

SYLLABUS

1. General information on the course

Full course name	Propaedeutics of Pediatrics
Full official name of a higher education institution	Sumy State University, Сумський державний університет
Full name of a structural unit	Academic and Research Medical Institute. Кафедра педіатрії
Author(s)	Manko Yuliia Anatoliivna, Smiian Oleksandr Ivanovych
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 6 semester
Workload	4 ECTS, 120 hours. For full-time course 90 hours are working hours with the lecturer (90 hours of seminars), 30 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	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.
Additional requirements	There are no specific requirements
Restrictions	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, which ensure the solution of professional tasks.

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 pediatrics, main stages of development. Organization medical and preventive care for children in Ukraine. Periods of childhood, their characteristics and features.

Pediatrics as a science of healthy and sick children, its place in the system of general medicine. The value of pediatrics for training a doctor. Objectives of the course on propaedeutic pediatrics. The main historical stages of the development of pediatrics in Ukraine. Principles of organization and methods of medical and preventive care for children in Ukraine. The structure of children's treatment and prevention institutions, organizational features their works. Organization of sanitary and hygienic and anti-epidemic regimes. Hospitalization of patients in a children's hospital and the specifics of the work of children's departments. Dispensary observation and rehabilitation of children in polyclinic conditions. Scope and forms of work of a pediatrician. The study of this topic involves theoretical work in the classroom, familiarization with the structure of the hospital, the organization of its work, the study of normative acts that regulate the work of a children's medical institution, both inpatient and polyclinic. Periods of childhood, their characteristics and features.

Topic 2 History collection. Clinical examination of the child. Criteria for assessing the general condition of children.

Peculiarities and methods of taking an anamnesis in children. Methods of clinical objective examination of healthy and sick children. General examination of healthy and sick 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 taking an anamnesis and assessing the severity of a sick child's condition is assumed at the sick bed. Under the current conditions, work with the use of virtual simulation of taking anamnesis, assessing the condition, as well as mastering skills with the help of clinical cases.

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 bone system in children.

Anatomical and physiological features of the bone system in children. Methodology of examination of the bone system. Semiotics of lesions and diseases of the bone system. Study of the hip joint in children. Instrumental methods of diagnosis. Study of this topic involves theoretical work in the classroom, in the simulation center (use of dummies, phantoms, centimeter tape), the use of virtual simulation (viewing films on the examination method of this system (complaints, inspection, palpation, percussion)) with further discussion.

Topic 8 Anatomical and physiological features, examination methods, semiotics of lesions of the muscular system in children.

Anatomical and physiological features of the muscular system in children. Methods of examination of the muscular system (strength, tone, development, etc.). Semiotics of lesions and diseases of the muscular system. Instrumental methods of diagnosis (determination of working capacity, etc.). The study of this topic involves theoretical work in the classroom, in the simulation center (use of dummies, phantoms, centimeter tape, dynamometer), the use of virtual simulation (viewing films on the examination method of this system (complaints, inspection, palpation)) with further discussion.

Topic 9 Anatomical and physiological features, methods of examination of the respiratory system in children.

Peculiarities of embryogenesis of respiratory organs and anomalies of their development. Anatomical and physiological features of the respiratory system in children. Methodology of clinical examination – complaints, examination, palpation, topographic and comparative percussion of the lungs, comparative auscultation of the lungs. Normal characteristics and semiotics of lesions and symptoms of the main diseases of respiratory organs, syndromes of lesions, main clinical manifestations. Functional and instrumental methods of research of the respiratory system: spirometry, spirometry, peak flowmetry in children. Types and degrees of ventilation disorders of pulmonary function. Semiotics of deviations. The study of this topic involves theoretical work in the classroom, in the simulation center (practicing the skills of palpation, percussion, auscultation on phantoms), the use of virtual simulation (viewing films on the methodology of clinical examination of the respiratory system and instrumental and functional methods of examination with further discussion. Analysis of clinical cases, mastering the skills of palpation, percussion and auscultation "one on one" with the use of a stethoscope, familiarization with the methods of conducting and interpreting the obtained data of the study of the function of external breathing, x-ray and ultrasound examination of the chest organs in the departments of the medical institution.

