



COURSE UNIT (MODULE) DESCRIPTION

Course unit (module) title	Code
Children's Diseases and Emergency Care	

Academic staff	Core academic unit(s)
Coordinating lecturer: dr. Benas Prušinskas Others: Lecturers of the Clinic of Children's Diseases, Institute of Clinical Medicine	Vilnius University, Faculty of Medicine, Institute of Clinical Medicine, Clinic of Children's Diseases

Study cycle	Type of the course unit
Integrated studies (1st and 2nd cycle)	Compulsory

Mode of delivery	Semester or period when it is delivered	Language of instruction
Lectures and seminars are held in classrooms; practical classes take place in the departments of children's diseases, paediatric emergency and intensive care, paediatric day-care units	Semester VI	English

Requisites	
Prerequisites: A student must have completed the following courses: Human Anatomy, Human Histology, Human Physiology, Biochemistry, Microbiology and Immunology, Propaedeutics of Internal Diseases, General Paediatrics and Neonatology, Pharmacology.	Co-requisites (if relevant): none

Number of ECTS credits allocated	Student's workload (total)	Contact hours	Individual work
5	133	66	69

Purpose of the course unit
Programme competences to be developed The aim of the course unit is to acquire knowledge of the aetiology, typical clinical forms, diagnosis, treatment and prevention of children diseases, including allergic diseases, gastrointestinal diseases and infectious diseases. Students are also expected to acquire knowledge of the diagnosis and principles of management of emergency conditions in children, as well as the principles of nutrition in healthy and ill children. Upon completion of the course, students must be able to identify the main allergic diseases, anaphylaxis, diseases of the gastrointestinal system, emergency conditions, and the principal syndromes of infectious diseases; analyse epidemiological data; understand how to organize preventive measures; know how to collect clinical material for laboratory testing; interpret laboratory results; understand the possibilities and methods of instrumental investigations; independently establish a clinical diagnosis; prescribe etiopathogenetic treatment; and perform initial paediatric resuscitation.

Communication with students: all general information related to this study programme will be made available in the Virtual Learning Environment system (e.g. recordings of common lectures, teaching materials for practical classes where provided by the lecturers of the module, the course unit description, etc.). In case of individual questions, students should contact the coordinating lecturer, Dr. Benas Prušinskas, by e-mail: benas.prusinskas@mf.vu.lt		
Learning outcomes of the course unit	Teaching and learning methods	Assessment methods
Generic competences After successful completion of this module, the student will be able to:		
- Act honestly and in accordance with ethical obligations; think critically and self-critically; be creative and proactive; pursue goals; and communicate effectively with others; - Solve problems independently and make decisions; communicate and work in a team; recognize the limits of their competence and seek help when necessary; - Collect, understand and apply theoretical knowledge; analyse and synthesise information; think critically and evaluate information.	Lectures delivered by e-learning (distance learning), independent information search, seminars and practical classes in the departments of children's diseases, paediatric emergency and intensive care, the paediatric day-care unit and the simulation classroom; analysis of theoretical material and clinical cases; group discussions; and decision-making exercises.	Continuous assessment of theoretical knowledge and practical skills through presentation and analysis of theoretical material, clinical cases and clinical decision-making; assessment of preparation tasks and control tests.
Subject-specific competences After successful completion of this module, the student will be able to:		
- obtain a medical and epidemiological history while communicating with children of various ages and their relatives; - objectively assess the condition of children of different ages when allergic, gastrointestinal, infectious or emergency conditions are suspected; - identify the investigations required in a specific clinical case and evaluate their results; prepare an appropriate patient follow-up plan; - prescribe an appropriate diet for a healthy and an ill child.	Lectures delivered by e-learning (distance learning), independent information search, seminars and practical classes in the departments of children's diseases, paediatric emergency and intensive care, the paediatric day-care unit and the simulation classroom; examination and discussion of ill children; solving real and simulated clinical situations; case analysis and group discussion.	Continuous assessment during practical classes through presentation, analysis and discussion of clinical cases and clinical decision-making; assessment of preparation tasks and control tests; cumulative practical class score at the end of the course unit and a programmed examination.
- purposefully select the laboratory and instrumental investigations required in a specific clinical case, evaluate their results, and perform differential diagnosis; - prescribe adequate treatment appropriate to the child's age and body weight; evaluate the suitability, potential benefits and harms of medicines and other treatment methods for children of different ages; and assess treatment effectiveness.	Lectures delivered by e-learning (distance learning), independent information search, seminars and practical classes in the departments of children's diseases, paediatric emergency and intensive care, the paediatric day-care unit and the simulation classroom; examination and discussion of ill children; solving real and simulated clinical situations.	Continuous assessment during practical classes through prescribing and justifying treatment and evaluating its effectiveness; assessment of preparation tasks and control tests; cumulative practical class score at the end of the course unit and a programmed examination.
Know the principles of preventive vaccination and develop an evidence-based attitude towards vaccination among parents, society, the media, and staff of children's educational institutions.	Lectures delivered by e-learning (distance learning), seminars, independent information search, practical classes.	Continuous assessment during practical classes through presentation, analysis and discussion of clinical cases and clinical decision-making; assessment of preparation tasks

