

COURSE UNIT (MODULE) DESCRIPTION

| Course unit (module) title | Code |
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| Infectious diseases and dermatovenerology | |

| Lecturer(s) | Department(s) where the course unit (module) is delivered |
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| Coordinator: prof. dr. L.Jančorienė Other(s): prof. dr. Raimonda Matulionytė prof. dr. Matilda Bylaitė Bučinskienė assoc. prof. dr. Jūratė Grigaitienė assoc. prof. dr. Rūta Gancevičienė assoc. prof. Daiva Radžišauskienė assoc. prof. dr. Birutė Zablockienė assist. prof. dr. Rolanda Valinteliene teaching assistant Elžbieta Matulytė teaching assistant Inga Kisieliene teaching assistant Tadas Raudonis teaching assistant Ieva Kubiliūtė lecturer Mindaugas Paulauskas lecturer Karolina Žvirblytė Skrebutėnienė lecturer Linas Svetikas lecturer Oleg Aliancevič lecturer Tatjana Karmazienė | Clinic of Infectious Diseases and Dermatovenereology, Institute of Clinical Medicine, Medical Faculty, Vilnius University, Santariškių street 14, 08406 Vilnius, Lithuania |

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

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

| Requirements for students | |
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| 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 |
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| 10 credits Infec+dermo 7,5 - credits infec 2,5 – credits dermo | 268 Infec+dermo 201- infec 67 - dermo | 134 Infec+dermo 101- infec 33 - dermo | 134 Infec+dermo 100- infec 34 -dermo |

| Purpose of the course unit (module): programme competences to be developed |
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| 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 |
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| 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 |

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| | | 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. |

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| 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. |
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| Content: breakdown of the topics | Contact hours | | | | | | Self-study work: time and assignments | | |
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| | 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 | 1 | | 2 | | | 5 | 2 | 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 | 1 | 3 | 2 | | | 8 | 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. |

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| 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 |

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| | | | | | | | | | etiology, epidemiology, pathogenesis, clinical presentation, diagnosis, treatment and prevention. |
| 9. Helminthosis: 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, |

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| 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. |

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| 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, |

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| 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, |

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| 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 | 3 | 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 |

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| | | | | | | | | | 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 | 3 | Prepare for the workshop about dermatitis: etiology, epidemiology, pathogenesis, clinical presentation, |

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| 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. |

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| 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 | 2 | 52 | 48 | | | 134 | 134 | |

| Assessment strategy | Weight, % | Deadline | Assessment criteria |
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| Evaluation during the workshops | 30% | During the semester | <p>The student is able to fulfill the task:</p> <ul style="list-style-type: none"> • 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. <p>Short quiz during every lecture: oral, written (clinical case, test). Accumulated evaluation comprises 30% of the final grade.</p> |
| Examination | 70% | During the semester | <p>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.</p> |

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| | | | <p>A grade is determined automatically by converting points accumulated in 100-point system to a 10-grade system.</p> <p>The final grade is calculated as follows: Performance during the workshops x 0.3 + examination grade x 0.7</p> |
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| 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 |
| Bologna 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 |
| 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 |

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| Rothman K.J | 2012 2 nd ed. | Epidemiology: an introduction | | Oxford University Press |
| Farrar J,Hotez PJ, Junghanss T, Kang G, Laloo D, White NJ. | 2014 23 rd ed. | Manson's Tropical Diseases | | Elsevier, Saunders |
| Beek D, Cabellos C, Dzupova 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 |