

# SYLLABUS

## 1. General information on the course

<b>Full course name</b>	Propaedeutics of Pediatrics
<b>Full official name of a higher education institution</b>	Sumy State University
<b>Full name of a structural unit</b>	Academic and Research Medical Institute. Кафедра педіатрії
<b>Author(s)</b>	Manko Yuliia Anatoliivna, Sichnenko Petro Ivanovych, Romaniuk Oksana Kostiantynivna
<b>Cycle/higher education level</b>	The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle
<b>Semester</b>	20 weeks during the 6th semester
<b>Workload</b>	The volume of the discipline is 4 ECTS credits, 120 hours, including 90 hours of contact work with the teacher (10 hours of lectures, 80 hours of practical classes), 30 hours of independent work.
<b>Language(s)</b>	English

## 2. Place in the study programme

<b>Relation to curriculum</b>	Compulsory course available for study programme "Medicine"
<b>Prerequisites</b>	Latin Language and Medical Terminology, Medical Biology, Medical Informatics, Human Anatomy, Physiology, Histology, Cytology and Embryology, Biological and Bioorganic Chemistry, Microbiology, Virology and Immunology, Care of sick children, European Experience of Care for Young Children.
<b>Additional requirements</b>	There are no specific requirements
<b>Restrictions</b>	There are no specific restrictions

## 3. Aims of the course

The course is designed according to the university's mission and aims at developing students' deep knowledge of the functioning of a healthy and sick child, methods of clinical examination, semiotics of lesions of organs and systems of children, the ability to interpret clinical and laboratory tests. The primary purpose of studying the Propaedeutics of paediatrics is to form general cultural and professional knowledge and skills of the graduate.

## 4. Contents

**Module 1. Child development, anatomical and physiological features, methods of examination, and semiotics of diseases in children.**

Topic 1 Subject and place of paediatrics, the main stages of development. The organisation of medical and preventive care for children in Ukraine.

Paediatrics as a science of healthy and sick children has its place in the system of general medicine. The value of paediatrics for physician training. Tasks of the course on Propaedeutics paediatrics. The main historical stages of development of paediatrics in Ukraine. Professors I. V. Troytsky, V. Ye. Chernov, M. D. Ponomariov, and V. F. Yakubovych as the organisers of the first paediatric departments in Ukraine. The contribution of professors O. M. Khokhol, V. O. Belousova, F. D. Rumiantseva, L. O. Finkelstein, O. I. Skrotsky, I. M. Rudnieva, P. M. Hudzenko, V. M. Sydelnykova, B. Ya. Reznik, S. I. Ihnatova, V. D. Chebotariova, and others in the development of domestic clinical paediatrics. Principles of organisation and methods of treatment and prevention of children in Ukraine. The structure of children's treatment and prevention facilities and features of the organisation of their work. The organisation of sanitary-hygienic and anti-epidemic regimens. Hospitalisation of patients to a children's hospital and the specifics of children's wards. Dispensary observation and rehabilitation of children in the clinic. The scope and forms of work of a paediatrician. Sanitary and educational work in the paediatric practice. The study of this topic involves theoretical work in the classroom

Topic 2 Periods of childhood, their characteristics, and features. Collection of anamnesis. Clinical examination of the child. Criteria for assessing the general condition of children.

Periods of childhood, their characteristics. Features and methods of collecting medical history in children. Methods of objective clinical examination of healthy and sick children. General inspection of healthy and ill children. Criteria for assessing the general condition of sick children. The study of this topic involves theoretical work in the classroom provided there is no quarantine, mastering the skills of collecting disease history and assessing the severity of the patient's condition is provided at the patient's bedside. Under the current conditions, work with the use of a virtual simulation of collecting history, condition assessment, and mastering skills through role-playing games.

Topic 3 Features of the neonatal period.

A new-born baby. Physiological and transitional states in the neonatal period. The concept of new-born maturity. Signs of prematurity. Primary toilet and new-born nursing. New-born care. Features of the method of examination of the new-born. Sanitary and hygienic regimen of neonatal wards. The study of this topic involves theoretical work in the classroom, in the simulation centre (mastering practical skills on models), and work with the use of virtual simulation (watching films) with further discussion.

Topic 4 Physical development of children, anthropometry. Assessment methods.

The concept of physical development, the importance of its evaluation. The idea of acceleration of children's development, basic hypotheses, and mechanisms of acceleration. Methods of anthropometry. Methods of assessing the physical development of children. Semiotics of physical development disorders in children. Physical Education. The study of this topic involves theoretical work in the classroom, in the simulation centre using floor and table scales, horizontal and vertical height meters, and centimetre tape to master the skills of measuring on models, phantoms of body length, height and head circumference, torso, and body weight.

Topic 5 Anatomical and physiological features, methods of examination, and semiotics of nervous system diseases in children. Psychomotor development of children and its assessment.

Anatomical and physiological features of the nervous system in children. Disorders of embryogenesis as the basis of congenital anomalies of the nervous system. Methods of clinical neurological examination of children. The concept of psychomotor development of children, its features in different neonatal periods. Full-time routine for children of all ages. Types of higher nervous activity and phase states in children and their importance for upbringing. Features of assessment of the neuropsychological development of the new-born. Semiotics of disorders of neuropsychological development of children. Elements of the neuropsychological upbringing of young children (emotional development, aesthetic, moral, etc.). Semiotics of major nervous system diseases in children (hydrocephalus, meningitis, encephalitis, cerebral palsy, etc.). Features of cerebrospinal fluid in children and semiotics of its changes in pathology (purulent and serous meningitis, hydrocephalus, etc.). Care for children with the pathology of the nervous system. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with models), virtual simulation (watching films on the methods of examination of the nervous system, assessment of neuro-mental development).

Topic 6 Anatomical and physiological features, methods of examination, semiotics of skin diseases, subcutaneous tissue.

Morphological and functional features of skin and its derivatives in children. Features of the structure of subcutaneous tissue. Total semiotics of its main changes. Semiotics of skin and subcutaneous tissue lesions. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the method of examination of the skin, subcutaneous fat layer, and the characteristics of morphological elements) with further discussion.

Topic 7 Anatomical and physiological features, examination methods, semiotics of the musculoskeletal system in children.

