



## COURSE UNIT DESCRIPTION

Course unit title	Code
<b>Final exam</b>	

Lecturer(s)	Department, Faculty
<b>Coordinating:</b> Assoc. Prof. PhD. Mindaugas Šilkūnas	Vilnius University, Faculty of Medicine, Institute of Clinical Medicine

Study cycle	Level of the course	Type of the course unit
Continuous studies (levels I and II)	–	Compulsory

Mode of delivery	Period of delivery	Language of instruction
Face-to-face	Semester XII	English

Requisites			
<b>Prerequisites:</b> The student must be settled for all subjects provided in the study plan.		<b>Corequisites (if any):</b> Students must have completed and defended a Master's thesis, completed an internship practice and passed an internship exam.	
Number of ECTS credits allocated	Student's total workload	Contact hours	Self-study hours
5	135	5	130

Discipline (module) objective: competencies to be developed during the study program		
<p>To acquire adequate knowledge and skills in medicine and to be able to apply them in practice, to know the structure, functions and behaviour of a healthy and sick person, to know the relations between the state of health and physical and social surroundings of the human being; a good understanding of the scientific methods. To develop the student's professionalism, ability and readiness to work independently and in an interdisciplinary team, to interact with people from different socio-cultural backgrounds, to follow medical ethics and deontology, health and social medicine organization requirements, to make an assessment within the scope of one's competence limits and be able to answer properly for one's actions. To develop a holistic approach to the patient, to be able to recognize acute conditions in a timely and appropriate manner and to provide medical care and life support; to know the epidemiology of diseases, to identify diseases of all ages individuals, their aetiology and major risk factors, symptoms, acute and chronic complications, evaluate the clinical status and vital signs of the patient, to know and apply basic methods of diagnostics, assign targeted examinations and, if indicated such as, to provide additional tests, interpreting the results of tests performed, performing differential diagnostics, understanding the principles of pharmacology, to be able to design a long-term patient care and observation plan, to understand the principles of treatment, and methods of preventing diseases. To be able to collect, systematize, analyse, interpret information, present conclusions and recommendations and plan their actions based on them. To pursue professional development throughout all professional career.</p>		
Learning outcomes of the course unit	Teaching and learning methods	Assessment method

<p><b>Generic competencies</b> After successful completion of this module, the student will be able to:</p>		
<p>Students will be able to apply knowledge in practice, act honestly, independently, qualitatively and appropriately, self-criticize the quality of their work, to assess the limits of their competences and, if necessary, seek help and take responsibility for their actions, act and adapt to new situations; Students will have professional ethical skills and the ability to comply with ethical obligations, apply the principles of good medical practice at work, communicate with patients and their families, be empathetic, tolerant and confidential, respect and uphold patients' rights, taking into account the individual's physical and mental development peculiarities, age, psychology of a healthy and sick person.</p>	<p>Studying all course units (lectures, seminars and practise workshops in various departments, surgery or procedure rooms of health care institutions (hospitals and outpatient clinics), problematic learning, presentation delivery, analysis of clinical cases and situations, brainstorming, telling, work in small group or pairs, open discussion, creative tasks, error analysis, theoretical modelling, video demonstration of operations, simulation of surgery, summer practice, internship practice; self-study, search for information and literature analysis, analysis of law; clinical case history writing.</p>	<p>Test</p>
<p>Students will be able to work with specialists in other fields and experts in other sciences, share existing knowledge, experience and good practice, solve problems, make common decisions and evaluate their impact.</p>		
<p>Students will be able to think critically and selfcritically, collect information and data from various sources, analyse, systematize, critically evaluate, interpret, fluently and reasonably express their thoughts orally and in writing.</p>		
<p>Students will be able to develop ideas, be creative and proactive, conduct research, organize, plan and execute projects, achieve goals.</p>		
<p>Students will be able to pursue general, non-medical knowledge, further education, independent lifelong learning and professional development, to train and motivate others</p>		
<p>Students will be able to communicate with the public, cooperate with various health care, personal and public health care institutions, disseminating science-based knowledge to the public, patients, their relatives, medical staff and other professionals; will be able to understand environmental diversity and multiculturalism; understand and take into account the customs of other cultures; work in an international environment and communicate in other foreign languages.</p>		
<p><b>Subject-specific competences</b> After successful completion of this semester the student will be able:</p>		
<p>Students will be able to apply the achievements of biomedical sciences, principles, skills and knowledge of evidence-based medicine; will be able to consult the patient, to assess clinical signs, perform physical examination and assessment of mental state, to order tests, to interpret results obtained from medical history, physical examination, instrumental and laboratory examinations, to perform differential diagnosis, preliminary assessment of the patient's problems and formulate the diagnosis, treatment and monitoring plans; to prescribe treatment and to write detailed case history.</p>	<p>Studying all course units (lectures, seminars and practise workshops in various departments, surgery or procedure rooms of health care institutions (hospitals and outpatient</p>	<p>Test</p>

