

SYLLABUS

1. General information on the course

Full course name	Pediatrics
Full official name of a higher education institution	Sumy State University
Full name of a structural unit	Academic and Research Medical Institute. Кафедра педіатрії
Author(s)	Smiian Kateryna Oleksandrivna, Petrashenko Viktoriia Oleksandrivna
Cycle/higher education level	The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle
Semester	18 weeks across 8 semester
Workload	4 ECTS, 120 hours. For full-time course 86 hours are working hours with the lecturer (6 hours of lectures, 80 hours of seminars), 34 hours of the individual study.
Language(s)	English

2. Place in the study programme

Relation to curriculum	Compulsory course available for study programme "Medicine"
Prerequisites	Krok-1, Necessary knowledge of: Latin language and medical terminology, medical biology, medical chemistry, medical informatics, biological and bioorganic chemistry, human anatomy, physiology, histology, cytology and embryology, microbiology, virology and immunology, pathomorphology, pathophysiology, pharmacology, hygiene and ecology , propaedeutics of pediatrics, nursing practice
Additional requirements	There are no specific requirements
Restrictions	There are no specific restrictions

3. Aims of the course

The goal of the educational discipline is for students to achieve modern knowledge and professional skills in pediatrics based on knowledge of age-related anatomical and physiological features of the child's body, medical biology, normal anatomy, normal physiology, histology and embryology, biochemistry, microbiology and virology, pathomorphology, pathophysiology, pharmacology, and clinical and laboratory skills and instrumental examination of the child.

4. Contents

Module 1. Diseases of young children

Topic 1 Functional gastrointestinal disorders in young children

Definition, classification (according to Roman IV criteria), etiology, pathogenesis, clinic and diagnosis of cyclic vomiting syndrome. Etiology, pathogenesis, classification, clinic and diagnosis of functional dyspepsia in young children. Etiology, pathogenesis, clinic, diagnosis of colic and functional constipation in young children. Treatment of functional gastrointestinal disorders from the standpoint of evidence-based medicine. Prevention and prognosis.

Topic 2 Hypervitaminosis D. Spasmophilia.

Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment of rickets from the perspective of evidence-based medicine. Prevention of rickets. Etiology, pathogenesis, clinic, diagnosis, prevention of hypervitaminosis D, emergency care and prognosis. Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment of spasmophilia from the standpoint of evidence-based medicine. Prevention of spasmophilia.

Topic 3 Protein-energy deficiency

Definition, classification, clinical, treatment of protein-energy deficiency in children from the standpoint of evidence-based medicine. Prevention of hypotrophy.

Module 2. Respiratory diseases, allergic diseases in children.

Topic 4 Acute respiratory infections of the upper respiratory tract in children. Acute bronchitis in children

Etiology, pathogenesis, clinic, diagnosis, treatment of acute nasopharyngitis, acute pharyngitis, acute laryngopharyngitis, acute tracheitis in children from the perspective of evidence-based medicine. Clinic and emergency care for acute obstructive laryngitis (croup), hyperthermic syndrome and convulsions. Definition, etiology, pathogenesis, clinic, diagnosis, treatment of acute bronchitis, acute obstructive bronchitis, acute bronchiolitis and recurrent bronchitis in children from the standpoint of evidence-based medicine. Prevention of acute respiratory infections of the upper respiratory tract in children.

Topic 5 Pneumonia in children

Definition, etiology, pathogenesis, clinic, diagnosis of pneumonia. Treatment of pneumonia and emergency care for respiratory failure in children from the standpoint of evidence-based medicine. Prevention of pneumonia in children.

Topic 6 Bronchial asthma in children

Definition. Risk factors and pathophysiological mechanisms of the development of bronchial asthma. Classification, clinic, diagnosis, treatment of bronchial asthma in children from the standpoint of evidence-based medicine. Emergency care for status asthmaticus. Prevention of taprognosis.

Topic 7 Atopic dermatitis and allergic rhinitis in children. Urticaria in children. Quincke's edema

Definition, etiology, pathogenesis, clinic, diagnosis, treatment of urticaria in children from the perspective of evidence-based medicine. Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment and prevention of atopic dermatitis in children, prognosis. Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment and prophylaxis of allergic rhinitis in children, prognosis. Atopic march.

Module 3. Cardiorheumatology of childhood

Topic 8 Congenital heart defects in children

Etiology of the most common BBC in children. Classification of heart defects, hemodynamics and the most common CHD in children (defects of IVS, IAS defects, tetrad of Fallot, coarctation of the aorta, stenosis of the pulmonary artery, aortic stenosis, transposition of arterial vessels and ODA). Diagnosis of the most common CHD in children. Tactics and prognosis of the most common CHD in children. Conservative treatment. Indications for cardiosurgical treatment. Treatment of heart failure from the standpoint of evidence-based medicine. Secondary prevention of infectious endocarditis.

Topic 9 Inflammatory and non-inflammatory heart diseases in children

Acute rheumatic fever in children. Carditis in children: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment, prognosis. Cardiomyopathies in children: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment, prognosis. Disorders of heart rhythm and conduction in children: classification, causes, clinic, diagnosis, treatment, prognosis. Acute rheumatic fever in children: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, primary and secondary prevention, prognosis.

Topic 10 Juvenile rheumatoid arthritis and reactive arthropathies in children.

JRA: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment, rehabilitation, prognosis. Reactive arthropathies in children: definition, classification, etiology, pathogenesis, diagnosis, diagnosis, treatment from the standpoint of evidence-based medicine, prognosis.

Module 4. Diseases of digestive organs in children

Topic 11 Functional diseases of intestines and biliary system in children.