Topic 10 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) in healthy children of different ages. Echocardiography. The study of this topic involves theoretical work in training room, in the simulation center (practice of palpation, percussion, auscultation skills on phantoms using a phonendoscope (auscultation)), application of virtual simulation, instrumental and functional examination method with further discussion.

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

Topic 11 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 solving clinical cases, 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 12 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 solving clinical cases, 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 13 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 14 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 solving clinical cases, 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 15 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 solving clinical cases, 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 16 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 17 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 18 The defence of disease history. Test. Credit lesson.

The defense of the medical history will include the issues of the peculiarities of anamnesis collection, examination methods, semiotics of lesions of the system that is affected in each specific case (that is, according to the main disease of the child who was given to the student for curation). Diagnostic testing will include questions from all sections of propaedeutic pediatrics. Credit class will include questions for the entire course of propaedeutics of pediatrics, among which: theoretical questions, questions for computer test control, as well as a demonstration of mastered practical skills in the simulation center (in the absence of quarantine - at the patient's bedside).

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, clinical examination of the child taking into account the anatomical and physiological characteristics of the child's body).
LO2	To justify and apply clinical methods of examination taking into account the peculiarities of their conduct in childhood and knowledge of the anatomical and physiological features of organs and systems to understand the manifestations of the disease (features of examination, palpation, percussion, auscultation in children)
LO3	Determine the necessary list of laboratory and instrumental research and evaluation of their results, taking into account the anatomical and physiological characteristics of the child's body
LO4	On the basis of knowledge of the anatomical and physiological features of organs and systems and the semiotics of childhood diseases, identify the main clinical syndrome
LO5	Diagnose emergency conditions in childhood and have the skills to provide emergency medical care, including for newborns
LO6	Assess the anatomical and physiological features of the organs and systems of the child's body, physical and neuropsychological development, the adequacy of nutrition of a healthy child, and calculate it.
LO7	Demonstrate the skills of performing simple emergency medical manipulations in children (gastric lavage, enema administration, nasal and urinary catheters, etc.)

LO8	Taking into account the anatomical and physiological features of the child's body, demonstrate the skills of performing medical manipulations (measurement of pressure, temperature, indirect heart massage, artificial respiration, etc.)
LO9	Work with medical documentation, including electronic forms, have the skills to work in search professional information networks.
LO10	Be able to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.
LO11	Carry out sanitary and hygienic and preventive measures to prevent the spread of infectious diseases among children (carrying out sanitary and educational work among children, issuing bulletins)

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

Programme learning outcomes achieved by the course.

For 222 Medicine:

PO1	Have sound knowledge of the structure of professional activity. be able to develop professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.
PO4	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).
PO5	Collect complaints, history of life and diseases, evaluate psychomotor and physical development of the patient, state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information regarding the diagnosis (according to list 4), taking into account the age of the patient.
PO7	Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
PO8	Determine the main clinical syndrome or what determines the severity of the condition of the victim/injured (according to list 3) by making a reasoned decision and assessing the person's condition under any circumstances (in the conditions of a health care institution, outside its borders), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.
PO12	To assess the general condition of a newborn child by making a reasoned decision according to existing algorithms and standard schemes, observing the relevant ethical and legal norms.
PO13	Assess and monitor the child's development, provide recommendations on feeding and specifics of nutrition depending on age, organize preventive vaccinations according to the calendar.

PO17	Perform medical manipulations (according to list 5) 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.
PO21	Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.
PO23	Assess the impact of the environment on human health in order to assess the morbidity of the population.

7. Soft Skills

SS1	Ability to abstract thinking, analysis and synthesis
SS2	Ability to learn, master modern knowledge
SS3	Ability to apply knowledge in practical situations
SS4	Knowledge and understanding of the subject area and understanding of professional activity
SS5	Ability to make informed decisions; work in a team; interpersonal skills.
SS6	Ability to use information and communication technologies
SS7	Ability to search, process and analyze information from various sources.
SS8	Determination and persistence in relation to assigned tasks and assumed responsibilities.