Students will be able to provide emergency medical aid, including first aid and resuscitation, in trauma, accident, poisoning, acute conditions and illnesses and other life-threatening situations in newborns, infants, children, adults, at labour and all other situations where no specialist physician is available in place and	clinics), problematic learning, presentation delivery, analysis of clinical cases and situations, brainstorming, telling, work in small group or pairs, open discussion, creative tasks, error analysis, theoretical modelling, video demonstration of operations, simulation of surgery, summer practice, internship practice; self-study, search for information and literature analysis, analysis of law; clinical case history writing.	
in the duties of the of Lithuanian Medicine Norm - Medical Doctor: Functions, Rights, Duties, Competence and Responsibilities MN7: 1995.		
Students will be able to apply basic principles of nursing.		
Students will know, comply with and apply national and European legislation governing the operation of healthcare, personal care facilities and the services they provide. In the prescribed order will be able to complete medical records on results of patient examining, treatment and preventive work, to report identified or suspected acute infectious disease, food poisoning and occupational poisoning, to report violent injury to police, to prescribe medicines, death certificates and other medical records.		
Students will be able to address public health issues, identify disease prevention issues and common risk factors for disease prevention, promote occupational disease prevention, promote healthy lifestyles, disease prevention and health promotion and education, and advise individuals on healthy lifestyles and diets using health education methodologies, will be able to perform preventive vaccinations and organize the prevention of communicable diseases.		

Topics Medical Studies Program	Contact work hours							Time and tasks of self-study	
	Lectures	Consultations	Seminars	Practice	Laboratory work	Practical training	Total contact hours	Self-study	Tasks
<b>HEALTH POLICY, PUBLIC HEALTH, ETHICS AND THE BASIS OF COMMUNICATION</b> Public health and mental health policy, systems of health care, indicators of health assessment and prevention of disorders; impact of water, nutrition, lifestyle, environment, noise, vibration, harmful chemicals and dust, occupational factors, psychological risk factors on individual and public health. Principles of health care organization, social medicine, health law, bioethics, evidence-based medicine, biomedical research, economic and legal aspects of health care services, principles of									Studies of the subject literature according to the topic. Analysis of questions of Medicine program final exam database; student self-study.

<p>professional contact, nonverbal communication and teamwork.</p>									
<p><b>BASICS OF CLINICAL PHARMACOLOGY</b>  Principles of pharmacology, major classes of medicines, therapeutic drug monitoring, medicines interactions, adverse drug reactions, principles of pharmacovigilance, rational use of medicines, clinical pharmacology of drug use in patients with renal and hepatic impairment, critically ill patients, paediatric and geriatric individuals, pregnancy and lactation, evaluation of clinical trials, principles of medicine prescribing.</p>									
<p><b>THE CIRCULATORY (CARDIOVASCULAR SYSTEM) AND DISEASES</b>  The anatomy, physiology, pathology and clinical examination of the circulatory system, principles and assessment of arterial blood pressure measurement and electrocardiography. Evaluation and interpretation of laboratory and instrumental examination of cardiovascular system diseases.  Acute and chronic cardiovascular failure (sudden death, cardiogenic shock, fainting, collapse, pulmonary oedema), atherosclerosis, chest pain, coronary artery disease (angina pectoris, acute coronary syndromes, myocardial infarction, post infarction cardiosclerosis), aortic diseases, rhythm and conduction disorders (tachyarrhythmias, paroxysmal rhythm of the heart, bradyarrhythmia, Morgagni-Adams-Stokes attack, etc.), arterial hypertension (primary and secondary, hypertensive crises), dyslipidaemia, cardiomyopathies, myocarditis, pericardial disease, acute pulmonary embolism, pulmonary hypertension, chronic pulmonary heart, valvular heart disease, infective endocarditis, congenital heart disease, congenital heart disease in new-borns and infants; peripheral and visceral artery occlusive disease, limb artery embolism; diabetic foot, congenital vascular malformations, chronic venous disease, deep vein thrombosis, lymphatic system pathology, cardiac arrhythmias and other conditions requiring long-term antithrombotic treatment: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options,</p>									

<p>differential diagnosis, emergency medical care, treatment principles, long-term observation, indications for hospitalization, oxygen therapy, surgical treatment and heart transplantation, principles of surgical treatment, methods of preventing cardiovascular diseases.</p> <p>Principles of first aid (cardiopulmonary resuscitation, artificial respiration, defibrillation and medications) in cases of ventricular fibrillation, cardiac asystole and electromechanical cardiac dissociation.</p>									
<p><b>RESPIRATORY SYSTEM AND DISEASES</b></p> <p>Respiratory system anatomy, physiology, pathology and clinical examination. Principles and assessment of lung functions testing, non-apparatus oxygen therapy, pleural puncture (thoracocentesis), sputum examination, radiological methods of lungs examination. Evaluation and interpretation of other laboratory and instrumental examination of respiratory diseases. Clinical pulmonary syndromes, differential diagnosis of cough, bronchial obstruction and dyspnoea, smoking injury and treatment methods.</p> <p>Upper respiratory tract infection, acute and chronic bronchitis, chronic obstructive lung disease, acute pneumonia, bronchial asthma (bronchial asthma attack, asthmatic condition), dry and exudative pleurisy, bronchiectasis, interstitial lung diseases, pulmonary embolism, lung cancer, tuberculosis, bleeding from lungs, haemorrhage, sleep apnoea syndrome, acute respiratory distress syndrome, pulmonary hypertension, pneumoconiosis, fungal and parasitic lung disease, drug-induced lung injury, pulmonary damage in systemic collagen vascular diseases, heart, digestive tract and haematological disorders, non-tuberculous mycobacterial lung disease, acute and chronic respiratory failure, chest traumas, pneumothorax, nonspecific pleuropulmonary suppurations, tumours of respiratory system and pleura, oesophageal diseases, iatrogenic injuries and blunt trauma of the airway, mediastinal diseases and tumours, diaphragm injuries and diseases: epidemiology, major risk</p>									