Definition, etiology, pathogenesis, clinic, diagnosis, treatment of irritable bowel syndrome, functional constipation, prognosis. Clinic, diagnosis, treatment from the standpoint of evidence-based medicine and prevention of gallbladder and sphincter of Oddi dysfunction.

Topic 12 Organic diseases of the intestines and biliary system in children.

Definition, etiology, pathogenesis, clinic, diagnosis, treatment of non-specific ulcerative colitis, Crohn's disease from the perspective of evidence-based medicine. Clinic, diagnosis, treatment from the standpoint of evidence-based medicine and prevention of organic diseases of the biliary system.

Topic 13 Functional and organic diseases of the esophagus and stomach in children.

Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention of functional dyspepsia, abdominal pain, gastroesophageal reflux, duodenogastric reflux, organic diseases of the esophagus and stomach in older children.

Module 5. Diseases of the urinary system in children

<p>Topic 14 Infections of the urinary system in children. Chronic kidney disease.</p> <p>Definition, classification of urinary system infections in children, differential diagnosis of lower and upper urinary tract infections. Etiology, pathogenesis, clinic, diagnosis, treatment, prevention and prognosis of cystitis in children. Definition, etiology, pathogenesis, classification, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention and prognosis of pyelonephritis in children.</p>
<p>Topic 15 Glomerulonephritis in children. Chronic kidney failure in children</p> <p>Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention and prognosis of glomerulonephritis in children. Chronic kidney failure: risk factors, etiology, pathogenesis, stages of the disease, clinic, diagnosis, treatment, prevention, prognosis.</p>
<p>Topic 16 Protection of case history</p> <p>Educational case history, based on clinical curation of patients with registration of examination data and additional research methods, with the aim of establishing and substantiating the diagnosis and prescribing a treatment regimen.</p>
<p>Topic 17 Performance of test tasks</p> <p>Testing</p>
<p>Topic 18 Performance of practical skills and manipulations</p> <p>Carrying out a list of practical skills and manipulations</p>
<p>Topic 19 Practically oriented exam</p> <p>Conducting the exam in accordance with the regulations</p>

5. Intended learning outcomes of the course

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

LO1	To acquire the skills of interviewing and objective examination of children of different age groups.
LO2	To justify and apply various methods of laboratory and instrumental research to understand the manifestations of the disease in childhood. Be able to interpret the results of examination of children.
LO3	Formulate a clinical diagnosis based on the evaluation of the results of laboratory and instrumental research methods.
LO4	Be able to determine the necessary mode of study, work and rest of healthy children and in the treatment of diseases.
LO5	Determine the nature of children's nutrition during the treatment of diseases.
LO6	To determine the principles and nature of treatment of childhood diseases.
LO7	To carry out in practice the differential diagnosis of the main syndromes that occur in the clinic of emergency conditions in children.
LO8	Be able to determine the tactics of providing emergency medical care to children.

LO9	To learn the main classes of pharmacological drugs used in pediatric practice, to apply the relevant clinical and pharmacological principles for the management of children's patients, to calculate doses of drugs for children. Be able to provide emergency medical assistance to children.
LO10	To be able to carry out sanitary-hygienic and preventive measures for the development of childhood diseases.
LO11	To be able to perform medical manipulations in pediatric practice
LO12	Determine the tactics, volume and nature of providing emergency medical care to children.
LO13	Perform manipulations of providing emergency medical care to children
LO14	Be able to work with professional literature, analyze and use the information received.
LO15	Assess the impact of the environment on children's health.
LO16	Carry out differential diagnosis of childhood diseases, determine the main clinical syndrome and justify the severity of the disease

6. Role of the course in the achievement of programme learning outcomes

Programme learning outcomes achieved by the course.

For 222 Medicine:

PO1	Identify leading clinical symptoms and syndromes; according to standard methods, using the previous data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish the most likely nosological or syndromic preliminary clinical diagnosis of the disease.
PO2	Collect information about the patient's general condition, evaluate the patient's psychomotor and physical development, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis
PO3	Assign and analyze additional (mandatory and optional) examination methods (laboratory, X-ray, functional and/or instrumental), patients with diseases of organs and systems of the body for differential diagnosis of diseases
PO4	Establish the final clinical diagnosis by making a reasoned decision and logical analysis of the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis), observing the relevant ethical and legal norms, under the control of the head physician in the conditions of a medical institution.
PO5	To determine the main clinical syndrome or what causes the severity of the victim's condition by making a reasoned decision and assessing the person's condition under any circumstances (at home, on the street, in a health care facility, its unit), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.

PO6	Determine the nature and principles of treatment (conservative, operative) of patients with diseases in the conditions of a health care institution, at the patient's home and at the stages of medical evacuation, including in field conditions, on the basis of a previous clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes based on the principles of evidence-based medicine, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the supervising physician in the conditions of a medical institution.
PO7	Determine the necessary regime of work and rest during the treatment of patients with diseases in the conditions of a health care institution, at the patient's home and at the stages of medical evacuation, including in the field, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
PO8	Determine the necessary diet during the treatment of patients with diseases in the conditions of a health care institution, at the patient's home and at the stages of medical evacuation, including in field conditions on the basis of a preliminary clinical diagnosis, observing relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
PO11	Determine the tactics of providing emergency medical care, under any circumstances, in compliance with relevant ethical and legal norms, by making a reasoned decision, based on the main clinical syndrome (severity of the condition) of the diagnosis of an emergency in a limited time using standard schemes based on principles evidence-based medicine.
PO12	Provide emergency medical care, under any circumstances, in compliance with the relevant ethical and legal norms, by making a reasoned decision, based on the main clinical syndrome (severity of the condition) of the diagnosis of an emergency in a limited time, according to the defined tactics, using standard schemes based on on the basis of evidence-based medicine.
PO14	Perform medical manipulations in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.
PO15	Perform manipulations of providing emergency medical aid in limited time, using standard schemes, under any circumstances based on the diagnosis of an emergency.
PO16	Plan and implement a system of sanitary-hygienic and preventive measures for the occurrence and spread of diseases among the population
PO18	Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information. Apply modern digital technologies, specialized software, and statistical data analysis methods to solve complex healthcare problems.
PO19	Assess the impact of the environment on the health of the population