8. Teaching and learning activities

<p>Topic 1. Subject and place of pediatrics, main stages of development. Organization medical and preventive care for children in Ukraine. Periods of childhood, their characteristics and features.</p>
<p>pr.tr.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>Pediatrics as a science of healthy and sick children, its place in the system of general medicine. The main historical stages of the development of pediatrics in Ukraine. Principles of organization and methods of medical and preventive care for children in Ukraine. Periods of childhood, their characteristics and features. The study of this topic involves theoretical work in the classroom, in the absence of quarantine mastering the skills of taking an anamnesis and assessing the severity of a sick child's condition is assumed at the patient's bedside. Under current conditions, work using a virtual simulation of taking an anamnesis, assessing the condition, as well as learning skills through clinical cases or in the departments of a medical institution.</p>
<p>Topic 2. History collection. Clinical examination of the child. Criteria for assessing the general condition of children.</p>

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

Peculiarities and methods of taking an anamnesis in children. Methods of clinical objective examination of healthy and sick children. General examination of healthy and sick 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 taking an anamnesis and assessing the severity of a sick child's condition is assumed at the sick bed. Under current conditions, work with the use of virtual simulation of history taking, condition assessment, as well as learning skills through clinical cases.

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 bone system in children.

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

Anatomical and physiological features of the bone system in children. Methods of clinical examination of the bone system (history taking, examination, palpation, percussion). The study of this topic involves theoretical work in the classroom, in the simulation center (use of dummies, phantoms, centimeter tape), the use of virtual simulation (viewing films on the method of examination of this system (complaints, inspection, palpation, percussion)) with further discussion.

pr.tr.12 "Semiotics of lesions of the bone system in children. Methodology of examination." (full-time course)

Semiotics of lesions of the bone system in children. Techniques of instrumental methods of examination (measurement of the circumference of the head, chest, the size of the large occipital lobe, X-ray research methods, etc.). Study of the hip joint in children. The study of this topic involves theoretical work in the classroom, in the simulation center (use of dummies, phantoms, centimeter tape), the use of virtual simulation (viewing films on the methodology of examination of the bone system (complaints, examination, palpation, percussion, instrumental research methods)) and further discussion.

Topic 8. Anatomical and physiological features, examination methods, semiotics of lesions of the muscular system in children.

pr.tr.13 "Anatomical and physiological features, methods of research of the muscular system in children." (full-time course)

Anatomical and physiological features of the muscular system in children. Methods of muscle research systems in children (tone, strength, development, etc.). The study of this topic involves a theoretical one work in the classroom, in the simulation center (use of dummies, phantoms, dynamometer, centimeter tape), application of virtual simulation (view films on the methodology of examination of the muscular system (complaints, examination, palpation)) and further discussion.

pr.tr.14 "Semiotics of lesions and diseases of the muscular system." (full-time course)

Semiotics of lesions and diseases of the muscular system (hypertonia, hypotonia, atony, myopathy, myasthenia, etc.). Instrumental methods of diagnosis (determination of working capacity, etc.). The study of this topic involves theoretical work in the classroom, in the simulation center (use of dummies, phantoms, centimeter tape, dynamometer), the use of virtual simulation (viewing films on the examination methods of this system (complaints, inspection, palpation, instrumental research methods)) and further discussion

Topic 9. Anatomical and physiological features, methods of examination of the respiratory system in children.

pr.tr.15 "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.16 "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.17 "Symptoms of major respiratory diseases of respiratory disorders" (full-time course)

Semiotics of lesions and symptoms of the main diseases of the respiratory organs in children. The study of this topic involves theoretical work in the classroom, in the simulation center (continuation of practicing the skills of palpation, percussion, auscultation on phantoms using a phonendoscope (auscultation), the use of virtual simulation (watching films with a demonstration clinical manifestations of the main diseases of the respiratory system.) In addition, the study of this pathology involves role-playing, mastering the skills of palpation, percussion and auscultation "one on one" using a stethoscope.

pr.tr.18 "Main syndromes of respiratory disorders and respiratory failure, clinical manifestations" (full-time course)