		and control tests; cumulative practical class score at the end of the course unit and a programmed examination.
Recognize and assess critical paediatric health conditions, provide emergency care, differentiate their causes, and apply paediatric resuscitation measures according to current European and Lithuanian standards.	Work in paediatric emergency care and paediatric intensive care units, assessment of newly admitted severely ill patients and provision of emergency care; solving real and simulated clinical situations; work with manikins and simulators in the simulation classroom.	Continuous assessment of practical work in paediatric emergency care and paediatric intensive care units; assessment of real and simulated clinical situation-solving; assessment of preparation tasks and control tests; cumulative practical class score at the end of the course unit and a programmed examination.

Content	Contact hours							Individual work: time and assignments	
	Lectures	Tutorials	Seminars	Workshops	Laboratory work	Internship	Contact hours, total	Individual work	Tasks for individual work

1. Diagnosis, differential diagnosis, treatment and prevention of the most common allergic diseases in children (atopic dermatitis, allergic contact dermatitis, urticaria, food allergy, anaphylaxis)	2		3	2			7	9	Prepare for practical classes on allergic skin diseases in children and anaphylaxis, highlighting in each case the age-related features of etiopathogenesis, diagnosis, treatment and prevention.
2. . Peculiarities of examination of the digestive system; nutrition of children of different ages Gastroesophageal reflux disease, eosinophilic oesophagitis, gastritis, peptic ulcer disease, disorders of gut–brain interaction, coeliac disease, constipation; diagnosis, differential diagnosis, treatment and prevention of these diseases.	5		8	7			20	20	Peculiarities of examination of the digestive system; nutrition of children of different ages Gastroesophageal reflux disease, eosinophilic oesophagitis, gastritis, peptic ulcer disease, disorders of gut–brain interaction, coeliac disease, constipation; diagnosis, differential diagnosis, treatment and prevention of these diseases.
3. Seriously ill child: initial assessment and emergency care Basic and advanced paediatric life support; fever; the most common critical conditions in children (acute disturbances of consciousness, respiration and circulation); disorders of homeostasis; shaken baby syndrome; acute poisonings; choking.	3		5	5			13	14	Prepare for practical classes on the principles of assessing an ill child, critical paediatric conditions and emergency care. Students should be familiar with Lithuanian and European standards of paediatric resuscitation. They should also be familiar with the features of homeostasis in children of different ages, know the most common disorders of water, electrolyte and acid–base balance, and understand the principles of infusion therapy. Prepare on the circumstances and prevention of accidents in children.

4. Viral and bacterial intestinal infections in children (rotavirus, norovirus, adenovirus infections, salmonellosis, shigellosis, escherichiosis, campylobacteriosis, yersiniosis, pseudotuberculosis); viral infections (measles, varicella-zoster infection, infectious mononucleosis, herpes simplex 1/2 infection, roseola infantum, hand-foot-and-mouth disease); bacterial infections (pertussis, paraptussis, <i>Haemophilus influenzae</i> , streptococcal and meningococcal infections); epidemiology, clinical features, diagnosis, treatment and prevention. Skin examination and infectious diseases in children presenting with rashes. Prevention of communicable diseases in children.	6		10	10			26	26	Prepare for practical classes on paediatric infectious diseases, highlighting in each case the specific features of aetiology, epidemiology, clinical presentation, diagnosis, antibacterial therapy and prevention. Know how to collect clinical material for laboratory investigations. Prepare for practical classes on prevention of communicable diseases in children, including the aims of immunoprophylaxis, classification of vaccines, methods of vaccination, the preventive vaccination schedule and the principles underlying its development, as well as additionally recommended vaccines.
5.									
Total	16		26	24			66	69	