7. Soft Skills

SS1	Ability to abstract thinking, analysis and synthesis.
SS2	Ability to learn, master modern knowledge and apply it in practical situations
SS3	Knowledge and understanding of the subject area and understanding of professional activity.
SS4	Ability to adapt and act in a new situation.
SS5	Ability to make informed decisions; work in a team; interpersonal skills.
SS6	Ability to use information and communication technologies.

8. Teaching and learning activities

Topic 1. Functional gastrointestinal disorders in young children
pr.tr.1 "Functional gastrointestinal disorders in young children" (full-time course) Definition, classification (according to the Roman criteria IV), etiology, pathogenesis, clinic, diagnosis.
pr.tr.2 "Treatment of functional gastrointestinal disorders in young children" (full-time course) Treatment from the standpoint of evidence-based medicine and prevention of functional gastrointestinal disorders. The study of this topic involves theoretical work in the classroom, in the absence of quarantine restrictions, work at the patient's bedside. Using virtual simulation (watching films) with further discussion.
Topic 2. Hypervitaminosis D. Spasmophilia.
lect.1 "Modern views on rickets: features of metabolic disorders, classification, clinic, diagnosis. Principles of treatment and prevention." (full-time course) Modern views on rickets: features of metabolic disorders, classification, clinic, diagnosis. Principles of treatment and prevention.
pr.tr.3 "Rickets" (full-time course) Definition, classification, etiology, pathogenesis, clinic, diagnosis and treatment of rickets. The study of this topic involves theoretical work in the classroom, familiarization with the methods of conducting and interpreting the data obtained from radiological and ultrasound examination of the chest organs in specialized departments of the medical institution (according to the cooperation agreement between a medical institution and a university). Drawing up a treatment plan for the patient.
pr.tr.4 "Hypervitaminosis D. Spasmophilia" (full-time course) Etiology, pathogenesis, clinic, diagnosis, prevention of hypervitaminosis D, emergency care from the standpoint of evidence-based medicine and prognosis. Spasmophilia. Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine. The study of this topic involves theoretical work in the classroom, in the simulation center (practicing the skills of detecting latent spasmophilia), the use of virtual simulation (watching films on the testing methods of Khvostek, Erb, Trousseau and the clinic for seizures in spasmophilia) with further discussion.
Topic 3. Protein-energy deficiency

pr.tr.5 "Protein-energy deficiency in children" (full-time course)

Protein-energy deficiency in children: etiopathogenesis, clinic, diagnosis. The study of this topic involves theoretical work in the classroom, solving clinical cases, work in the simulation center (working with centile tables, measuring the thickness of the skin-fatty fold with a caliper or caliper), the use of virtual simulation (watching films on the methodology of instrumental and functional examination methods) with further discussion . In the absence of quarantine restrictions, work in the departments of the medical institution (according to the cooperation agreement between the medical institution and the university).

pr.tr.6 "Treatment of protein-energy deficiency in children." (full-time course)

Treatment from the standpoint of evidence-based medicine and prevention of protein-energy deficiency in children. The study of this topic involves theoretical work in the classroom, solving clinical cases, work in the simulation center (working with centile tables, measuring the thickness of the skin-fat fold with a caliper or caliper), the use of virtual simulation (watching films on the methodology of conducting instrumental and functional examination methods) with further discussion . In the absence of quarantine restrictions, work in the departments of the medical institution (according to the cooperation agreement between the medical institution and the university).

Topic 4. Acute respiratory infections of the upper respiratory tract in children. Acute bronchitis in children

pr.tr.7 "Acute respiratory infections of the upper respiratory tract in children." (full-time course)

Etiology, pathogenesis, clinic, diagnosis of acute respiratory infections of the upper respiratory tract in children. The study of this topic involves theoretical work in the classroom. Implementation of group cases. If possible, work at the patient's bedside in specialized departments of the medical institution (according to the cooperation agreement between the medical institution and the university).

pr.tr.8 "Treatment of acute respiratory infections of the upper respiratory tract in children." (full-time course)

Treatment from the standpoint of evidence-based medicine and prevention of acute respiratory infections of the upper respiratory tract in children. The study of this topic involves theoretical work in the classroom. Work at the patient's bedside. in specialized medical departments, drawing up a treatment plan for a sick institution (according to the cooperation agreement between the medical institution and the university).

pr.tr.9 "Acute bronchitis in children." (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis of acute bronchitis. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (viewing films on the specified pathology) with further discussion. In addition, the study of this topic involves the analysis of clinical cases, mastering the practical skills of palpation, percussion and auscultation at the patient's bedside in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Interpretation of the results of laboratory and instrumental examination methods.

pr.tr.10 "Treatment and prevention of acute bronchitis." (full-time course)

Treatment of acute bronchitis from the standpoint of evidence-based medicine and prevention of acute bronchitis. The study of this topic involves theoretical work in the classroom. In addition, the study of this topic involves analyzing clinical cases, mastering the practical skills of palpation, percussion and auscultation at the patient's bedside in specialized departments of the medical institution (according to the cooperation agreement between the medical institution and the university). Drawing up a treatment plan.