Syndromes of respiratory disorders and respiratory insufficiency, the main clinical manifestations (bronchoobstructive syndrome, croup syndrome, respiratory insufficiency). The study of this topic involves theoretical work in the classroom, in the simulation center (continuation of practicing the skills of palpation, percussion, auscultation on phantoms using a phonendoscope (auscultation), the use of virtual simulation (watching films demonstrating the clinical manifestations of the main syndromes of the respiratory system). In addition, the study of this pathology involves role-playing, mastering the skills of palpation, percussion and auscultation "one on one" using a stethoscope.

pr.tr.19 "Functional and instrumental methods of research of respiratory system. Methodology and evaluation of indicators" (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).

pr.tr.20 "Functional methods of research of the respiratory system. Methodology and evaluation of indicators" (full-time course)

Spirography, spirometry, peak flowmetry in children. Methodology and evaluation of indicators. Types and degrees of ventilation disorders of pulmonary function. Semiotics of deviations. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (viewing films with methods of functional research of the respiratory system (spirography, spirometry, peak flowmetry)) with further discussion. In addition, the study of this system involves solving clinical cases, mastering the skills of performing external breathing function research "one on one" using a spirometer, peak flow meter. Familiarization with the methods of conducting and interpreting the obtained data of external breathing function research (spirography, peak flowmetry) on stationary devices in specialized departments of the medical institution (according to the cooperation agreement between the medical institution and the university).

Topic 10. APF (anatomical and physiological features) of the cardiovascular system in children. Methods of clinical examination of CVC (cardiovascular system) organs in children.

pr.tr.21 "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 clinical cases, mastering the skills of palpation, percussion, and auscultation "one on one".

pr.tr.22 "Methods of examination of the cardiovascular system in children (percussion, auscultation), semiotics of lesions" (full-time course)" (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 mastering the skills of palpation, percussion, and auscultation "one on one" using a stethoscope.

pr.tr.23 "Symptoms of the main diseases of the cardiovascular system in children" (full-time course)

Semiotics of congenital and acquired diseases of the heart and blood vessels in children, myocarditis, endocarditis, pericarditis, etc. The study of this topic involves theoretical work in the classroom, in the simulation center (continuation of practicing skills palpation, percussion, auscultation on phantoms using a phonendoscope (auscultation)), use of virtual simulation (watching films demonstrating clinical manifestations of the main diseases of the cardiovascular system). In addition, the study of this pathology includes role-playing games, improvement of mastering the skills of palpation, percussion and auscultation "one on one" using a stethoscope.

pr.tr.24 "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.25 "Laboratory and functional methods of research of the cardiovascular system" (full-time course)

Clinical and biochemical indicators of blood in cardiovascular diseases. Functional tests. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (watching films on the methodology of conducting functional examination methods) with further discussion. In addition, when studying this system mastering the skills of blood pressure measurement using a tonometer and phonendoscope, familiarization with the methods of conducting and interpretation are expected received data from the study of functional tests (Barbell, Gencha, Shalkov, bicycle ergometry and others).

pr.tr.26 "Instrumental methods of CCC research in children - x-ray, ultrasound, electrocardiography, phonocardiography, echocardiography in children. ECG features in children are normal." (full-time course)

Electrocardiography, phonocardiography, echocardiography, x-ray and ultrasound examination methods. Features of the ECG in children in normal and pathological conditions. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (watching films on the methodology of conducting instrumental survey methods) with further discussion. In addition, when studying this system, familiarization with the methods of conducting and interpreting the obtained data of FCG, ECG, X-ray and ultrasound examination of the heart in the departments of the medical institution (according to the cooperation agreement between the medical institution and the university) is expected.

Topic 11. Anatomical and physiological features of the digestive system, examination methods.

pr.tr.27 "Anatomical and physiological features of the digestive system, Methodology of clinical examination of digestive organs (examination, palpation, percussion, auscultation). Semiotics of lesions." (full-time course)

Age-related anatomical and physiological features of the digestive system in children. Methods of clinical examination of digestive organs (history taking, examination, palpation, percussion, auscultation). Semiotics of lesions of digestive organs in children. The main diseases of the digestive organs in children (pylorospasm, pylorostenosis, gastritis, peptic ulcer disease, cholecystitis, biliary tract dyskinesia, etc.) in children. "Acute stomach" syndrome. Study of this topic involves theoretical work in the classroom, in the simulation center (working with phantoms), the use of virtual simulation (watching films on the methodology of clinical examination of the gastrointestinal tract and demonstrating the clinical manifestations of the main diseases and syndromes) with further discussion. In addition, the study of this system involves mastering the skills of taking an anamnesis, examination, palpation, percussion and auscultation "one on one" using a stethoscope.