Anatomical and physiological features of the musculoskeletal system in children. Methods of examination of the skeletal and muscular systems. Semiotics of lesions and diseases of the musculoskeletal system. Examination of the hip joint in children. Instrumental diagnostic methods. The study of this topic involves theoretical work in the classroom, in the simulation centre (use of models, phantoms, centimetre tape, and dynamometer), the use of virtual simulation (watching films on the method of examination of these systems (complaints, review, palpation, and percussion) with further discussion.

Topic 8 Anatomical and physiological features, methods of examination of the respiratory system in children.

Features of embryogenesis of respiratory system and anomalies of its development. Anatomical and physiological characteristics of the respiratory system in children. Methods of clinical examination of the respiratory system in children. Examination, palpation. Anatomical and physiological features, methods of examination of the respiratory system in children. Features of embryogenesis of respiratory system and anomalies of its development. Anatomical and physiological characteristics of the respiratory system in children. Methods of clinical examination of the respiratory system in children. Examination, palpation. Anatomical and physiological features, methods of examination of the respiratory system in children. Methods of clinical examination of the respiratory system in children. Examination, palpation. Topographic and comparative percussion of the lungs in children. Semiotics of disorders. Comparative lung auscultation. Vesicular, washing, hard breathing. Semiotics of lesions and major respiratory diseases in children. Anatomical and physiological features, methods of examination of the respiratory system in children. Syndromes of respiratory disorders and respiratory failure, and the main clinical manifestations. Spirography.

**Module 2. Anatomical and physiological features, examination methods, semiotics of diseases in children, and breastfeeding.**

Topic 9 APF (anatomical and physiological features) of the cardiovascular system in children. Methods of clinical examination of CVC (cardiovascular system) organs in children

Embryogenesis of the cardiovascular system and congenital anomalies of the heart and blood vessels. Features of blood circulation in the antenatal period. Anatomical and physiological features of the heart and blood vessels in the neonatal period. Methods of clinical examination of CVC organs in children and semiotics of lesions (complaints, examination, and palpation). Percussion of the heart in children. Percussion of absolute and relative boundaries of the heart in children, semiotics of disorders. Semiotics of lesions and major diseases of the cardiovascular system in children. Methods of auscultation of the heart in children. Characteristics of sound phenomena (tones, noises). Semiotics of lesions. Semiotics of congenital and acquired cardiovascular diseases in children. The main clinical syndromes in CVC diseases, clinical manifestations. Circulatory failure, degree, and symptoms. Laboratory, functional, and instrumental methods of research of cardiovascular system. Electrocardiography, phonocardiography, echocardiography. Features of ECG (electrocardiography) and PCG (phonocardiography) in healthy children of different ages. Echocardiography.

Topic 10 Anatomical and physiological features of the digestive system, examination methods.

Age anatomical and physiological features of the digestive system in children. Methods of clinical examination of the digestive system (examination, palpation, percussion, and auscultation). Semiotics of lesions of the digestive system in children. The main diseases of the digestive system in children (pylorospasm, pylorostenosis, gastritis, peptic ulcer disease, cholecystitis, biliary dyskinesia, etc.) in children. Acute abdomen syndrome. Laboratory, instrumental and functional research methods of children with gastrointestinal pathology (ultrasound, endoscopy, thermography, and ultrasound). The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), the use of virtual simulation (watching films on the methods of clinical examination of the gastrointestinal tract (complaints, examination, palpation, percussion, and auscultation), and instrumental and functional methods of examination. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one" using a stetho- phonendoscope, acquaintance with methods of conducting and interpretation of the received data of the endoscopic examination, X-ray and ultrasound gastric examination. Intestinal tract in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

Topic 11 Anatomical and physiological features, methods of examination of the excretory system in children.

Anatomical and physiological features of the urinary system in childhood. Brief information about the embryogenesis of the urinary system as the basis of congenital anomalies. Methods of examination and semiotics of the most common diseases of the urinary system in children. Semiotics of microscopic changes of urine sediment (protein-, erythrocyte-, leukocyte- and cylindruria, etc.). Syndrome of acute and chronic renal failure. Laboratory, instrumental and functional methods of research of children with SHS pathology. Care for patients with pathology of the urinary system. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), the use of virtual simulation (watching films on the methods of clinical examination of the urinary tract (complaints, examination, palpation, percussion, auscultation) and instrumental and functional methods of examination. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one" using a stethoscope, acquaintance with the methods of conducting and interpreting the data of laboratory tests, endoscopic examination, X-ray, and ultrasound urination in the departments of a medical institution (based on the agreement on cooperation between the medical institution and the university).

Topic 12 Features of the endocrine system

APF (anatomical and physiological features), methods of examination and semiotics of lesions of the pituitary gland, pineal gland, thyroid and parathyroid glands, adrenal glands, pancreas, and genital glands. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of the endocrine system (complaints, examination, palpation)), and instrumental and functional methods of examination with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one", acquaintance with the methods of conducting and interpreting the obtained data of laboratory tests, X-ray and ultrasound examination of the urinary organs in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

### Topic 13 Blood system in children.

APF (anatomical and physiological features) of the blood system in children of different ages. Methods of clinical examination of children with blood diseases. Semiotics of lesions. Laboratory and instrumental methods of examination in children with blood diseases. Their assessment and semiotics of deviations. Clinical and haematological semiotics of the main syndromes (anaemic, haemolytic, haemorrhagic, etc.) in blood system diseases in children. The study of this topic involves theoretical work in the classroom, in the simulation centre, the use of virtual simulation (watching films on the methods of clinical examination of the blood system (complaints, examination, palpation, percussion)) and instrumental and functional methods of examination with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one", acquaintance with the methods of conducting and interpreting laboratory data, X-ray and ultrasound examination of the blood system in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

### Topic 14 Immune system in children. Curation.

Immunodeficiency states and methods of diagnosing immunodeficiency in children. Curation. Writing a medical history. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of the immune system (complaints, examination, palpation), and instrumental and functional methods of examination with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one", acquaintance with the methods of conducting and interpreting the data of laboratory (immunological) tests, X-ray and ultrasound examination of the immune system in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

### Topic 15 Breastfeeding

Natural breastfeeding of infants. The quantitative and qualitative composition of breast milk. Methods of calculating the full-time amount of food and diet. The child's full-time need for food ingredients and energy. Supplementary feeding and nutrition correction. Bottle-feeding of infants. Classification and characterisation of milk formulas for bottle-feeding of infants. Certified cow's milk. The technique of bottle-feeding and criteria for evaluating its effectiveness. The child's full-time need for proteins, fats, carbohydrates, and calories during bottle-feeding. Supplementary feeding and nutrition correction during bottle-feeding. Mixed feeding. Feeding techniques and rules. Milk formulas are used for supplemental feeding. Schemes of mixed feeding of children of the first year of life. Supplementary feeding and nutrition correction. The child's full-time need for protein, fat, carbohydrates, and calories during the mixed feeding. Organisation and principles of nutrition of children older than one year. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms, models to practice the skills of proper breastfeeding), the use of virtual simulation (watching films on breastfeeding, bottle-feeding, and mixed feeding). Besides, the study of this topic involves solving the problem of compiling a menu for one day for a healthy child under one year.