Topic 5. Pneumonia in children

lect.2 "Pneumonia in children." (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis of pneumonia. Teaching is conducted in the form of multimedia lectures (in case of quarantine - in online mode).

pr.tr.11 "Pneumonia in children." (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis of pneumonia. The study of this topic involves theoretical work in the classroom. In addition, when studying this topic, mastering practical skills of palpation, percussion and auscultation at the patient's bedside in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) are expected. Interpretation of the results of laboratory and instrumental examination methods.

pr.tr.12 "Complications of pneumonia." (full-time course)

Clinic, diagnosis of pneumonia complications in children. The study of this topic involves theoretical work in the classroom. In addition, when studying this topic, role-playing games are expected, in the absence of quarantine restrictions, work at the patient's bedside in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university).

pr.tr.13 "Treatment of pneumonia in children." (full-time course)

Treatment from the standpoint of evidence-based medicine and prevention of pneumonia in children. emergency care for respiratory failure in children. The study of this topic involves theoretical work in the classroom. In addition, when studying this topic, role-playing games are expected, in the absence of quarantine restrictions, work at the patient's bedside in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Drawing up a treatment plan for the patient.

pr.tr.14 "Treatment of complications of pneumonia." (full-time course)

Treatment from the standpoint of evidence-based medicine and prevention of complications of pneumonia in children. Emergency care for complications of pneumonia in children. The study of this topic involves theoretical work in the classroom. In addition, when studying this topic, role-playing games are expected, in the absence of quarantine restrictions, work at the patient's bedside in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Drawing up a treatment plan for the patient.

Topic 6. Bronchial asthma in children

pr.tr.15 "Bronchial asthma in children." (full-time course)

Bronchial asthma in children. Definition. Risk factors and pathophysiological mechanisms of the development of bronchial asthma. Classification, clinic, diagnosis of bronchial asthma in children, prognosis. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (watching films with methods of functional and instrumental research of the respiratory system (breath tests, chest x-ray, ultrasound, capnography, scintigraphy, spirometry, spirometry, peak flowmetry)) with further discussion. In addition, the study of this system involves group cases, work in a simulation center for performing breathing tests, peak flowmetry. Interpretation of the data obtained from the study of the function of external breathing (spirometry, peak flowmetry), X-ray and ultrasound examination of the chest organs in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university).

pr.tr.16 "Treatment of bronchial asthma in children." (full-time course)

Treatment from the standpoint of evidence-based medicine and prevention of bronchial asthma in children, prognosis. Emergency care for status asthmaticus. The study of this topic involves theoretical work in the classroom. Work in a specialized department of a medical institution (according to the agreement on cooperation between the medical institution and the university), drawing up a treatment plan for the main disease and providing emergency care.

Topic 7. Atopic dermatitis and allergic rhinitis in children. Urticaria in children. Quincke's edema

pr.tr.17 "Atopic dermatitis and allergic rhinitis in children." (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis and treatment of atopic dermatitis, allergic rhinitis. Atopic march. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (watching films on the methods of conducting skin tests) with further discussion. In addition, when studying this topic, it is expected to work at the patient's bedside in specialized departments of the medical institution (according to the cooperation agreement between the medical institution and the university). Interpretation of the results of laboratory and instrumental examination methods. Drawing up a treatment plan.

pr.tr.18 "Urticaria. Quincke's edema in children" (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention of angioedema in children. The study of this topic involves theoretical work in the classroom. In addition, studying this topic involves working at the patient's bedside in specialized departments of a medical institution (according to the agreement on cooperation between the medical institution and the university). Interpretation of the results of laboratory and instrumental methods of examination, drawing up a treatment plan. Practicing emergency care skills in a simulation center.

Topic 8. Congenital heart defects in children

pr.tr.19 "The most common congenital heart defects in white children." (full-time course)

Etiology of the most common CHD of the white type in children. Classification of heart defects, hemodynamics in the most common CHD in children, diagnosis, doctor's tactics, conservative treatment. Indications for cardiosurgical treatment. Secondary prevention of infectious endocarditis. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (work on the 3-D virtual simulator) with further discussion. Work in the simulation center and specialized departments of the medical institution (conducting and interpreting the obtained data of ECG, functional tests, X-ray and ultrasound examination of the heart (according to the agreement on cooperation between the medical institution and the university))

pr.tr.20 "Congenital heart defects of the blue type in children." (full-time course)

Etiology of the most common CHD of the white type in children. Classification of heart defects, hemodynamics in the most common CHD in children, diagnosis, doctor's tactics, conservative treatment. Indications for cardiosurgical treatment. Secondary prevention of infectious endocarditis. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (work on the Z-D virtual simulator) with further discussion. Work in the simulation center and specialized departments of the medical institution (conducting and interpreting the obtained data of ECG, functional tests, X-ray and ultrasound examination of the heart (according to the agreement on cooperation between the medical institution and the university))

Topic 9. Inflammatory and non-inflammatory heart diseases in children

pr.tr.21 "Infectious carditis in children." (full-time course)

Carditis in children: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment. The study of this topic involves theoretical work in the classroom. Work in the simulation center and specialized departments of the medical institution (conducting and interpreting the obtained data of ECG, functional tests, X-ray and ultrasound examination of the heart (according to the agreement on cooperation between the medical institution and the university)) .

pr.tr.22 "Violation of heart rhythm and conduction in children." (full-time course)

Classification, causes, clinic, diagnosis, treatment, prognosis. The study of this topic involves theoretical work in the classroom, interpretation of ECG results. If possible, work at the patient's bedside in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Classification, causes, clinic, diagnosis, treatment, prognosis. The study of this topic involves theoretical work in the classroom, interpretation of ECG results. If possible, work at the patient's bedside in specialized departments of the medical institution (according to the cooperation agreement between the medical institution and the university).

pr.tr.23 "Acute rheumatic fever in children." (full-time course)

Acute rheumatic fever in children: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, primary and secondary prevention, prognosis Studying this topic involves theoretical work in the classroom. Work in the simulation center and specialized departments of the medical institution (conducting and interpreting the received data of ECG research, functional tests, X-ray and ultrasound examination of the heart (according to the cooperation agreement between the medical institution and the university)).