pr.tr.28 "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 12. Anatomical and physiological features, methods of examination of the excretory system in children.

pr.tr.29 "Laboratory, functional and instrumental methods of research of excretory system 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).

pr.tr.30 "Anatomical and physiological features, methods of examination of the excretory system in children. semiotics of lesions" (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

Topic 13. Features of the endocrine system

pr.tr.31 "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).

pr.tr.32 "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).

Topic 14. Blood system in children.

pr.tr.33 "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 solving clinical cases, mastering the skills of palpation, percussion, and auscultation "one on one".

pr.tr.34 "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 15. Immune system in children. Curation.

pr.tr.35 "Immune system in children. Immunodeficiency states and methods of diagnosis of immunodeficiencies in children" (full-time course)

AFO of the immune system. Examination methodology. Semiotics of lesions. Immunodeficiency states and methods of diagnosis of immunodeficiencies in children. The study of this topic involves theoretical work in the classroom, in the simulation center, and application virtual simulation (viewing films on the methodology of clinical examination of the immune system (complaints, examination, palpation)) and instrumental and functional examination methods with further discussion. In addition, when studying this system solving clinical cases, mastering the skills of palpation "one on one", getting acquainted with the methods of conducting and interpreting the obtained data of laboratory (immunological) studies, x-ray and ultrasound examination of the immune system in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) .

pr.tr.36 "Curation. Preparing to write a medical history" (full-time course)

Independent care of a sick child. Preparation for writing a medical history. In the absence of quarantine restrictions, a sick child who is being treated in the departments of a medical institution is provided to the student during curation. The student independently, but under the guidance of the teacher, conducts a clinical examination of the child. The results of examinations, including paraclinical ones with conclusions, are drawn up by the student in written form work. The rules for writing a medical history are regulated by relevant regulations. For the student, they are outlined in the department's methodological recommendations for writing educational medical history. In case of quarantine, a virtual patient is provided to the student.

Topic 16. Breastfeeding

pr.tr.37 "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.38 "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.39 "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.40 "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.41 "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 17. Metabolism in children

<p>pr.tr.42 "Metabolism in children" (full-time course)</p> <p>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.</p>
<p>Topic 18. The defence of disease history. Test. Credit lesson.</p>
<p>pr.tr.43 "The defence of disease history" (full-time course)</p> <p>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).</p>
<p>pr.tr.44 "Test" (full-time course)</p> <p>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).</p>
<p>pr.tr.45 "Credit lesson (practically - oriented differentiated credit)" (full-time course)</p> <p>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.</p>

9. Teaching methods

9.1 Teaching methods

Course involves learning through:

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

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

9.2 Learning activities

LA1	Preparation for practical classes
LA2	Preparation for current and final control
LA3	Analysis of clinical cases
LA4	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
LA5	Preparation of multimedia presentations
LA6	Solving specific clinical tasks (for example, writing a case history and defending it in the audience)
LA7	Practical work with the patient in the specialized departments of the hospital (in the absence of quarantine) or in a simulation center
LA8	Self-study
LA9	Writing the disease history
LA10	Work with textbooks and relevant information sources
LA11	Electronic training in Google Meet, Viber, Telegram, Zoom, MIX.sumdu.edu.ua systems
LA12	Individual research project (student research paper, article, thesis, etc.)
LA13	Practicing practical skills in the simulation center
LA14	Viewing films on the method of examination of organs and systems and their details