#### Topic 16 Metabolism in children

APF (anatomical and physiological features) of mineral metabolism. Semiotics of mineral metabolism disorders. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of children with mineral metabolism disorders), and instrumental and functional methods of examination with further discussion. Besides, the study of this topic involves acquiring skills in calculating the amount of fluid needed to meet the needs of the child's body, both in normal and in pathology.

#### Topic 17 The defence of disease history. Test.

The test will include questions to the whole course of Propaedeutics of paediatrics, including theoretical questions, questions to computer test control, and the practice of practical skills in the simulation centre (provided there is no quarantine at the patient's bedside). The defence of disease history will include issues of history, methods of examination, and semiotics of lesions of the system that is affected in each case (i.e., according to the child's underlying disease, which was provided to the student for curation).

### 5. Intended learning outcomes of the course

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

LO1	Collect medical information about the patient and analyze clinical data (skills survey and clinical examination of the child or parents).
LO2	Study the necessary list of laboratory and instrumental studies and evaluation of their results
LO3	Diagnose emergencies and provide emergency medical care.
LO4	Identify the main clinical syndrome and establish the previous and clinical diagnosis of the disease.
LO5	Argue information for decision-making, be responsible for them in standard and non-standard professional situations; adhere to the principles of deontology and ethics in professional activities
LO6	Make informed decisions.
LO7	Adhere to the norms of communication in professional interaction with colleagues, management, work effectively in a team.
LO8	Acquire the ability to keep medical documentations, including electronic forms.

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

Programme learning outcomes achieved by the course.

For 222 Medicine:

PO1	Identify and identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish the most probable nosological or syndromic preliminary clinical diagnosis of the disease (according to list 2).
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PO2	Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies to assess information about the diagnosis (list 4).
PO3	Prescribe and analyze additional (mandatory and optional) examination methods (laboratory, radiological, functional and / or instrumental) according to list 4, patients with diseases of organs and systems of the body for differential diagnosis of diseases (list 2).
PO5	Determine the main clinical syndrome or the severity of the victim's condition (according to list 3) by making an informed decision and assessing the person's condition under any circumstances (at home, on the street, health care facility, its units), including in conditions of emergency and hostilities, in the field, in conditions of lack of information and limited time.
PO10	Assess the general condition of the newborn child by making an informed decision according to existing algorithms and standard schemes, adhering to the relevant ethical and legal norms.
PO14	Perform medical manipulations (according to list 5) in a medical institution, at home or at work on the basis of a previous clinical diagnosis and / or indicators of the patient's condition by making an informed decision, adhering to the relevant ethical and legal norms.
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, statistical methods of data analysis to solve complex health problems.
PO19	Assess the impact of the environment on public health.

## 7. Teaching and learning activities

### 7.1 Types of training

<p><b>Topic 1. Subject and place of paediatrics, the main stages of development. The organisation of medical and preventive care for children in Ukraine.</b></p>
<p>lect.1 "Subject and place of paediatrics, the main stages of development. Organization of treatment and prevention aid for children in Ukraine. A new-born child" (full-time course)</p> <p>As a science of healthy and sick children, Paediatrics has its place in the system of general medicine. The main historical stages of development of paediatrics in Ukraine. Principles of organisation and methods of treatment and prevention aid for children in Ukraine. Childhood periods, their characteristics and features. Features of new-borns – full-term and premature. Teaching is conducted in the form of multimedia lectures (during quarantine – online).</p>
<p><b>Topic 2. Periods of childhood, their characteristics, and features. Collection of anamnesis. Clinical examination of the child. Criteria for assessing the general condition of children.</b></p>



pr.tr.1 "Childhood periods, their characteristics and features" (full-time course)

Childhood periods, their characteristics, recognising the need to study them. Antenatal and postnatal periods. The study of this topic involves theoretical work in the classroom, acquaintance with the structure of the hospital, organisation of its work, a study of regulations governing the work of children's medical institution, both inpatient and outpatient type, and rules governing the work of a paediatrician.

pr.tr.2 "Collection of anamnesis. Clinical examination of the child. Criteria for assessing the general condition of children" (full-time course)

Features and methods of collecting medical history of children. Methods of objective clinical examination of healthy and sick children. General examination of healthy and ill children. Criteria for assessing the general condition of sick children. The study of this topic involves theoretical work in the classroom, in the absence of quarantine, mastering the skills of collecting history and assessing the severity of the sick child is provided at the patient's bedside. Under the current conditions, work with the use of a virtual simulation of history taking, condition assessment, and mastering skills through role-playing games.

### **Topic 3. Features of the neonatal period.**

pr.tr.3 "Features of the neonatal period" (full-time course)

A new-born baby. Physiological and transitional states in the neonatal period. The concept of new-born maturity. Signs of prematurity. Primary toilet and new-born nursing. New-born care. Features of the method of examination of the new-born. Sanitary and hygienic regimen of neonatal wards. The study of this topic involves theoretical work in the classroom, in the simulation centre (mastering practical skills on models), and work with the use of virtual simulation (watching films) with further discussion.

pr.tr.4 "Features of the premature baby" (full-time course)

A new-born premature baby. Signs of prematurity. Primary toilet and care of a premature new-born. Features of care for a premature baby. Features of the method of examination of the premature new-born. Sanitary and hygienic regime of premature babies' wards. The study of this topic involves theoretical work in the classroom, in the simulation centre (mastering practical skills on models), work with the use of virtual simulation (watching films) with further discussion.

