			3	2			5	2	Prepare for the workshop about infections in immunosuppressed population and its aetiology, epidemiology, pathogenesis, clinical features, diagnostics, treatment and prevention. Prepare for the workshop about hospital infections and its control.
15. Infections caused by <i>Herpes</i> virus family viruses (EBV, CMV, <i>Herpes simplex</i> , <i>Herpes zoster</i>).			3	1			4	4	Prepare for the workshop about herpes group virus (EBV, CMV, <i>Herpes simplex</i> , <i>Herpes zoster</i>) infections pathology, pathogenesis, clinical features, diagnostics, treatment and prevention.
16. Bacterial and viral meningitis. Meningococcal infection. Brain abscesses.	1			2			3	4	Prepare for the workshop about bacterial and viral meningitis

									etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention; clinical forms and features of meningococcal infection.
17. Sepsis. Septic and toxic shock. Principals of empirical and specific antimicrobial therapy.			3	1			4	4	Prepare for the workshop about systemic inflammatory response, sepsis and septic shock etiology, pathogenesis, clinical features, empirical and specific antibacterial therapy.
18. Tick-transmitted diseases: tick-borne encephalitis, Lyme disease.	2			1			3	4	Prepare for the workshop about tick-borne encephalitis and Lyme disease etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
19. Infectious diseases of travellers: malaria, cutaneous leishmaniasis. Yellow fever, Dengue, Chikungunya, Ebola and other haemorrhagic fevers	1			1			2	4	Prepare for the workshop about malaria and haemorrhagic fevers etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.

20. Zoonoses: leptospirosis, brucellosis, anthrax, tularemia. Mpox infection (monkeypox).			3	1			4	4	Prepare for the workshop about leptospirosis, brucellosis, anthrax, tularemia etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
21. HIV infection etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.	1			2			3	4	Prepare for the workshop about features of HIV infection, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
22. AIDS and opportunistic infections: etiology, diagnostics, treatment and prevention.	2			2			4	4	Prepare for the workshop about main opportunistic infections (pneumocystosis, toxoplasmosis, candidiasis, CMV retinitis, Kaposi sarcoma) clinical features, diagnostics and treatment.
23. Human papilloma virus infection. Infections in pregnancy (toxoplasmosis, rubella, CMV, herpes virus infections, beta-haemolytic streptococcal infection, hepatitis, HIV, Zika, Parvovirus and others).	1						1	3	Prepare for the workshop about human papilloma virus infection and most relevant infections in pregnancy etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.

24. Measles, rubella, parotitis, poliomyelitis							3	Study of selected publications.
25. Tetanus. Rabies.	2			2			4	4 Prepare for the workshop about tetanus and rabies etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
26. Erysipelas, cellulitis, skin infections after animal and insect bites, pastereulosis, anaerobic infections.			3	2			5	4 Prepare for the workshop about skin and soft tissue infections aetiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention, the possible etiology and clinical features of cellulitis.
27. Dermatovenereology. Skin structure, function, morphological elements of the lesion and the patient's examination.	1		1	1			3	4 Prepare for the workshop about specifics of skin and sexually transmitted infections, morphology of skin and mucous membrane lesions, histopathology changes in skin, examination principles of the patient, diagnostic methods, bacteriological samples and treatment principles of skin diseases. Inspect the patient's skin and mouth rashes, evaluate them. To

									get acquainted with the most common auxiliary diagnostic in dermatologic practice.
28. Bacterial and parasitic skin diseases.			2	1			3	3	Prepare for the workshop about bacterial and parasitic skin diseases: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
29. Viral diseases of the skin.			2	1			3	3	Prepare for the workshop about viral diseases of the skin: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
30. Fungal skin infections.			2	1			3	3	Prepare for the workshop about fungal skin infections: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
31. Dermatitis.			2	2			4	4	Prepare for the workshop about dermatitis: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis,

									treatment and prevention.
32. Psoriasis and lichen planus.	1			2			3	3	Prepare for the workshop about psoriasis and lichen planus: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
33. Acne. Rosacea. Ichtyosis.			1	1			2	3	Prepare for the workshop about acne, rosacea and ichthyosis: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
34. Autoimmune skin disease: connective bullous skin diseases, vitiligo.	2		1	1			4	3	Prepare for the workshop about autoimmune skin disease: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
35. Benign skin tumors. Preneoplastic diseases of skin.	1		1	1			3	3	Prepare for the workshop about benign skin tumors and pre-neoplastic diseases of skin: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
36. Skin cancer and melanoma.	1		1	1			3	3	Prepare for the workshop about

									skin cancer and melanoma: etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention.
37. Sexually transmitted infections.	2						2	4	Study of selected publications.
Total	32		52	48			132	13	