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

<p>FA1 Peer assessment</p>	<p>Partnership interaction, aimed at improving results educational activity for comparison account own current level of success with previous ones indicators. Provides possibility of analysis own education activity</p>	<p>During the entire period of studying the discipline</p>	<p>Adjustment together with students of approaches to learning, taking into account the results of the assessment.</p>
<p>FA2 Survey and teacher's oral comments based on his results</p>	<p>Provides an opportunity to reveal the state of experience gained by students educational activity in accordance with the set goals, find out the prerequisites for the state of formation of the obtained results, the causes of difficulties, adjust the learning process, track the dynamics of the formation of learning results and forecast their development.</p>	<p>Throughout period of study disciplines</p>	<p>Consultancy students at work with and standardized the patient, directly and indirectly observation of work acquirers "near bed" of a patient with further level determination practical preparation</p>
<p>FA3 Consultancy teacher during preparation individual research project (performance at the conference scientific competition works)</p>	<p>An important factor formation professional qualities there are future specialists Scientific research work students Involvement the last to research activity contributes to the formation their scientific outlook, hard work, working capacity, initiative, etc.</p>	<p>Throughout period of study disciplines</p>	<p>Oral comments the teacher To a student are provided additional encouraging points (from 5 to 10), depending on the species research project</p>
<p>FA4 Solving case problems</p>	<p>An important factor in the formation of professional qualities future specialists scientific 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>Throughout period of study disciplines</p>	<p>Oral comments the teacher To a student are provided additional encouraging points (from 5 to 10), depending on the species research project</p>

<p>FA5 Guidelines teacher in execution process practical tasks</p>	<p>In the instructions methods are disclosed pedagogical control by professional activities of acquirers. Efficiency is defined compliance with all stages implementation of practical tasks Effectiveness formation necessary practical abilities and skills depends on the level formation practical competence.</p>	<p>Throughout period of study disciplines</p>	<p>Consultancy students at work with and standardized the patient, directly and indirectly observation of work acquirers "near bed" of a patient with further level determination practical preparation</p>
<p>FA6 Tests (automated tests) for control educational achievements acquirers</p>	<p>The effective method level checks assimilation of knowledge, skills and skills from each topic academic discipline. Testing allows check learning educational material from of each topic.</p>	<p>Throughout everything period of study disciplines</p>	<p>The student has give 60% correct ones answers that are available admission to practical part of the lesson</p>
<p>FA7 Task level assessment theoretical preparation</p>	<p>Evaluation of acquired theoretical know-how from subjects of the discipline. It is held on to everyone practical occupation respectively specific goals of each topic based complex performance evaluation student, which includes level control theoretical training, independent performance work according to thematic plan.</p>	<p>Throughout period of study disciplines</p>	<p>Feedback aimed at support independent student works, detection shortcomings and level assessment acquired theoretical nobility</p>
<p>FA8 Consultancy teacher during writing history diseases</p>	<p>Writing history disease predicts demonstration of skill work with the patient consolidation of practical physical skills examination of the patient, assessment and analysis medical documentation, establishment of clinical diagnosis. Anticipated protection medical history when the student must provide answers to questions regarding the patient, curation which he conducted modern methods diagnostics and treatment</p>	<p>Writing during cycle, protection - according to calendar and thematic plan</p>	<p>Consultancy teacher during writing history oral diseases comments The acquirer receives grade for writing history diseases (5 points maximum) and defense (5 points maximum).</p>

<p>FA9 Audit implementation practical skills</p>	<p>Working out practical skills on various dummies and simulators.</p>	<p>Throughout period of study.</p>	<p>It will be successful implementation practical skills with there are disciplines admission to calculation. Maximum scores - 20, minimum -12</p>
<p>FA10 Implementation group case</p>	<p>The method allows involve all participants to the discussion process and justification by own thought multilateral communications, develop the ability to conduct a professional discussion, educate respect for colleagues and ability to generate alternative ideas and proposals</p>	<p>Throughout period of study disciplines</p>	<p>Assessment of ability student to teamwork, skill justify your decisions level determination theoretical preparation that displayed in appropriate assessment</p>
<p>FA11 Objective structured clinical examination</p>	<p>The student must prove your skill examine the patient, put the correct one diagnosis, prescribe and carry out treatment, considering individual features of a patient with compliance with the main principles of ethics and deontology</p>	<p>Throughout period of study disciplines</p>	<p>It is held on every lesson result implementation of the ND affects on complex grade for practical occupation</p>
<p>FA12 Assessment interpretations laboratory and instrumental methods examination</p>	<p>The student has interpret the results laboratory and instrumental examination methods, highlight the leading clinical syndrome or pathological conditions.</p>	<p>Throughout period of study disciplines</p>	<p>It is held on every lesson result implementation of the ND affects on complex grade for practical occupation.</p>
<p>FA13 Discussions in focus groups</p>	<p>The method allows involve all participants to the discussion process and justification by own thought multilateral communications, develop the ability to conduct a professional discussion, educate respect for colleagues and ability to generate alternative ideas and proposals</p>	<p>Throughout period of study disciplines</p>	<p>Assessment of ability student to teamwork, skill justify your decisions level determination theoretical preparation that displayed in appropriate assessment</p>