### **Topic 4. Physical development of children, anthropometry. Assessment methods.**

pr.tr.5 "Physical development of children, anthropometry. Assessment methods" (full-time course)

The concept of physical development, the importance of its evaluation. The concept of acceleration of children's development, basic hypotheses, and mechanisms of acceleration. Methods of anthropometry. Methods of assessing the physical development of children. The study of this topic involves theoretical work in the classroom, in the simulation centre using floor scales, table, horizontal and vertical height meters, centimetre tape to master the skills of measuring body length and height, head and torso circumference, and for determining body weight.

pr.tr.6 "Semiotics of lesions of physical development of children" (full-time course)

Semiotics of deviations of physical development of children, frequency. The most common types of deviations. The study of this topic involves theoretical work in the classroom.

**Topic 5. Anatomical and physiological features, methods of examination, and semiotics of nervous system diseases in children. Psychomotor development of children and its assessment.**

pr.tr.7 "Anatomical and physiological features of the nervous system in children. Methods of clinical neurological examination of children. Features of the formation of psychomotor development of children Reflexes of new-borns and young children." (full-time course)

Anatomical and physiological features of the nervous system in children. Disorders of embryogenesis as the basis of congenital anomalies of the nervous system. Methods of clinical neurological examination of children. The concept of psychomotor development of children, its features in different periods of childhood. Full-time routine for children of all ages. Types of higher nervous activity and phase states in children and their importance for education. Features of assessment of neuropsychological development of the new-born. Semiotics of disorders of neuropsychological development of children. Elements of neuropsychological education of young children (emotional development, aesthetic, moral, etc.). The study of this topic involves theoretical work in the classroom, in the simulation centre (work with models), the use of virtual simulation (watching films to assess the neuro-mental development) with further discussion.

pr.tr.8 "Semiotics of diseases of the nervous system in children" (full-time course)

Semiotics of major nervous system diseases in children (hydrocephalus, meningitis, encephalitis, cerebral palsy, etc.). Features of cerebrospinal fluid in children and semiotics of its changes in pathology (purulent and serous meningitis, hydrocephalus, etc.). Care for children with the pathology of the nervous system. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with models), virtual simulation (watching films on the methods of examination of the nervous system) with further discussion.

**Topic 6. Anatomical and physiological features, methods of examination, semiotics of skin diseases, subcutaneous tissue.**

pr.tr.9 "Anatomical and physiological features, methods of examination of the skin and subcutaneous fat" (full-time course)

Morphological and functional features of skin and its derivatives in children. Features of the structure of subcutaneous tissue. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the examination of the skin, subcutaneous fat layer) with further discussion.

pr.tr.10 "Characteristics of morphological elements of the skin (rash) and semiotics of skin and subcutaneous tissue lesions" (full-time course)

Characteristics of the main morphological elements of the skin, classification, semiotics of lesions. Elements of skincare and EGB (esophagogastric bleeding). The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films with characteristics of morphological elements), with further discussion.

**Topic 7. Anatomical and physiological features, examination methods, semiotics of the musculoskeletal system in children.**

pr.tr.11 "Anatomical and physiological features, methods of examining the skeletal system in children. Semiotics of deviations" (full-time course)

Anatomical and physiological features of the skeletal system in children. Methods of examination of skeletal systems. Semiotics of deviations. Examination of the hip joint in children. Instrumental diagnostic methods. The study of this topic involves theoretical work in the classroom, in the simulation centre (use of models, phantoms, centimetre tape), the use of virtual simulation (watching films on the examination of the skeletal system (complaints, examination, palpation, and percussion)) with further discussion.

pr.tr.12 "Anatomical and physiological features, methods of examination, semiotics of lesions of the muscular system in children" (full-time course)

Methods of studying the muscular system in children (tone, strength, development, etc.), semiotics of abnormalities. The study of this topic involves theoretical work in the classroom, in the simulation centre (use of models, phantoms, dynamometers), the use of virtual simulation (watching films on the examination of the muscular system (complaints, examination, palpation, and percussion)) followed by discussion.

**Topic 8. Anatomical and physiological features, methods of examination of the respiratory system in children.**

lect.2 "Anatomical and physiological features, methods of examination of respiratory organs in children" (full-time course)

Anatomical and physiological features of the respiratory system in children. Semiotics of lesions and major respiratory diseases in children. Syndromes of respiratory disorders and respiratory failure, the main clinical manifestations. Teaching is carried out in the form of multimedia lectures (during quarantine – online).

pr.tr.13 "APF of the respiratory system in children. Methods of clinical examination of the respiratory organs in children and semiotics of lesions (complaints, examination, palpation)" (full-time course)

Features of embryogenesis of respiratory organs and anomalies of their development. Anatomical and physiological features of the respiratory system in children. Methods of clinical examination of the respiratory organs in children. Examination, palpation. Semiotics of lesions. Characteristics of the main symptoms of respiratory diseases (cough, shortness of breath, skin discolouration, etc.) The study of this topic involves theoretical work in the classroom, in the simulation centre (the practice of palpation, percussion, auscultation on phantoms with a phonendoscope (auscultation), the use of virtual simulation (watching films on the methods of clinical examination of the respiratory system (complaints, examination, and palpation) Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion and auscultation "one on one".

pr.tr.14 "Methods of clinical examination of respiratory organs in children and semiotics of lesions (percussion, auscultation" (full-time course)

Topographic and comparative percussion of the lungs in children. Semiotics of disorders. Comparative lung auscultation. Vesicular, puerile, rigid, weakened, bronchial respiration and semiotics of lesions. The study of this topic involves theoretical work in the classroom, in the simulation centre (the practice of palpation, percussion, auscultation on phantoms with a phonendoscope (auscultation), the use of virtual simulation (watching films on the methods of clinical examination of the respiratory system (complaints, examination, palpation). Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one" using a stethoscope.

pr.tr.15 "Symptoms of major respiratory diseases in children and syndromes of respiratory disorders and respiratory failure, clinical manifestations" (full-time course)

Semiotics of lesions and major respiratory diseases in children. Syndromes of respiratory disorders and respiratory failure, the main clinical manifestations (Broncho-obstructive syndrome, croup syndrome, and respiratory failure). The study of this topic involves theoretical work in the classroom, in the simulation centre (continuing to practice the skills of palpation, percussion, auscultation on phantoms with a phonendoscope (auscultation), the use of virtual simulation (watching films demonstrating clinical manifestations of major diseases and syndromes). Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion and auscultation "one on one" using a stetho- phonendoscope.