<p>factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, treatment principles, long-term observation, indications for hospitalization, oxygen therapy, surgical treatment, principles of surgical treatment methods of preventing respiratory diseases. Foreign bodies in the trachea, indications and complications of tracheostomy.</p>									
<p><b>DIGESTIVE SYSTEM AND DISEASES</b></p> <p>Digestive system anatomy, physiology, pathology and clinical examination of abdomen. Principles and evaluation of gastric lavage and gastric and duodenal contents, faecal occult blood test, ascites puncture, digital rectal and speculum examination. Evaluation and interpretation of laboratory and instrumental examination of digestive system diseases. Differential diagnosis of abdominal pain.</p> <p>Benign diseases of the oesophagus, stomach and duodenum (reflux oesophagitis, acute and chronic gastritis, ulcer) and tumours, eating disorders, gallbladder and ductal diseases (gallstones, cholecystitis, syndrome), pancreas, liver disease, acute and chronic liver failure; small bowel diseases, appendicitis, colonic diseases, intestinal obstruction, irritable bowel syndrome, constipation, rectal and anal canal diseases, abdominal hernias, peritonitis, abdominal trauma, gastrointestinal bleeding: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, principles of treatment, long-term follow-up, indications for hospitalization and surgery, principles of surgical treatment, metabolic and endocrine surgery and abdominal organ transplantation, principles of dietary treatment of patients with gastrointestinal diseases, and methods of preventing digestive diseases.</p>									

<p><b>CONNECTIVE TISSUE AND MUSCULOSKELETAL SYSTEM AND DISEASES</b></p> <p>Anatomy, physiology, pathology and clinical examination of connective tissue and musculoskeletal system. Geriatric examination of the elderly. Evaluation and interpretation of joint function, radiographs of joints and bones, other laboratory and instrumental examination of connective tissue and musculoskeletal disorders.</p> <p>Rheumatoid arthritis, undifferentiated arthritis, dermatomyositis, myopathies, rheumatoid arthritis, Sjogren's syndrome, rheumatic fever, arthritis associated with infections, microcrystalline arthritis (gout, chondrocalcinosis), systemic lupus erythematosus, antiphospholipid syndrome, vasculitis, systemic sclerosis, ankylosing spondylitis, spondylarthritis, degenerative joint and spinal disorders (coxarthrosis, gonarthrosis, osteochondrosis), fibromyalgia, osteoporosis, periarthropathies of hand, elbow, shoulder, hip, knee and foot, (tendovaginitis, bursitis, ligamentitis), gait and balance disorders, wounds, bone fractures, dislocations, joint and spinal injuries, polytrauma, tunnel syndromes, nerve trauma and foot nerve pathology, bone and cartilage tumours: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, treatment principles, indications for hospitalization and surgery, principles of surgery and methods of preventing connective tissue and musculoskeletal diseases.</p> <p>Principles of bleeding control, application of soft and plaster bandages, immobilization of hand and foot bone fractures, treatment of uncomplicated wounds, indications for endoprosthesis and skin plastics and their application.</p>									
<p><b>GENITOURINARY SYSTEM AND DISEASES</b></p> <p>Anatomy, physiology, pathology and clinical examination of the urogenital system and renal function. Evaluation and interpretation of laboratory and instrumental examination of diseases of the urogenital system. Principles of</p>									

<p>bladder catheterization and kidney biopsy.</p> <p>Acute renal injury, glomerulopathies, nephropathies, other renal diseases, urogenital tract infection (cystitis, acute and chronic pyelonephritis, urosepsis), urinary stone disease, renal colic, obstructive uropathy, dysuria, female and male urinary incontinence, acute and chronic renal failure, chronic kidney disease, prostate, kidney, bladder and testicular cancer, urological trauma: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, treatment principles, long- term monitoring, indications hospitalization, renal replacement therapy (haemodialysis, peritoneal dialysis), surgical treatment, kidney transplantation, and application principles, methods of preventing urogenital diseases.</p>									
<p><b>ENDOCRINE SYSTEM AND DISEASES</b></p> <p>Anatomy, physiology, pathology and clinical examination of the endocrine system. Evaluation and interpretation of laboratory and instrumental examination of endocrine disorders.</p> <p>Hormone secretion disorders of anterior pituitary, thyroid, parathyroid and adrenal glands, thyrotoxic crisis, myxedemic coma, adrenal hyperplasia, acute and chronic adrenal insufficiency; glucose metabolism, diabetes mellitus, diabetic coma, hypoglycaemia, and chronic diabetic complications, gonadal hormones and their role in reproduction, sex chromosome diseases (Aneupoids – Turner and Klinefelter syndromes): epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, treatment principles, long- term follow-up, indications for hospitalization and surgery, methods of preventing endocrine diseases.</p>									
<p><b>BLOOD AND HAEMOPOIETIC SYSTEM AND DISEASES</b></p> <p>Anatomy, physiology, pathology and clinical examination of the blood and hematopoietic system. Evaluation and interpretation of laboratory and instrumental examination blood and haematopoietic diseases.</p>									