Topic 10. Juvenile rheumatoid arthritis and reactive arthropathies in children.

pr.tr.24 "Juvenile rheumatoid arthritis." (full-time course)

JURA: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, rehabilitation, prognosis. The study of this topic involves theoretical work in the classroom, role-playing games. In addition, when studying this system, cases are provided. Working at the patient's bedside, interpreting the data obtained from x-ray and ultrasound examination in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university), drawing up a treatment plan for the main disease.

pr.tr.25 "Reactive arthropathies in children." (full-time course)

Reactive arthropathies in children: definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prognosis. The study of this topic involves theoretical work in the classroom, role-playing games. In addition, when studying this system, cases are provided. Working at the patient's bedside, interpreting the data obtained from x-ray and ultrasound examination in specialized departments of the medical institution (according to the agreement on cooperation between the medical institution and the university), drawing up a treatment plan for the main disease.

Topic 11. Functional diseases of intestines and biliary system in children.

pr.tr.26 "Functional bowel diseases." (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis, treatment of irritable bowel syndrome from the perspective of evidence-based medicine, functional constipation, prognosis. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (viewing films demonstrating the clinical manifestations of the main diseases and syndromes) with further discussion. In addition, the study of this topic involves role-playing games, improving the mastery of palpation, percussion and auscultation skills while working at the patient's bedside in a specialized department (in the absence of quarantine restrictions), drawing up an examination plan with further interpretation of the observed results of ultrasound, FGDS and treatment.

pr.tr.27 "Functional diseases of the biliary system in children." (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis, treatment of biliary tract dyskinesia from the standpoint of evidence-based medicine. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (viewing films demonstrating the clinical manifestations of the main diseases and syndromes) with further discussion. In addition, the study of this topic involves role-playing games, improving the mastery of palpation, percussion and auscultation skills while working at the patient's bedside in a specialized department (in the absence of quarantine restrictions), drawing up an examination plan with further interpretation of the obtained results of ultrasound, FGDS and treatment.

Topic 12. Organic diseases of the intestines and biliary system in children.

pr.tr.28 "Organic intestinal diseases." (full-time course)

Definition, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine of non-specific ulcerative colitis, Crohn's disease. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (watching films demonstrating the clinical manifestations of the main diseases and syndromes) with further discussion. In addition, the study of this topic involves role-playing games, improving the mastery of palpation, percussion and auscultation skills while working at the patient's bedside in a specialized department (in the absence of quarantine restrictions), drawing up an examination plan with further interpretation of the obtained results of ultrasound, FGDS and treatment.

pr.tr.29 "Organic diseases of the biliary system in children." (full-time course)

Clinic, diagnosis, treatment from the standpoint of evidence-based medicine and prevention of organic diseases of the biliary system. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (viewing films demonstrating the clinical manifestations of the main diseases and syndromes) with further discussion. In addition, the study of this topic involves role-playing games, improving the mastery of palpation, percussion and auscultation skills while working at the patient's bedside in a specialized department (in the absence of quarantine restrictions), drawing up an examination plan with further interpretation of the obtained results of ultrasound, FGDS and treatment.

Topic 13. Functional and organic diseases of the esophagus and stomach in children.

pr.tr.30 "Functional diseases of the esophagus and stomach in children." (full-time course)

Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention of functional diseases of the esophagus and stomach in older children. The study of this topic involves theoretical work in the classroom. In addition, the study of this topic involves carrying out cases, improving the mastery of palpation, percussion and auscultation skills while working at the bedside of a patient in a specialized department (in the absence of quarantine restrictions), drawing up an examination and treatment plan.

pr.tr.31 "Organic diseases of the esophagus and stomach in children." (full-time course)

Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention of organic diseases of the esophagus and stomach in older children. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (viewing films demonstrating the clinical manifestations of the main diseases and syndromes, the introduction of 3-D virtual endoscopy) with further discussion. In addition, the study of this topic involves role-playing games, improving the mastery of palpation, percussion and auscultation skills while working at the patient's bedside in a specialized department (in the absence of quarantine restrictions), drawing up an examination plan with further interpretation of the obtained results of ultrasound, FGDS and treatment.

Topic 14. Infections of the urinary system in children. Chronic kidney disease.

lect.3 "Infections of the urinary system in children." (full-time course)

Definition, classification of urinary system infections in children, differential diagnosis of lower and upper urinary tract infections. Etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention and prognosis of cystitis in children. Definition, etiology, pathogenesis, classification, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention and prognosis of pyelonephritis in children. Teaching is conducted in the form of multimedia lectures (in case of quarantine - in online mode).

pr.tr.32 "Infections of the urinary system in children." (full-time course)

Definition, classification of urinary system infections in children, differential diagnosis of lower and upper urinary tract infections. Etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention and prognosis of cystitis in children. Definition, etiology, pathogenesis, classification, clinic, diagnosis, treatment, prevention and prognosis of pyelonephritis in children. The study of this topic involves theoretical work in the classroom, interpretation of the obtained data of laboratory tests, endoscopic examination, x-ray and ultrasound examination of the urinary organs in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Work at the patient's bedside.

pr.tr.33 "Chronic kidney disease." (full-time course)

Etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention and prognosis of chronic kidney disease in children. The study of this topic involves theoretical work in the classroom, interpretation of the obtained data of laboratory tests, endoscopic examination, x-ray and ultrasound examination of the urinary organs in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Work at the patient's bedside.