pr.tr.16 "Functional and instrumental methods of research of respiratory system" (full-time course)

Pr.tr.16 "Functional and instrumental methods of research of respiratory system". (full-time) Respiratory tests, chest radiography, ultrasound, capnography, and scintigraphy. Spirography, spirometry, peakflowmetry in children. Methods of conducting and evaluating indicators. Types and degrees of ventilatory disorders of pulmonary function. Semiotics of deviations. The study of this topic involves theoretical work in the classroom, virtual simulation (watching films with methods of functional and instrumental study of the respiratory system (breathing tests, chest X-ray, ultrasound, capnography, scintigraphy, spirography, spirometry, and peakflowmetry). In addition, the study of this system provides role-playing games, mastering the skills of breathing test "one on one" using a stetho - phonendoscope, stopwatch. Acquaintance with methods of conducting and interpretation of the received data of research of the function of external respiration (spirography, peakflowmetry), X-ray and ultrasonic inspection of bodies of a thorax in profile departments of a medical institution (based on the agreement on cooperation between the medical institution and the university).

**Topic 9. APF (anatomical and physiological features) of the cardiovascular system in children. Methods of clinical examination of CVC (cardiovascular system) organs in children**

lect.3 "APF the cardiovascular system in children. Methods of clinical examination of CVC organs in children" (full-time course)

Anatomical and physiological features of the heart and blood vessels in childhood. Clinical signs of cardiovascular disease in children. Semiotics of congenital and acquired cardiovascular diseases in children. Features of ECG and FCG in healthy children of different ages. Teaching is carried out in the form of multimedia lectures (during quarantine – online).

pr.tr.17 "APF of the cardiovascular system in children. Methods of clinical examination of CVC organs (complaints, examination, and palpation) and semiotics of lesions" (full-time course)

Embryogenesis of the cardiovascular system and congenital anomalies of the heart and blood vessels. Features of blood circulation in utero. Anatomical and physiological features of the heart and blood vessels in childhood. Methods of clinical examination of CCC organs in children and semiotics of lesions (complaints, examination, palpation). The study of this topic involves theoretical work in the classroom, in the simulation centre (testing skills, palpation), the use of virtual simulation (watching films on the methods of clinical examination of the cardiovascular system (complaints, examination, palpation)) with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one".

pr.tr.18 "Methods of examination of the cardiovascular system in children (percussion, auscultation), semiotics of lesions" (full-time course)

Methods of clinical examination of CVC organs in children and semiotics of lesions (percussion, auscultation). Percussion of the heart in children. Percussion of absolute and relative boundaries of the heart in children, semiotics of disorders. Semiotics of lesions and major diseases of the cardiovascular system in children. Methods of auscultation of the heart in children. Characteristics of sound phenomena (tones, noises). Semiotics of lesions. The study of this topic involves theoretical work in the classroom, in the simulation centre (the practice of percussion skills, auscultation on phantoms with a phonendoscope (auscultation)), the use of virtual simulation (watching films on the methods of clinical examination of the cardiovascular system (percussion, auscultation) further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one" using a stethoscope.

pr.tr.19 "Syndromes of CVC lesions, clinical manifestations. Circulatory failure, degree, symptoms" (full-time course)

Semiotics of congenital and acquired cardiovascular diseases in children. The main clinical syndromes in CVC diseases, clinical manifestations. Acute and chronic circulatory failure, degree, and symptoms. The study of this topic involves theoretical work in the classroom, in the simulation centre (continuation of skills of palpation, percussion, auscultation on phantoms with a phonendoscope (auscultation)), the use of virtual simulation (watching films demonstrating clinical manifestations of major diseases and syndromes of the cardiovascular system). In addition, the study of this pathology involves role-playing games, improving the skills of palpation, percussion, and auscultation "on each other" using a stethoscope.

pr.tr.20 "Laboratory, functional and instrumental methods of cardiovascular research" (full-time course)

Clinical and biochemical parameters of blood in CVC diseases. Electrocardiography, phonocardiography, echocardiography. Features of an ECG at children in norm and pathology. The study of this topic involves theoretical work in the classroom, virtual simulation (watching films on the methods of instrumental and functional methods of examination) with further discussion. In addition, the study of this system involves mastering the skills of measuring blood pressure using a tonometer and phonendoscope, familiarisation with the methods of conducting and interpreting the data of FCG, ECG, functional tests, X-ray, and ultrasound examination of the heart in the departments of the institution (based on the agreement on cooperation between the medical institution and the university).

**Topic 10. Anatomical and physiological features of the digestive system, examination methods.**

pr.tr.21 "Anatomical and physiological features of the digestive system, examination methods" (full-time course)

Age anatomical and physiological features of the digestive system in children. Methods of clinical examination of the digestive system (review). The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), the use of virtual simulation (watching films on the methods of clinical examination of the gastrointestinal tract (complaints, review)) with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one".

pr.tr.22 "Methods of clinical examination of the digestive system" (full-time course)

Methods of clinical examination of the digestive organs (palpation, percussion, and auscultation). The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), the use of virtual simulation (watching films on the methods of clinical examination of the gastrointestinal tract (palpation, percussion, auscultation)) with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one" using a stethoscope.

pr.tr.23 "Semiotics of digestive lesions in children. The main syndromes of lesions" (full-time course)

Semiotics of digestive lesions in children. The main diseases of the digestive system in children (pylorospasm, pylorostenosis, gastritis, peptic ulcer disease, cholecystitis, biliary dyskinesia, etc.) in children. Acute abdomen syndrome. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), the use of virtual simulation (watching films demonstrating the clinical manifestations of major diseases and syndromes) with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one" using a stethoscope.

pr.tr.24 "Laboratory, instrumental and functional methods of research of children with gastrointestinal pathology" (full-time course)

Laboratory, instrumental and functional research methods of children with gastrointestinal pathology (sonography, endoscopy, thermography, ultrasound, colonoscopy, rectoromanoscopy, and others). The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), virtual simulation (watching films on the methods of instrumental and functional methods of examination) with further discussion. Besides, the study of this system provides acquaintance with the methods of conducting and interpreting the obtained data of endoscopic examination, X-ray, and ultrasound examination of the gastrointestinal tract in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