<p>Iron, vitamin B12 and folic acid deficiency anaemia, lymphatic system pathology, lymphoproliferative diseases, acute leukaemia, chronic leukemia, paraproteinemia, thrombosis and bleeding syndrome, haemophilia, disseminated intravascular coagulation: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnostics, emergency medical care, treatment principles, long- term follow-up, indications for hospitalization, surgery and bone marrow transplantation, principles of treatment and clinical transfusion, methods of preventing blood and hematopoietic diseases.</p>									
<p><b>SKIN AND ITS ADDITIVES, DERMATOVENEROLOGICAL AND ALLERGIC DISEASES</b>  Anatomy, physiology, pathology and clinical examination of the skin, its additives and the immune system. Evaluation and interpretation of microbiological, laboratory and instrumental examination of dermatovenerological and allergic diseases. Bacterial and parasitic skin diseases, viral skin and mucous membrane diseases, fungal infections, psoriasis, dermatitis, photodermatoses, acne and acne related diseases, rosacea, sexually transmitted infections, AIDS and skin diseases, autoimmune connective tissue diseases, bullous skin diseases, precancerous skin diseases and benign skin tumours, malignant skin tumours, allergic rhinitis and allergic conjunctivitis, allergic bronchial asthma, acute allergic reactions (Queens oedema, anaphylactic shock), urticaria and angioedema, allergic dermatitis, food allergy, drug hypersensitivity, anaphylaxis, toxic epidermal necrosis, immunodeficiency: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, treatment principles, long-term follow-up, indications for hospitalization and methods of preventing of dermatovenerological and allergic diseases.</p>									
<p><b>NERVOUS SYSTEM AND DISEASES</b></p>									

<p>Anatomy, physiology, pathology and clinical examination of the nervous system. Evaluation and interpretation of laboratory, functional and instrumental examination of the nervous system diseases. Differential diagnosis of unconsciousness, seizures, lumbar and abdominal pain. Disorders of sensation and somatic sensation, central and peripheral paralysis, pyramidal, extrapyramidal and coordination disorders, seizures, cranial nerves disorders, cerebral cortical dysfunction, disorders of autonomic nervous system, peripheral nervous system disorders, cerebrovascular diseases, infectious diseases of nervous system, headache, dementia and other cognitive disorders, epilepsy, disturbances of consciousness, demyelinating disorders of the central nervous system, neuromuscular disorders, diseases of motoneuron, craniocerebral trauma, brain tumours, cerebrovascular abnormalities, pathology of carotid and vertebral arteries, spinal injury, degenerative disorders of spine, oncological disorders of spine and spinal cord, disturbances of circulation of cerebrospinal fluid, neurosurgical disorders in children: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, treatment principles, long-term follow-up, indications for hospitalization surgical treatment and functional neurosurgery, principles of surgical treatment, methods of preventing of nervous system diseases.</p>									
<p><b>PRINCIPLES OF COMMUNICABLE DISEASE AND EPIDEMIOLOGY</b>  Indicators and research in epidemiology, epidemiology, prevention and management principles of communicable infectious diseases, basics of immunoprophylaxis, principles of organization of anti-epidemic measures in case of suspicion of extremely dangerous infection. Interpretation and evaluation of microbiological, laboratory and instrumental examination of communicable diseases. Degrees of dehydration. Acute infectious diseases (typhoid, paratyphoids, intestinal salmonellosis</p>									

<p>and other food toxic infections, botulism), viral diarrhoea, yersiniosis (intestinal yersiniosis and pseudotuberculosis), protozoal diseases, shigellosis, campylobacteriosis, helminthiasis, viral hepatitis, viral respiratory infections, diphtheria, streptococcal tonsillitis, mycoplasma infection, chlamydial pneumonia, pneumococcal infection, legionellosis, rickettsiosis, infection caused by Herpes family viruses, bacterial and viral meningitis, meningococcal meningitis, extremely dangerous infections (cholera, plague, yellow butterfly), sepsis, infectious-toxic shock, tick-borne diseases, traveller diseases, zoonoses, HIV infection, AIDS and opportunistic infections, human papillomavirus infection, polio, tetanus, rabies, rose, cellulitis, skin infections following animal bites: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, treatment principles, long-term follow- up, indications for hospitalization and methods of preventing communicable infectious diseases.</p>									
<p><b>MENTAL AND BEHAVIURAL DISORDERS</b></p> <p>General psychopathology, schizophrenia, eating disorders, inorganic sleep disorders, depression, bipolar affective disorder, organic and symptomatic psychiatric disorders, personality and behavioural disorders, somatoform and dissociative disorders, anxiety and stress disorders, psychoactive substance abuse, autism spectrum disorders, other developmental disorders, behavioural disorders in children and adolescents, hyperkinetic disorders, emotional disturbances in children and adolescents, tics, enuresis: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, treatment principles, long-term follow-up, indications for hospitalization and methods of mental and behavioural disorders.</p> <p>Violence against children, peculiarities of adult age-related mental disorders in childhood and adolescence, suicidal behaviour, basics of social psychiatry, biological methods of treatment,</p>									