Topic 15. Glomerulonephritis in children. Chronic kidney failure in children

pr.tr.34 "Glomerulonephritis in children." (full-time course)

Definition, classification, etiology, pathogenesis, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention and prognosis of glomerulonephritis in children. The study of this topic involves theoretical work in the classroom, interpretation of the obtained data of laboratory tests, endoscopic examination, x-ray and ultrasound examination of the urinary organs in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Work at the patient's bedside. Solving clinical cases.

pr.tr.35 "Acute and chronic renal failure." (full-time course)

Acute and chronic renal failure: risk factors, etiology, pathogenesis, stages of the disease, clinic, diagnosis, treatment from the standpoint of evidence-based medicine, prevention, prognosis. The study of this topic involves theoretical work in the classroom, interpretation of the obtained data of laboratory tests, endoscopic examination, x-ray and ultrasound examination of the urinary organs in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university). Work at the patient's bedside.

Topic 16. Protection of case history

pr.tr.36 "Protection of case history" (full-time course) Educational case history, based on clinical curation of patients with registration of examination data and additional research methods, with the aim of establishing and substantiating the diagnosis and prescribing a treatment regimen.
pr.tr.37 "Protection of case history" (full-time course) Educational case history, based on clinical curation of patients with registration of examination data and additional research methods, with the aim of establishing and substantiating the diagnosis and prescribing a treatment regimen.
Topic 17. Performance of test tasks
pr.tr.38 "Performance of test tasks." (full-time course) Computer testing.
Topic 18. Performance of practical skills and manipulations
pr.tr.39 "Performance of practical skills and manipulations." (full-time course) Performance of practical skills and manipulations.
pr.tr.40 "Performance of practical skills and manipulations." (full-time course) Performance of practical skills and manipulations.
Topic 19. Practically oriented exam
assessm.41 "Exam." (full-time course) Conducting the exam in accordance with the regulations.

9. Teaching methods

9.1 Teaching methods

Course involves learning through:

TM1	Lecture teaching
TM2	Case-based learning
TM3	Team Based Learning
TM4	Research Based Learning
TM5	Self-study
TM6	Electronic learning
TM7	Practical training

The discipline is taught using modern teaching methods (CBL, TBL, RBL), which contribute not only to the development of professional abilities, but also stimulate creative thinking.

Acquisition of soft skills by students is carried out during the entire period of studying the discipline. The ability for analytical and critical thinking, teamwork, perseverance is formed during

team-, practice- and case-oriented training, knowledge and understanding of the subject area is acquired during lectures, self-study. E-learning stimulates the ability to use information technologies. inquiry-based learning encourages the development of certainty and persistence about tasks and responsibilities.

9.2 Learning activities

LA1	Writing and defense of case history
LA2	Interpretation of laboratory (clinical blood, urine, biochemical blood analysis, immunological studies, etc.) and instrumental (ECG, Echocardiogram, EFGDS, ultrasound, CT, X-ray, spirometry, etc.) examination methods.
LA3	Preparation for practical classes.
LA4	Analysis of clinical cases.
LA5	Practical work with the patient in specialized departments of the hospital.
LA6	Electronic training in systems (Zoom, MIX.sumdu.edu.ua).
LA7	Preparation for the exam
LA8	Individual research project (student research paper, article, abstract, etc.)
LA9	Work with textbooks and relevant information sources.
LA10	Practicing practical skills in the simulation center
LA11	Performing a group practical task.
LA12	Interactive lectures.

10. Methods and criteria for assessment

10.1. Assessment criteria

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

10.2 Formative assessment

	Description	Deadline, weeks	Feedback
FA1 Peer assessment	Partnership interaction aimed at improving the results of educational activities by comparing one's own current level of success with previous indicators. Provides an opportunity to analyze one's own educational activities.	During the entire period of studying the discipline	Adjustment together with students of approaches to learning, taking into account the results of the assessment.

<p>FA2 Counseling of the teacher during the writing of the case history</p>	<p>Writing a medical history involves demonstrating the ability to work with a patient, consolidating practical skills in physical examination of a patient, evaluating and analyzing medical documentation, establishing a clinical diagnosis with elements of differential diagnosis, prescribing treatment. The defense of the medical history is provided, when the student must provide answers to questions about the patient he treated, the causes and provoking factors of the disease.</p>	<p>Writing during the cycle, defense - in accordance with the calendar and thematic plan.</p>	<p>Counseling of the teacher during the writing of the medical history with oral comments. The applicant receives an assessment for writing a medical history (5 points maximum) and defense (5 points maximum).</p>
<p>FA3 Final testing</p>	<p>A method of effective verification of the level of assimilation of knowledge, abilities and skills in an educational discipline. Testing allows you to check the results of training after completing the discipline.</p>	<p>In the penultimate discipline lesson.</p>	<p>The maximum number of points for the test is 10 points, provided that 100% of the answers are correct. The minimum score for successfully passing the tests is 6 points (60% of correct answers).</p>
<p>FA4 Consulting the teacher during the preparation of an individual research project (speech at a conference, competition of scientific papers)</p>	<p>An important factor in the formation of professional qualities of future specialists is the research work of students. Involvement of the latter in research activities contributes to the formation of their scientific worldview, industriousness, work capacity, initiative, etc.</p>	<p>During the entire period of studying the discipline.</p>	<p>Teacher's oral comments. The student is given additional incentive points (from 5 to 10), depending on the type of research project.</p>