**Topic 11. Anatomical and physiological features, methods of examination of the excretory system in children.**

pr.tr.25 "Anatomical and physiological features, methods of examination of the excretory system in children" (full-time course)

Anatomical and physiological features of the urinary system in childhood. Brief information about the embryogenesis of the urinary system as the basis of congenital anomalies. Methods of examination and semiotics of the most common diseases of the urinary system in children. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), the use of virtual simulation (watching films on the methods of clinical examination of the urinary tract (complaints, examination, palpation, percussion, auscultation)) with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one" using a stethoscope

pr.tr.26 "Laboratory, functional and instrumental methods of research of SHS bodies in children" (full-time course)

Semiotics of microscopic changes of urine sediment (protein-, erythrocyte-, leukocyte- and cylindruria, etc.). Syndrome of acute and chronic renal failure. Laboratory, instrumental and functional methods of research of children with SHS pathology. Care for patients with pathology of the urinary system. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms), virtual simulation (watching films on the methods of instrumental and functional methods of examination) with further discussion. Besides, the study of this system provides acquaintance with the methods of conducting and interpreting the data of laboratory tests, endoscopic examination, X-ray and ultrasound examination of the urinary organs in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

## **Topic 12. Features of the endocrine system**

pr.tr.27 "Features of the endocrine system" (full-time course)

APF, methods of examination and semiotics of the adrenal glands, pancreas and gonads. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of the endocrine system (complaints, examination, palpation), and instrumental and functional methods of examination with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one", acquaintance with the methods of conducting and interpreting the obtained data of laboratory tests, X-ray and ultrasound examination of the endocrine system in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

pr.tr.28 "Features of the endocrine system" (full-time course)

APF, methods of examination and semiotics of lesions of the pituitary gland, pineal gland, thyroid and parathyroid glands. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of the endocrine system (complaints, examination, palpation), and instrumental and functional methods of examination with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one", acquaintance with the methods of conducting and interpreting the obtained data of laboratory tests, X-ray and ultrasound examination of the endocrine system in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

## **Topic 13. Blood system in children.**

lect.4 "Blood system in children" (full-time course)

Anatomical and physiological features of blood in children. Clinical and haematological semiotics of the main syndromes. Immune system and features of its functioning in children. The concept of immunodeficiency, classification, and semiotics of immunodeficiency states. Clinical and immunological semiotics of HIV infection in children. Teaching is carried out in the form of multimedia lectures (during quarantine – online).

pr.tr.29 "Blood system in children" (full-time course)

APF of the blood system in children of different ages. Methods of clinical examination of children with blood diseases. Semiotics of lesions. Clinical and haematological semiotics of the main syndromes (anaemic, haemolytic, haemorrhagic, etc.) in blood system diseases in children. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of the blood system (complaints, examination, palpation, percussion)) with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one".

pr.tr.30 "Blood system in children" (full-time course)

Laboratory and instrumental methods of examination in children with blood diseases. Their assessment and semiotics of deviations. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of instrumental and functional methods of examination) with further discussion. In addition, the study of this system provides acquaintance with the methods of conducting and interpreting the data of laboratory tests, X-ray and ultrasound examination of the blood system in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).

**Topic 14. Immune system in children. Curation.**

pr.tr.31 "Immune system in children. Curation" (full-time course)

AFO of the immune system. Methods of examination. Semiotics of lesions. Immunodeficiency states and methods of diagnosing immunodeficiency in children. The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of the immune system (complaints, examination, palpation)), and instrumental and functional methods of examination with further discussion. Besides, the study of this system involves role-playing games, mastering the skills of palpation, percussion, and auscultation "one on one", acquaintance with the methods of conducting and interpreting the data of laboratory (immunological) tests, X-ray and ultrasound examination of the immune system in the departments of the medical institution (based on the agreement on cooperation between the medical institution and the university).



pr.tr.32 "Curation. Preparing to write a medical history" (full-time course)

Independent supervision of a sick child. Preparing to write a medical history. In the absence of quarantine restrictions during the curation, the student is provided with a sick child treated in the medical institution's departments. The student independently, but under the teacher's guidance, conducts a clinical examination of the child. The student makes out the results of examinations, including para-clinical with conclusions in the form of written work. Relevant regulations regulate the rules for writing medical history. For the student, they are presented in the department's guidelines for writing an educational history of the disease. During quarantine, the student is provided with a virtual patient.

### **Topic 15. Breastfeeding**

lect.5 "Breastfeeding" (full-time course)

Feeding of young children. Natural, artificial, and mixed infant feeding. Organisation and principles of nutrition of healthy children older than one year. Teaching is carried out in the form of multimedia lectures (during quarantine – online).

pr.tr.33 "Natural breastfeeding" (full-time course)

Natural breastfeeding of infants. The quantitative and qualitative composition of breast milk. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms, models to practice the skills of proper breastfeeding), the use of virtual simulation (watching films on breastfeeding techniques).

pr.tr.34 "Natural breastfeeding" (full-time course)

Methods of calculating the full-time amount of food and diet. The child's full-time need for food ingredients and energy. Feeding (feeding) and nutrition correction. Methods of the introduction of feeding (supplementary feeding) and correction of food at natural feeding. Terms, food supplements. Evaluation of effectiveness. The study of this topic involves theoretical work in the classroom, in the simulation centre (work with phantoms, models to practice the skills of proper breastfeeding), the use of virtual simulation (watching films on breastfeeding techniques). Besides, the study of this topic involves solving problems of compiling a menu for one day for a healthy child under one year of age during breastfeeding.

pr.tr.35 "Bottle-feeding" (full-time course)

Artificial feeding of infants. Classification and characterisation of milk formulas for bottle-feeding of infants. Certified cow milk. The study of this topic involves theoretical work in the classroom.

pr.tr.36 "Bottle-feeding" (full-time course)

Pr.tr.36 "Bottle-feeding". (full-time) The technique of bottle-feeding and criteria for evaluating its effectiveness. The child's full-time need for proteins, fats, carbohydrates, and calories during bottle-feeding. Supplementary feeding and nutrition correction during bottle-feeding. The study of this topic involves theoretical work in the classroom, in the simulation centre (working with phantoms, models to practice the skills of proper breastfeeding, bottle-feeding), the use of virtual simulation (watching films on bottle-feeding). Besides, the study of this topic involves solving problems of compiling a menu for one day for a healthy child under one year of age with bottle-feeding.

pr.tr.37 "Mixed feeding" (full-time course)

Mixed feeding. Feeding techniques and rules. Milk formulas are used for supplementary feeding. Schemes of mixed feeding of children of the first year of life. Supplemental feeding and nutrition correction. The child's full-time need for protein, fat, carbohydrates, and calories during mixed feeding. Organisation and principles of rational nutrition of children older than one year. The study of this topic involves theoretical work in the classroom, in the simulation centre (working with phantoms, models to practice the skills of proper breastfeeding, nipples, feeding bottles), and virtual simulation (watching films on the method of mixed feeding). Besides, the study of this topic involves solving problems of compiling a menu for one day for a healthy child under one year of age with mixed feeding.