<p>directions and basics of psychotherapy, principles of integrated child and family care.</p>									
<p><b>BASICS OF CLINICAL GENETICS</b>  Genetic counselling. Bioethical and legal issues in clinical genetics. Genealogy analysis. Rare diseases. Multiple Diseases. Elements of morphology: phenotypic evaluation of head, face, ears, eyes, nose, mouth, extremities. Databases used for differential diagnosis in clinical genetics. Chromosomal diseases (sex chromosome aneuploids, autosomal trisomies, microdeletion syndromes). Clinical syndromology. Syndromes associated with craniofacial contour, affected faces, proportionally short stature, bone and connective tissue pathology, overgrowth and postnatal onset obesity, premature aging, skin and mucosa. Monogenic diseases mainly affecting the central nervous system, respiratory system, cardiovascular system, hematopoietic system, urogenital, digestive and endocrine system. Inherited peripheral nervous system and muscle disorders. Hereditary metabolic diseases (phenylketonuria, tyrosinemia, type I, urea synthesis disorders, galactosemia). Disorders of energy metabolism. Mitochondriopathies. Disorders of fatty acid oxidation. Mucopolysaccharidoses. Prenatal diagnosis and genetic counselling. Preimplantation genetic diagnostics.</p>									
<p><b>CHILDREN DISEASES</b>  Stages and characteristics of the physical and mental development of healthy child, maturity and physiological development of the newborn; Paediatric anatomical and physiological peculiarities of different organ system, clinical examination of different age child. Care of a healthy and sick child, natural, formula, mixed and additional infant feeding, feeding of elder children, dentition and dental change; rickets, spasmophilia. Evaluation and interpretation of laboratory and instrumental examination in children, peculiarities of children's electrocardiogram. Immunoprophylaxis in children. Initial resuscitation of new-born and child. Transient neonatal conditions, common neonatal disorders: haemolytic, haemorrhagic, common</p>									

<p>embryopathy and fetopathy, prenatal infection and neonatal sepsis, perinatal hypoxia.</p> <p>Children congenital and acquired heart diseases, paediatric inflammatory heart diseases in children: myocarditis, infectious endocarditis, pericarditis, cardiomyopathies, acute heart failure, inherited arrhythmias, paroxysmal tachycardia.</p> <p>The most common respiratory system diseases in children: acute upper respiratory tract infections, acute bronchitis, pneumonia, upper and lower airway obstruction, acute respiratory failure, bronchial asthma, respiratory system abnormalities in neonates and children, foreign bodies of respiratory tract.</p> <p>The most common diseases and functional disorders of the gastrointestinal tract in children: diseases of children oesophagus and stomach, malabsorption syndrome and celiac disease, functional disorders of digestive tract and constipation. Common urinary tract disorders and urinary disorders in children: urinary tract infection, nephritic and nephrotic syndrome, acute kidney failure.</p> <p>Vasculitis in children, juvenile idiopathic arthritis and systemic connective tissue disease.</p> <p>Hemoblastoses and solid tumours, anaemias, thrombocytopenia, disorders of haemostasis, histiocytes and macrophages.</p> <p>Paediatric diabetes mellitus, diabetic, ketoacidosis and hypoglycaemia, paediatric obesity and type 2 diabetes, adrenal disease, acute adrenal disorders, congenital adrenogenital syndrome, disorders of growth and puberty.</p> <p>Children's seizures, epilepsy, non-epileptic seizures, children developmental disorders, cerebral palsy, congenital neuromuscular diseases.</p> <p>The most common allergic diseases in children: skin allergies, digestive allergies, allergic rhinitis and conjunctivitis, feeding of allergic child, toxic epidermal necrosis.</p> <p>Bacterial gastrointestinal infections (salmonellosis, shigellosis, escherichiosis, campylobacteriosis, yersiniosis, pseudotuberculosis), viral gastrointestinal infections. Viral infections: measles, rubella,</p>									
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<p>chickenpox, shingles, Herpes simplex infection, sudden exanthema, infectious mononucleosis, mumps, parvovirus infection. Bacterial infections: scarlet fever, pertussis, parapertussis, Haemophilus influenzae infection, meningococcal infection, streptococcal infection, diphtheria in children; helminthiasis.</p> <p>Urgent pediatric surgical diseases of abdominal organs: acute appendicitis, acquired and congenital bowel obstruction, trauma of abdominal and retroperitoneal organs, gastrointestinal foreign bodies of gastrointestinal tract. Benign tumours (hemangiomas, lymphangiomas, teratomas), and malignant tumours (neuroblastoma, hepatoblastoma, teratoblastoma).</p> <p>Purulent diseases of children: acute hematogenous osteomyelitis, dermal and subdermal infections, destructive pneumonia and its complications. Congenital malformations of the urinary and urogenital systems, urinary tract stone disease, nephroblastoma.</p> <p>The most common paediatric orthopaedic abnormalities, paediatric traumas and accidents: bone fractures, neurotrauma, burns, chilblains.</p> <p>Epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical treatment, principles of treatment, long-term follow-up, indications for hospitalization and surgery, principles of surgical treatment ways to prevent childhood and childhood illness</p> <p>Peculiarities of children's emergency conditions: acute unconsciousness, respiratory and circulatory failure, shock of various origins, critical conditions, anaphylaxis, fever and hyperthermia; peculiarities of specialized child resuscitation.</p> <p>Peculiarities of child homeostasis, and disorders, dehydration; principles of paediatric infusion therapy. Children's accidents: acute household poisoning by medicines and chemicals, choke, shocked infant's syndrome, drowning, heat injury, severe trauma.</p>									
<p><b>BASICS OF GENERAL SURGERY</b></p> <p>Principles of asepsis and antisepsis, disinfection and sterilisation, sutures, drains, probes, catheters, instruments, surgical infection, intoxication, abscess, cellulitis (phlegmon),</p>									