Assessment strategy	Weight %	Deadline	Assessment criteria
Control tests	40	During practical classes	Theoretical and practical knowledge is assessed during practical classes and seminars through control tests (tests/open-ended questions/clinical case presentation). The points obtained are summed, and the maximum possible score is 40 points, including: • Paediatric allergology – 4 points • Emergency care – 8 points • Paediatric gastroenterology – 12 points • Paediatric infectious diseases – 16 points. The assessment strategy is based on the number of correctly answered questions and their individual weighting (questions of varying complexity are assigned different point values). Clinical case presentations are assessed by awarding 1 point for each component of the presentation, namely: 1. complaints and medical history, 2. clinical condition, 3. development of the investigation plan, and 4. development of the treatment plan. Scores obtained during practical classes and seminars are not rounded; if a fractional score is awarded, it is recorded with one decimal place (e.g. 3.5 points).

Final examination by computer-based electronic testing at the end of the course unit	60	On the designated day after completion of the practical classes	The examination is conducted using a computer-based electronic testing system (within a specially designed database) and consists of test questions of varying levels of difficulty. The assessment strategy is based on the number of correctly answered questions and their individual weighting (questions of different complexity are assigned different point values; scores are not rounded, and fractional points are recorded with one decimal place, e.g. 0.5 points). The maximum possible score for the examination is 60 points.																
Final evaluation	The final evaluation is the sum of the points accumulated from control tests and the examination. The result is rounded according to the following principle: 91.4 = 9, 91.5 = 10. <table><tr><th>Final score (points)</th><th>Grade</th></tr><tr><td>100-92</td><td>10 (excellent)</td></tr><tr><td>91-85</td><td>9 (very well)</td></tr><tr><td>84-75</td><td>8 (good)</td></tr><tr><td>74-65</td><td>7 (average)</td></tr><tr><td>64-55</td><td>6 (satisfactory)</td></tr><tr><td>54-50</td><td>5 (weak)</td></tr><tr><td><50</td><td>4 (unsatisfactory)</td></tr></table>			Final score (points)	Grade	100-92	10 (excellent)	91-85	9 (very well)	84-75	8 (good)	74-65	7 (average)	64-55	6 (satisfactory)	54-50	5 (weak)	<50	4 (unsatisfactory)
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Author (-s)	Publishing year	Title	Issue of a periodical or volume of a publication	Publishing house or web link
Required reading				
<u>Robert Kliegman MD</u> (Editor), <u>Joseph W. St. Geme III MD</u> (Editor)	2024	Nelson Textbook of Pediatrics, 2-Volume Set	Edition 22	Elsevier
T.Lissauer W.Carroll	2022	Illustrated Textbook of Paediatrics'	6th edition	eBook Elsevier. ISBN : 9780702081804: https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20190011636
Long S.S., Prober C.G, Fisher M.	2023	Principles and Practice of Pediatric Infectious Diseases	6th edition	Philadelphia, 2023 by Elsevier
P. Van de Voorde, et al., European Resuscitation Council	2021	European Resuscitation Council Guidelines 2021: Paediatric Life Support		https://doi.org/10.1016/j.resuscitation.2021.02.015
Lectures	prof. O. Rudzevičienė, prof. V. Urbonas, assoc. prof. Inga Ivaškevičienė, assoc. prof. S. Burokienė, assist. E. Poluziorovienė			
Recommended reading				
Vesikari T, Van Damme P. et all.	2017	Pediatric Vaccines and Vaccinations. A European Textbook	1st edition	Springer International Publishing AG. https://link.springer.com/book/10.1007%2F978-3-319-59952-6
Cherry J, Demmler-Harrison G, Kaplan Sh, Steinbach WJ., Hotez P.	2019	Feigin and Cherry's Textbook of Pediatric Infectious Diseases	8th edition, Vol. 1 & 2	Philadelphia, Saunders Elsevier.
https://www.espgan.org/knowledge-center				

<u>European Centre for Disease Prevention and Control.</u> www.ecdc.europa.eu

<u>Centers for Disease Control and Prevention.</u> www.cdc.gov

Approved at the meeting of the Clinic of Children's Diseases, Institute of Clinical Medicine, Faculty of Medicine, Vilnius University.

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