<p>FA5 Instructions of the teacher in the process of performing practical tasks</p>	<p>The guidelines reveal the methods of pedagogical control over the professional activities of applicants. Efficiency is determined by compliance with all stages of practical tasks. The effectiveness of the formation of the necessary practical skills and abilities depends on the level of formation of practical competence.</p>	<p>During the entire period of studying the discipline</p>	<p>Counseling of students in working with a standardized patient, direct and indirect observation of the work of applicants "at the patient's bedside" with further determination of the level of practical training</p>
<p>FA6 Survey and teacher's oral comments based on his results.</p>	<p>It provides an opportunity to identify the state of educational experience acquired by students in accordance with the set goals, to find out the prerequisites for the state of formation of the obtained results, the causes of difficulties, to adjust the learning process, to track the dynamics of the formation of learning results and to forecast their development.</p>	<p>During the entire period of studying the discipline</p>	<p>According to the obtained data on the results of training, based on their analysis, it is proposed to determine the evaluation as an indicator of the achievements of the educational activities of the applicants.</p>
<p>FA7 Solving clinical cases.</p>	<p>The case method makes it possible to reveal and form the qualities and abilities of medical students necessary for further work, forms clinical thinking, analytical abilities, independence in decision-making, communication, skills for working with a sufficiently large amount of information.</p>	<p>During the entire period of studying the discipline</p>	<p>Assessment of the student's ability to think clinically, justify their decisions, clearly express their opinions, determine the level of theoretical training, which is reflected in the corresponding assessment.</p>

<p>FA8 Tests (automated tests) to control the educational achievements of applicants.</p>	<p>A method of effective verification of the level of assimilation of knowledge, abilities and skills from each subject of an educational discipline. Testing allows you to check the assimilation of educational material from each subject.</p>	<p>During the entire period of studying the discipline</p>	<p>The student must provide 60% of the correct answers, which is an admission to the practical part of the lesson.</p>
<p>FA9 The task of assessing the level of theoretical training.</p>	<p>Assessment of acquired theoretical knowledge on the subject of the discipline. It is conducted at each practical lesson in accordance with the specific goals of each topic based on a comprehensive assessment of the student's activity, which includes monitoring the level of theoretical training, performing independent work according to the thematic plan.</p>	<p>During the entire period of studying the discipline</p>	<p>Feedback is aimed at supporting students' independent work, identifying shortcomings and assessing the level of acquired theoretical knowledge</p>
<p>FA10 Practical skills test</p>	<p>Practicing practical skills on various mannequins and simulators.</p>	<p>During the entire period of study. At the last lesson, the student must successfully complete.</p>	<p>Successful completion of practical skills in the discipline is a prerequisite for passing the exam. The maximum number of points is 20, the minimum is 12.</p>
<p>FA11 Focus group discussions.</p>	<p>The method makes it possible to involve all participants in the process of discussion and justification of one's own opinion through multilateral communication, to develop the ability to conduct a professional discussion, to cultivate respect for colleagues and the ability to generate alternative ideas and proposals.</p>	<p>During the entire period of study.</p>	<p>Assessment of the student's ability to work in a team, the ability to justify their decisions, determination of the level of theoretical training, which is reflected in the corresponding assessment.</p>

10.3 Summative assessment

	Description	Deadline, weeks	Feedback
SA1 Final control: exam	Passing a practically-oriented exam. Candidates who have successfully mastered the material from the discipline, passed the practical skills and final computer testing, and defended their medical history are admitted to the exam.	According to the schedule	The candidate can get 80 points for the exam. The minimum number of points that the student should get is 48 points.
SA2 Assessment of case history writing and defense.	Writing a medical history involves demonstrating the ability to work with a patient, consolidating the practical skills of physical examination of a patient, evaluating and analyzing medical documentation, establishing a clinical diagnosis with the elements of differential diagnosis, prescribing treatment. The defense of the medical history is provided, when the student must provide answers to questions about the patient he was treating, the causes and provoking factors of the disease.	According to the calendar-thematic plan.	A student can get a maximum of 10 points. 5 points are awarded for writing, 5 points for defense. The minimum number of points for a successful defense is 6 points
SA3 Final testing	A method of effective verification of the level of knowledge assimilation, skills and skills in the academic discipline. Testing allows you to check the results of the study during the cycle and determine the level of knowledge before the completion of the discipline.	Final computer test at the end of the course (10 points)	It is an admission to pass the exam
SA4 Assessment of performance of practical skills and manipulations	Comprehensive practice of the practical component of academic programs in a safe simulation environment for students. Provides an opportunity to learn skills from a variety of emergency situations.	According to the calendar and thematic plan.	It is mandatory for admission to the final modular control. The maximum number of points is 20, the minimum is 12.