<p>necrotising fasciitis, closed body cavity infections, sepsis, septic shock, trauma and polytrauma, wounds, thermal injuries (burns, frostbite), external bleeding.</p> <p>Bleeding and principles of haemostasis in surgery, treatment of uncomplicated wounds, surgical wound dressing, post-operative patient care.</p>									
<p><b>THE EYE DISEASES</b></p> <p>Eye anatomy, physiology, pathology and clinical examination. Evaluation and interpretation of laboratory and instrumental examination. Strabismus, eyelid and conjunctival diseases, lacrimal disorders, cornea and uveal tract diseases, lens diseases, glaucoma, diseases of retina and optic nerve, eye traumas: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, principles of treatment, indications for hospitalization and surgery, methods of preventing eye diseases.</p>									
<p><b>EARS, NOSE AND THROAT DISEASES</b></p> <p>Ear, nose, throat anatomy, physiology, pathology and clinical examination. Evaluation and interpretation of laboratory and instrumental examination.</p> <p>Otitis, mastoiditis, tympanofibrosis, labyrinthitis, dizziness, intracranial otogenic complications, Meniere's disease, sensorineural hearing loss, otosclerosis, nose obstruction, rhinitis, nasal furuncle, haematoma and abscess of the nasal septum, deviated septum of the nose, epistaxis, sinusitis, intraorbital and intracranial complications, tumours of the nose, pharyngitis, paratonsillar, parapharyngeal and retropharyngeal abscesses, tonsillitis, laryngitis, stenosing laryngitis, voice diseases, benign and malignant larynx tumours: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, emergency medical care, principles of treatment, indications for hearing aids, hospitalization and surgical treatment, methods of preventing ear, nose and throat diseases.</p>									
<p><b>MALIGNANT TUMOURS</b></p> <p>Epidemiology of malignant tumours, major risk factors, aetiology, symptoms, progression, acute</p>									

<p>conditions, complications, lymphadenopathies, paraneoplastic syndromes, diagnostic options, evaluation and interpretation of laboratory and instrumental examination, differential diagnosis, principles of treatment and palliative care, indications for radiation, chemotherapy, surgical and other specific treatments, bone marrow transplantation, and prevention of oncological diseases.</p>									
<p><b>CRITICAL CONDITIONS, POISONING AND BASICS OF ANAESTHESIA</b></p> <p>Basic and advanced life support (external cardiac massage and artificial respiration, oral and nasopharyngeal cleansing, insertion of the oropharyngeal and nasopharyngeal tube, performing artificial respiration by hand-operated apparatus, taking an electrocardiogram, defibrillation, cardioversion, electrical heart pacing, related medication and post-heart-arrest syndrome, critical care pharmacotherapy, venous puncture and infusion therapy), resuscitation in emergencies, peculiarities in ventricular fibrillation, cardiac asystole and electromechanical cardiac dissociation, resuscitation in the hospital, main principles of mechanical ventilation of lungs, renal replacement, infusion and transfusion therapy neuroprotection, treatment of patients after resuscitation.</p> <p>Sudden death, acute lung injury, acute respiratory distress syndrome, acute respiratory failure, pulmonary oedema, shock (cardiogenic, bacterial, anaphylactic, hypovolemic, haemorrhagic and traumatic), sepsis and organ dysfunction, gastrointestinal failure, intraabdominal hypertension, acute renal failure, nosocomial infection, coma; seizures; stroke, severe head trauma, polytrauma, choking, drowning, acute and chronic pain, hyperthermia, dehydration, disseminating intravascular coagulation, injuries, accidents: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, principles of treatment, indications for treatment in intensive care unit, ethical questions in intensive care, end-of-life decisions.</p>									