#### **Topic 16. Metabolism in children**

pr.tr.38 "Metabolism in children" (full-time course)

APF of mineral metabolism Semiotics of mineral metabolism disorders/ The study of this topic involves theoretical work in the classroom, in the simulation centre, virtual simulation (watching films on the methods of clinical examination of children with mineral metabolism disorders), and instrumental and functional methods of examination with further discussion. Besides, the study of this topic involves acquiring skills in calculating the amount of fluid needed to meet the needs of the child's body, both in normal and in pathology.

#### **Topic 17. The defence of disease history. Test.**

pr.tr.39 "The defence of disease history" (full-time course)

Protection of disease history will include the peculiarities of history taking, methods of examination, semiotics of lesions of the system that is affected in each case (i.e., according to the child's underlying disease, which was provided to the student for curation). The student receives a maximum of 10 points for diagnostic testing. The minimum number of points that a student must receive is 6 points (60% of correct answers).

pr.tr.40 "Credit lesson (practically - oriented differentiated credit)" (full-time course)

The practically - oriented differentiated test will include questions to the whole course of propaedeutics of pediatrics, including: theoretical questions, questions to computer test control and practical part. Classes are held in the classroom. First, students answer theoretical questions in written or oral form, followed by discussion and defense, then make a test computer control. The practical part of the test will include a demonstration by the student of the practical skills he has acquired while studying the discipline. The lesson is planned in the simulation center (in the absence of quarantine - at the patient's bedside). The overall score for the test will be based on the results of all three components of the test.

## 7.2 Learning activities

LA1	Preparation for practical classes
LA2	Preparation for current and final control
LA3	Interpretation of laboratory (clinical analysis of blood, urine, biochemical analysis of blood, immunological tests, etc.) and instrumental (ECG, echocardiography, EFGDS, ultrasound, CT, radiography, spirometry, etc.) methods of examination
LA4	Solving situational tasks

LA5	Analysis of clinical cases
LA6	Practice of practical skills in the simulation center
LA7	Practical work with the patient in the specialized departments of the hospital (in the absence of quarantine)
LA8	Writing the disease history
LA9	Watching educational films
LA10	Preparation of multimedia presentations
LA11	Preparation for Krok-1 and Krok-2
LA12	Self-study
LA13	Work with textbooks and relevant information sources
LA14	E-learning in Google Meet, Viber, Telegram, MIX learning systems
LA15	Individual research project (student research paper, article, thesis, etc.)

## 8. Teaching methods

Course involves learning through:

TM1	Role-playing game
TM2	Practice-oriented learning
TM3	Think-pair-share
TM4	Brain storm
TM5	Educational discussion / debate
TM6	Interactive lectures
TM7	Case-based learning (CBL).
TM8	Team-based learning (TBL).
TM9	Research-based learning (RBL).

The discipline is taught using modern teaching methods (CBL, TBL, RBL), which not only promote the development of professional skills, but also stimulate creative and scientific activities and are aimed at training practice-oriented professionals.

Mastering skills such as: • Ability to think abstractly, analyse, and synthesise. • Ability to learn, acquire current knowledge, and apply it in practical situations. • Knowledge and understanding of the subject area and understanding of the professional activity. • Ability to make grounded decisions; work in a team; interpersonal skills. • Ability to use information and communication technologies • Determination and perseverance in terms of tasks and responsibilities

## 9. Methods and criteria for assessment

### 9.1. Assessment criteria

Definition	National scale	Rating scale
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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)	$0 \leq RD < 119$

## 9.2 Formative assessment

FA1	Peer assessment
FA2	The defence of disease history
FA3	Solving case problems
FA4	Express testing
FA5	Solving case problems from Krok-1 and Krok-2
FA6	Independent performance of situational exercises by students in practical classes and their discussion.
FA7	Teacher's instructions during the performance of practical tasks
FA8	Interviews and oral comments of the teacher on the results
FA9	Checking and evaluating written assignments
FA10	Defense of an individual research project (presentation at a conference, competition of scientific papers)
FA11	Preparation and demonstration with discussion of multimedia presentations

## 9.3 Summative assessment

SA1	Evaluation of written works, surveys, solving a clinical case
SA2	Writing and defending a medical history
SA3	Testing
SA4	Final control (PC): practice-oriented differentiated test (according to the regulations)
SA5	Defense of an individual research project (incentive activities, additional points)
SA6	Preparation and demonstration with discussion of multimedia presentations (incentive points)

Form of assessment:

<b>6 semester</b>		<b>200 scores</b>
SA1. Evaluation of written works, surveys, solving a clinical case		<b>100</b>
		100
SA2. Writing and defending a medical history		<b>10</b>
		10

SA3. Testing		<b>10</b>
		10
SA4. Final control (PC): practice-oriented differentiated test (according to the regulations)		<b>80</b>
	підсумкове комп'ютерне тестування	16
	відповідь на теоретичні завдання	32
	виконання практичного завдання	32

Form of assessment (special cases):

<b>6 semester</b>		<b>200 scores</b>
SA1. Evaluation of written works, surveys, solving a clinical case		<b>100</b>
	In case of quarantine restrictions, practical classes are held remotely using the platforms Mix.sumdu.edu.ua, Google meet. A virtual patient is provided to write the history.	100
SA2. Writing and defending a medical history		<b>10</b>
		10
SA3. Testing		<b>10</b>
		10
SA4. Final control (PC): practice-oriented differentiated test (according to the regulations)		<b>80</b>
	In case of quarantine restrictions, practical classes are held remotely using the platforms Mix.sumdu.edu.ua, Google meet.	80