Assessment strategy	Weight, %	Deadline	Assessment criteria
Evaluation during the workshops	30%	During the semester	The student is able to fulfill the task: • examine patient suffering with infectious and skin disease, and sexually transmitted infections, to collect medical history, perform a patient physical examination, to identify and formulate the correct diagnosis, to differentiate it with other diseases, to create laboratory examination and treatment plan; • to take samples for microbiological tests, to know the methods of investigation, to understand the interpretation of the results, to know the basics of antimicrobial resistance, to inspect skin, appendices of skin and visible mucosa, to assess the morphology of lesions, to get acquainted with functional tests and skin patch tests; to learn laboratory tests and invasive methods of diagnosis and treatment of skin, appendices of skin and mucous pathology; • to assess the indications for hospitalization and intensive care; • to initiate the adequate treatment and prevention measures; • keep proper medical records. Short quiz during every lecture: oral, written (clinical case, test). Accumulated evaluation comprises 30% of the final grade.
Examination	70%	During the semester	The exam consists of 100 test questions including theoretical and practical knowledge, clinical cases from Infectious diseases (65 questions) and Dermatovenereology (35 questions). Allocated time – 2 hours. Questions may include both single and multiple-choice answers. Multiple-choice questions that are answered only partly correctly will be proportionally counted. A grade is determined automatically by converting points accumulated in 100-point system to a 10-grade system.

			The final grade is calculated as follows: Performance during the workshops x 0.3 + examination grade x 0.7
--	--	--	---

Author	Year of publication	Title	Issue of a periodical or volume of a publication	Publishing place and house or web link
Compulsory reading				
Bonita R., Beaglehole R., Kjellstrom.	2006 2 nd ed	Basic epidemiology		WHO http://whqlibdoc.who.int/publications/2006/9241547073_eng.pdf
Cohen J, Powderly WG, Opal SM.	2010 3 rd ed	Infectious Diseases	Vol.1 Vol.2	Mosby, Elsevier
Bennett JE, Dolin R, Blaser MJ.	2015 8 th ed	Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases	Vol.1 Vol.2	Elsevier, Saunders
Hoffmann C, Rockstroh J.	2015	HIV 2015/2016 www.hivbook.com		Medizin Fokus Verlag
Bolognia JL, Jorizzo JL, Rapini RP.	2018 4 th ed	Dermatology		London, Elsevier
Wolff K, Johnsons R.	2017 8 th ed	Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology		London McGrawHill
Burgdorf W, Plewig G, Wolff HH, Landthaler M.	2009 3 th ed	Braun-Falco's Dermatology		Springer-Verlag, Berlin
Wolff K, Goldsmith LA, et al	2019 9 th ed	Fitzpatrick's dermatology in general medicine		London McGrawHill London McGrawHill
Habif T.	2019 7 th ed	Clinical dermatology: A Color Guide to Diagnosis and Therapy		Mosby, New York
Balevičienė G, Maciulevičienė R.	2002	Odos ligų atlasas		Vilnius
Valiukevičienė S, Grigaitienė J, Burg G, Itin P, McGrath J.	2021	DOIT: Dermatology Online with Interactive Technology. Webbook		LSMU, VU www.cyberderm.net
Mickienė, Aukšė; Kuliešė, Monika; Pakalnienė, Jolita; Pukenytė, Evelina; Vážnaisienė, Danguolė; Vėlyvytė, Daiva; Jančorienė, Ligita; Matulionytė, Raimonda; Miciulevičienė, Jolanta.	2024	Infekcinės ligos: universiteto vadovėlis / Sudarytoja ir mokslinė redaktorė Aukšė Mickienė		Lietuvos sveikatos mokslų universiteto Akademinė leidyba, Kaunas, 2024. 526 p.
Optional reading				

Advisory Committee on Immunization Practices (ACIP).	2011	General Recommendations on Immunization. Recommendations of the Advisory Committee on Immunization Practices	<i>MMWR. Recommendations and Reports.</i> / Vol. 60 / No. 2	http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf
Rothman K.J	2012 2 nd ed.	Epidemiology: an introduction		Oxford University Press
Farrar J, Hotez PJ, Junghanss T, Kang G, Lalloo D, White NJ.	2014 23 rd ed.	Manson's Tropical Diseases		Elsevier, Saunders
Beek D, Cabellos C, Dzipova O, et al.	2016	European Society of Clinical Microbiology and Infectious Diseases (ESCMID) guideline: diagnosis and treatment of acute bacterial meningitis.		Clinical Microbiology and Infection. 22(S3):S37-S62. http://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(16)00020-3/pdf
Center of Disease Control and Prevention	2017	Health Information for International Travel "Travelers' Health" http://wwwnc.cdc.gov/travel/yellowbook/2018		Oxford University Press
www.hcvguidelines.org	2017	HCV guidance: Recommendations for testing, managing and treating hepatitis C		AASLD and IDSA