<p>Poisoning by medicines, psychoactive (narcotic) substances, barbiturates, organic substances, poisonous gases, carbon monoxide, methaemoglobin creating substances, arsenic and metal compounds, biological poisons, insecticides, pesticides, methyl and ethyl alcohol, acids and alkalis, food and first aid when poisoning (non-specific detoxification measures, elimination of resorbed poisons, promotion of metabolism in the body, antidote therapy), forms of prevention measures and information management.</p> <p>Types, principles and complications of anaesthesia, principles of infusion and transfusion therapy, pharmacotherapy of critical illness, basics of homeostasis correction, electrolyte disbalance, metabolic control, acid-base balance disorders, pain physiology and pharmacology; Enteral and parenteral nutrition: evaluating the deterioration of and individual needs for nutrition, setting the nutrition-plan, and its specifics in different critical states of patients.</p>								
<p><b>PHYSIOLOGY AND PATHOLOGY OF PREGNANCY</b></p> <p>Physiology of pregnancy, multiple pregnancy, adolescent pregnancy, development of foetus, physiology of labour, antenatal assessment of foetal wellbeing and foetal wellbeing assessment in labour, evaluation of new-born health, physiology of puerperium, peculiarities of breastfeeding. Chronic illnesses and medication use during pregnancy planning, pregnancy and feeding. Prenatal diagnosis of hereditary diseases and congenital defects, evaluation and interpretation of laboratory and instrumental examination of the pregnant women and foetus. Antenatal care in outpatient clinic, peculiarities of care of labour in term, preterm and postterm labour, care and treatment of healthy and preterm new-born, transitive new-born conditions. Principles of normal labour mechanisms, first neonatal toilet, maternal care during the placental period, labour induction and stimulation, obstetrical operations.</p> <p>Hypertension disorders in pregnancy, preeclampsia, eclampsia, HELLP syndrome, haemorrhage in pregnancy, labour and postpartum, perinatal</p>								

<p>infection, multiple pregnancy: complications in pregnancy and labour, labour distortion, malpresentations and malpositions of foetus, Rh isoimmunization: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, principles of treatment, indications for hospitalization, indications for surgery.</p>									
<p><b>GYNECOLOGICAL DISEASES</b>  Age related anatomy, physiology, pathology, and clinical examination of the women reproductive system. Peculiarities of normal and pathological puberty, perimenopausal and postmenopausal period. Family planning and infertility issues. Evaluation and interpretation of laboratory and instrumental examinations important to diagnose gynaecological disease. Gynaecologic problems in girls, menstrual cycle disorders, benign and malignant lesions of external genitalia, benign and malignant cervical lesions, polycystic ovary syndrome, hyperandrogenaemia, ovarian benign and malignant tumours, endometrium hyperplasia, polyps and cancer, uterine leiomyomas, endometriosis, chronic pelvic pain, gynaecological diseases and disorders of urinating, urgent situations in gynaecology: epidemiology, major risk factors, aetiology, symptoms, complications, diagnostic options, differential diagnosis, emergency medical care, first aid in uterine bleeding, principles of treatment, indications for hospitalization and surgical treatment, principles of surgical treatment and methods of preventing gynaecological diseases.</p>									
<p><b>BASICS OF NURSING</b>  Nursing classification, types, infection control in health care institutions and asepsis, work safety and hygiene, hands and medical devices' hygiene, safe environment. Patient's personal hygiene, environment and mobility issues, eating and drinking, body temperature control issues and nursing, hyperthermia, hypothermia, urinary and defecation issues and nursing, drug administration.</p>									
<p><b>BASICS TO PHYSICAL MEDICINE AND REHABILITATION</b></p>									

Principles of rehabilitation, physical therapy and occupational therapy, principles of social, psychological and professional rehabilitation, teamwork in rehabilitation, biopsychosocial functions, physical and functional capacity, health promoting physical activity, determination of disability and working capacity, speech and swallowing disorders and their correction.									
<b>BASICS OF FORENSIC MEDICINE</b> Principles of thanatology and forensic psychiatry; deontology and ethics of forensic medicine; influence of external factors to the human body, hypothermia, frostbite, overheating, burn, asphyxia and its types, drowning, sexual crimes, gunshot wounds, stab-wounds, cut-wounds, bone fracture mechanisms, injuries caused by physical and chemical factors, effects of electricity on human body, injuries caused by mechanical factors, health impairment level evaluation.									
<b>Total:</b>			5				5	130	

Assessment strategy	Weight	Assessment period	Assessment criteria
Examination in the computed classroom	100%	After completing of XII semester	<p><b>Knowledge of course is evaluated by 10 points system</b></p> <p>10 point – excellent knowledge and skills, synthesis and understanding, knowledge application level, the student mastered the studied material well, is able to analyse and summarize, accurately uses the concepts and terms, detailed and correct answers to all questions, approximate percentage of required knowledge 93–100 % of questions answered correctly.</p> <p>9 point – strong, good knowledge and abilities, approximate percentage of required knowledge 83,7–92,9 % of questions answered correctly.</p> <p>8 point – better than average knowledge and abilities, understanding and knowledge application level, the student ably mastered the studied material, is able to organize and summarize, and uses correctly the concepts and terms, might be some minor isolated non-essential errors, approximate percentage of required knowledge 75,3–83,6 % of questions answered correctly.</p> <p>7 point – average knowledge and abilities, understanding and knowledge application level, nonessential mistakes, no more than two significant error responses, approximate percentage</p>