Mastering the module materials, the student is assigned a maximum of 5 points for each practical class (the grade is set in the traditional 4-point scale system). At the end of the academic year, the arithmetic mean of student performance is calculated. The maximum number of points that a student can receive in practical classes during the academic year is 120. The formula calculates the number of points of the student: the arithmetic mean of the success of current pints multiplied by 24. For example, if the arithmetic mean of current grades is 3.0, then  $3 * 24 = 72$ , this amount of points is the minimum for admission to the test, or the arithmetic mean of current grades is 5.0, then  $5 * 24 = 120$ , is the maximum amount of points that a student can score for current performance. The exact number of points is awarded for writing and defending a disease history as for one current class. A student is admitted to the exam if he meets the requirements of the curriculum and if he has scored at least 72 points for the current academic activity. Graded test (summative module control) is conducted according to the schedule at the end of the semester. The grade for the final module is set in the traditional 4-point scale system with subsequent transference into points, while, in general, the grade "5" corresponds to 80 points, "4" - 64 points, "3" - 48 points, and "2" - 0 points. Among these points, the score for practical and theoretical training is 40% of the total control points and corresponds to "5" - 32 points, "4" - 25.6 points, "3" - 19.2 points, and "2" - 0 points. The score for testing is 20%, which corresponds to "5" - 16 points, "4" - 12.8 points, "3" - 9.6 points, and "2" - 0 points. The summative control is credited to the student if he scored at least 48 points out of 80. The general assessment for the subject consists of the total of points scored for the current performance

and the summative module control.

## 10. Learning resources

### 10.1 Material and technical support

MTS1	Information and communication systems
MTS2	Library funds
MTS3	Computers, computer systems, and networks
MTS4	Simulation centre, which is equipped with floor and table scales, horizontal and vertical height meter, centimetre tape for anthropometric research; a pressure gauge, a steophonendoscope for practising blood pressure measurement skills; models of separate organs: 2 upper extremities for the practice of methods of carrying out injections, practice of skills of inspection of pulse, etc.; two models of buttocks for the practice of skills of performance of injections, care of patients, statement of enemas; 2 phantom dolls for practising child care skills (e.g. diapering), mastering the techniques of palpation, percussion, and auscultation of different systems.
MTS5	Technical means (films, radio and television programs, audio and video recordings, etc.)
MTS6	Medical facilities/premises and equipment (clinics, hospitals, etc.).
MTS7	Multimedia, video and sound reproduction, projection equipment (video cameras, projectors, screens, smart boards, etc.).
MTS8	Software (to support distance learning, online surveys, virtual laboratories, virtual patients, to create computer graphics, modelling, etc.).
MTS9	Medical equipment (floor and table scales, horizontal and vertical height meters, centimeter tape for anthropometric studies; hand dynamometer; blood pressure monitor, stethoscope for testing blood pressure measurement skills, spirometer, peak flow meter, etc.)
MTS10	TytoCare electronic device for auscultation of the patient's heart and lungs in the clinic or remotely, viewing videos of examinations of the ears and throat, measuring the patient's body temperature and photographing the patient's skin

### 10.2 Information and methodical support

<b>Essential Reading</b>	
1	Nelson Textbook of Pediatrics [Text] / R. M. Kliegman [et al.] ; ed. R. E. Behrman. - 21th ed. - Edinburgh [etc.] : Elsevier, 2020.
2	Pediatric Physical Examination [Текст] : textbook / O. V. Katilov, D. V. Dmytriiev, K. Yu. Dmytriieva, S. Yu. Makarov. — 2-nd ed. — Vinnytsia : Nova Knyha, 2019. — 504 p.
3	The urgent help and the rules of care of patients with diseases of the gastrointestinal tract: methodological instructions or practical lessons on the discipline “Nursing care” / compilers:O. I. Smiyan, Y. A. Manko. – Sumy : Sumy State University, 2021. –31 p.

<b>Supplemental Reading</b>	
1	Manual of Propaedeutic Pediatrics [Текст] : textbook / S. O. Nykytyuk, N. I. Balatska, N. B. Galiyash etc. — 2-nd ed., unchanged. — Ternopil : Ukrmedkniha, 2016. — 468 p.
2	Pediatrics physical examination: textbook for students of higher educational institutions/O.Katilov, D.Dmitriev at al – Vinnytsia: Nova Knyha, 2018.-504p.
3	Nelson Textbook of Pediatrics, 20th edition / Robert M. Kliegman, Bonita F. Stanton, Nina F. Schor [at all.] // London: Elsevier, 2016. – 3880 p.
4	Principle of Pediatric Nursing. Techniques for Medical Procedures and Manipulations: study guide/O.V.Tiazhka, A.M.Antoshkina, M.M.Vasiukova et al.;ed.by O.V.Tiazhka.-K.:AUS Medicina Publishing, 2016.-144p
5	Care for sick children. Methodological instructions for practical lessons on the topic “The role of care for sick children in medical and diagnostic process. Structure and functions of children’s hospital and polyclinic department, peculiarities of their work organization” / compilers: O. I. Smiyan, O. K. Romaniuk. – Sumy : Sumy State University, 2018. – 33 p.
6	Infant and Young Child Nutrition (0–23 months) : recommendations [Текст] / O. V. Katilov, A. V. Varzar’, O. Yu. Belousova etc. — Vinnytsia : Nova Knyha, 2019. — 64 p.
7	4930 Methodical instructions for practical lessons on the topic "Anatomical and physiological features, methods of examination and semiotics of respiratory diseases in children" on the discipline "Propaedeutics of pediatrics" [Текст] : or students of specialty 222 "Medicine" of the full-time course of study / O. I. Smiyan, V. A. Horbas, O. G. Vasilyeva. — Sumy : Sumy State University, 2021. — 56 p.
8	5144 Methodical instructions for practical lessons on the topic "Anatomical and physiological features, methods of examination and semiotics of urinary tract in children" on the discipline "Propaedeutics of pediatrics" [Електронний ресурс] : (in accordance with the conditions of the Bologna process) for stud. of spec. 222 "Medicine" of the full-time course of study / O. I. Smiyan, O. G. Vasilyeva, V. A. Horbas. — Sumy : Sumy State University, 2022. — 68 p.