SA5 Assessment of the level of theoretical training	It includes an oral examination, interpretation of laboratory and instrumental examination methods, an objective structured clinical examination of the patient, solving clinical individual and group cases, current testing. Students who are involved in research activities have the opportunity to present the results of their own research at conferences, competitions for student scientific works, etc. (incentive activities, additional points).	During the entire period of studying the discipline.	Conducted at each lesson, the result of the LA performance affects the comprehensive assessment of the practical lesson
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Form of assessment:

	Points	Minimum points	Можливість перекладання з метою підвищення оцінки
8 semester	200 scores		
SA1. Final control: exam	80		
Answer to theoretical questions (3x15)	45	9	No
answer to the question of providing emergency care.	20	12	No
ВІДПОВІДЬ НА ПИТАННЯ ПРАКТИЧНОЇ ПІДГОТОВКИ	15	9	No
SA2. Assessment of case history writing and defense.	10		
	10	6	No
SA3. Final testing	10		
	10	6	No
SA4. Assessment of performance of practical skills and manipulations	20		
	20	12	No
SA5. Assessment of the level of theoretical training	80		
Oral interview, performance of a group case, clinical case, assessment, objective structured clinical examination, interpretation of laboratory and instrumental examination results.	80	48	No

When learning the materials of the module, the student is awarded a maximum of 5 points for each practical session (the grade is given in the traditional 4-point grading system). At the end of the academic year, the student's arithmetic average is calculated. The maximum number of points that a student can receive in practical sessions during the academic year is 80. Number of points of a student is calculated by the formula of multiplying the arithmetic average and dividing by 5. The following points are assigned for writing a medical history: "5" - 5 points, "4" - 4 points, "3" - 3 points, "2" - 0 points. Medical history protection: "5" - 5 points, "4" - 4 points, "3" - 3 points, "2" - 0 points. In general, a student can receive a maximum of 10 points for medical history, a minimum of 6 points is required. For diagnostic testing, a student receives a maximum of 10 points. The

minimum number of points that a student must receive is 6 points. A mandatory condition for admission to the exam is the successful completion of the list of practical skills in the last lesson of the discipline. The maximum number of points a student can get is 20 points, the minimum is 12 points. The maximum number of points for the student's current educational activity is 120. The student is admitted to the exam on the condition that he fulfills the requirements of the educational program and if he has scored at least 72 points for the current educational activity: 48 points during practical classes, 6 points for medical history, 6 points for testing and 12 points for performing practical skills and manipulations. Practice-oriented Exam is conducted according to the schedule during the session. Examination tickets contain 3 theoretical questions on various subjects and cover all sections of the academic discipline (15 points each), 1 practical task (15 points) and the issue of providing emergency care (20 points). The exam is credited to the student if he scored at least 48 points out of 80. Encouraging points are added to the grade for the discipline for the implementation of an individual research project (defense of the student's thesis 10 points, speech at the conference, stand report at the conference, theses of the reports - 5 points). The total score for the discipline cannot exceed 200 points. The possibility of re-crediting the points obtained by the system of non-formal education in accordance with the Regulation is provided.

11. Learning resources

11.1 Material and technical support

MTS1	Information and communication systems
MTS2	Library funds, archive of results of laboratory examination methods.
MTS3	Computers, computer systems and networks.
MTS4	Phantoms, dummies, simulation center equipment.
MTS5	Municipal non-profit enterprise "Regional Children's Clinical Hospital"SRC
MTS6	Multimedia, video and sound reproduction, projection equipment (video cameras, projectors, laptop screens)
MTS7	Software (to support distance learning)
MTS8	Medical equipment (spirometer, peak flow meter, electrocardiograph, height meter, scales, fibrogastroscope, tonometer, phonendoscope, etc.).

11.2 Information and methodical support

Essential Reading	
1	Nelson Textbook of Pediatrics [Text] / R. M. Kliegman [et al.] ; ed. R. E. Behrman. - 21th ed. - Edinburgh [etc.] : Elsevier, 2020.
2	USMLE Step 2 CK: Pediatrics [Текст] : Lecture Notes / Editors W.G. Cvetnic, E.Pino. — New York : Kaplan, 2019. — 281 p.
3	Pediatrics [Текст] : textbook / O. V. Tiazhka, T. V. Pochinok, A. M. Antoshkina etc. ; edited by O.V. Tiazhka. — 3-rd edition, reprint. — Vinnytsia : Nova Knyha, 2018. — 544 p. + Гриф МОЗ.
Supplemental Reading	

1	Peptic ulcer disease: methodical instructions for practical lessons on the discipline "Pediatrics" [Текст] : for students of specialty 222 "Medicine" of full-time training / S. V. Popov, O. K. Redko. — Sumy : Sumy State University, 2021. — 12 p.
2	Dynamics of content of some minerals in teenagers with cardiovascular system pathology against the background of chronic tonsillitis / O.I. Smiyan, A.M.Loboda, Y.A. Manko [et al.] // Wiadomosci Lekarskie. – 2018. – Vol 71(4). – P.861-864
3	Methodological instructions for practical lessons "Urinary tract infections in children" on the discipline "Pediatrics" [Текст] : in accordance with the conditions of the Bologna process for students of specialty 222 "Medicine" of full-time training / S. V. Popov, O. K. Redko, V. O. Petrashenko. — Sumy : Sumy State University, 2020. — 18 p.
4	5364 Respiratory distress in newborns : methodical instructions for practical lessons on the subject "Pediatrics" [Електронний ресурс] : for the stud. of the spec. 222 "Medicine" full-time education / S. V. Popov, O. K. Redko. — Sumy : Sumy State University, 2022. — 15 p
5	5495 Methodical instructions for practical lessons on the topic "The diseases of hypothalamic pituitary system and sexual glands in children" on the discipline "Pediatrics" [Електронний ресурс] : for stud. of spec. 222 "Medicine" of full-time training / O. K. Redko, A. M. Loboda, V. O. Petrashenko. — Sumy : Sumy State University, 2023. — 127 p.
6	5363 Methodical Instructions to practical lessons on the topic "Hemorrhagic Diseases in Children on the discipline "Pediatrics" [Електронний ресурс] : for students of specialty 222 "Medicine" of full-time course of study / I. I. Shkolna, V. O. Petrashenko, A. M. Loboda. — Sumy : Sumy State University, 2022. — 30 p.