			<p>of required knowledge 66,9–75,2 % of questions answered correctly.</p> <p>6 point – knowledge and abilities worse than average, approximate percentage of required knowledge 58,5–66,8 % of questions answered correctly.</p> <p>5 point – knowledge and abilities, adequate to minimal requirements, understanding and knowledge application level, lots of errors, approximate percentage of required knowledge 50,1–58,4 % of questions answered correctly.</p> <p>4 point and less – minimal requirements not fulfilled, student’s knowledge is insufficient, terms and concepts used incorrectly.</p> <p>4 point – approximate percentage of required knowledge 40–50,0 % of questions answered correctly.</p> <p>3 point – approximate percentage of required knowledge 30–39,9 % of questions answered correctly.</p> <p>2 point – approximate percentage of required knowledge 20–29,9 % of questions answered correctly.</p> <p>1 point – approximate percentage of required knowledge &lt; 20 % of questions answered correctly.</p>
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Author	Year of publication	Title	No of periodical or vol. of publication	Publication place and publisher or Internet link
<b>Required reading</b>				
R. S. Ašoklis	2018	Eye diseases	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
V. Paliulytė	2018	Obstetrics	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
AC	2019	Diagnostics and Treatment Methods in Obstetrics and Neonatology		<a href="http://sam.lrv.lt/lt/veiklos-sritys/programos-ir-projektai/sveicarijos-paramos-programa/akuserijos-ir-neonatologijos-diagnostikos-ir-gydymo-metodikos/akuserijos-diagnostikos-ir-gydymo-metodikos">sam.lrv.lt/lt/veiklos-sritys/programos-ir-projektai/sveicarijos-paramos-programa/akuserijos-ir-neonatologijos-diagnostikos-ir-gydymo-metodikos/akuserijos-diagnostikos-ir-gydymo-metodikos</a>
Magowan BA	2019	Clinical Obstetrics and Gynaecology	4th edition	<a href="https://www.clinicalkey.com#!/browse/book/3-s2.0-C2016003512X">https://www.clinicalkey.com#!/browse/book/3-s2.0-C2016003512X</a>
Smith RP	2017	Netter’s Obstetrics and Gynaecology	3th edition	<a href="https://www.clinicalkey.com#!/browse/book/3-s2.0-C20150058695">https://www.clinicalkey.com#!/browse/book/3-s2.0-C20150058695</a>
J. Šipylaitė	2018	Anaesthesiology and Reanimathology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
E. Lesinskas	2018	Ear, nose, throat diseases	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
S. Petraitiėnė	2018	General Paediatrics and Neonatology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
A. Gintautas	2018	Pharmacology		<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
G. Sadauskaite	2018	Gastroenterology and abdominal surgery	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>

Ž. Bumbulienė	2018	Gynaecology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
S. Glaveckaitė	2018	Cardiology and cardiovascular surgery	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
J. Gulbinovič	2018	Clinical pharmacology, drug approval and safety	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
B. Tumienė	2018	Clinical genetics	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
A. E. Tamošiūnas	2018	Clinical radiology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
J. Šipylaitė	2018	Critical Care Medicine, Transfusiology and Toxicology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
D. Karčiauskaitė	2018	Laboratory medicine	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
E. Gefenas	2018	Medical ethics	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
J. Dadonienė	2018	Research methods and biostatistics	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
L. Rimševičius	2018	Nephrology and Urology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
D. Jatužis	2018	Neurology and Neurosurgery	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
S. Lesinskienė	2018	Psychology, professional Communication and Psychosomatic Medicine	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
S. Lesinskienė	2018	Psychiatry, child and adolescent psychiatry, psychotherapy	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
E. Danila	2018	Pulmonology, phthisiology and thoracic surgery, clinical immunology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
I. Butrimienė	2018	Rheumatology, gerontology, endocrinology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
A. Beržanskytė	2018	Social medicine. Health Law and Economics	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
J. Stasiūnienė	2018	Forensic medicine	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
N. Porvaneckas	2018	Traumatology, orthopaedics, plastic and reconstructive surgery	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
L. Jančorienė	2018	Infectious diseases and epidemiology	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
R. Kemežys	2018	Children diseases, paediatric surgery	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
V. Šapoka	2018	Differential diagnosis of internal medicine, haematology and family medicine	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
V. Ožeraitienė	2018	Fundamentals of Internal Medicine and Nursing	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
M. Jakubauskienė	2018	Public health	-	<a href="https://is.vu.lt/pls/klevas/logon">https://is.vu.lt/pls/klevas/logon</a>
Ministry of health	2022	Dėl Lietuvos medicinos normos MN 7:2022 „Medicinos gydytojas“ patvirtinimo“ 2022 m. gegužės 9 d. Įsakymas Nr. V-930 [angl. – Order "On the approval of the Lithuanian medical norm "Medical doctor" MN 7:2022, adopted in 2022 May 9]	-	Available from: <a href="#">V-930 Dėl Lietuvos medicinos normos MN 7:2022 „Medicinos gydytojas“ patvirtinimo (etar.lt)</a>