FA14 Preparation and demonstration of discussion multimedia presentations (encouraging points).	Getters on their own prepare multimedia presentations on certain topics, included in thematic plan and report in class. After the presentation it is conducted discussion.	During the training semester	The acquirer receives skills independent scientific research literature, is studying select most relevant and fresh information Can get up to 5 points.
FA15 Revision educational films on methods examination bodies and systems and further them burn	The acquirer has the opportunity self-assess survey methodology one or another system for further rejection in simulation center or at the patient's bed, and the teacher controls correctness of actions.	during the year	Provides an opportunity to polish technique performance of that or another method
FA16 Protection individual research project (encouraging activity, extra points)	An important factor formation professional qualities there are future specialists Scientific research work students Involvement the last to research activity contributes to the formation their scientific outlook, hard work, working capacity, initiative, etc.	Throughout period of study disciplines	Oral comments the teacher To a student are provided additional encouraging points (from 5 to 10), depending on the species research work

10.3 Summative assessment

	Description	Deadline, weeks	Feedback
SA1 Evaluation of written works, surveys, clinical solution the case	Written ones are evaluated the work is done as per occupation, as well as in form homework (example menu calculation to a child up to a year old, or evaluate physical and nervous - mental development)	during the study period semester	Getter maximum gets 5 points minimum 3

SA2 Writing and defending a medical history	Writing history disease predicts demonstration of skill work with the patient fixing practical skills physical examination of the patient, installation clinical diagnosis of elements differential diagnostics. Anticipated protection medical history when the student must provide answers to questions regarding the patient the curation of which he conducted modern methods diagnostics and treatment.	According to calendar and thematic plan	A student can get maximum 10 points. 5 points is accrued for writing 5 points for protection. Minimal number points for successful protection - 6 points
SA3 Testing	At every lesson the acquirer passes passes computer testing with theoretical part on platforms Google Meet, or others which are used in Sumy State University	During the training year	The acquirer has right answer to no less than 60% of questions, what is admission to practical parts occupation
SA4 Performing practical skills and manipulations	Comprehensive working out practical component educational programs discipline in safe for education seekers simulation environment Provides opportunity to master skills with various emergency situations.	According to calendar and thematic plan	IS mandatory for admission d at final modular control Maximum number 20 points, minimum 12
SA5 Final control (PC): practice-oriented differentiated test (according to the regulations)	Drafting differential calculation. Before the calculation are allowed acquirers who are successful learned the material from disciplines, made up practical skills and protected history diseases	According to the schedule	Getter may get 80 points for the exam. Minimal number points it has get student - 48 points

Form of assessment:

	Points	Minimum points	Можливість перескладання з метою підвищення оцінки
6 semester	200 scores		
SA1. Evaluation of written works, surveys, clinical solution the case	80		

		80	48	No
SA2. Writing and defending a medical history		10		
		10	6	No
SA3. Testing		10		
		10	6	No
SA4. Performing practical skills and manipulations		20		
		20	12	No
SA5. Final control (PC): practice-oriented differentiated test (according to the regulations)		80		
	final computer testing	16	10	No
	Oral survey, performance of a group case, clinical case, answers to theoretical questions.	32	19	No
	Виконання практичного завдання оцінювання стану дитини, об'єктивне структуроване клінічне обстеження з визначенням основного клінічного синдрому, інтерпретація результатів лабораторного та інструментального обстеження.	32	19	No

When evaluating knowledge, a student is assigned for each hour of practical training a maximum of 5 points (the rating is given in the traditional 4-point rating system). The maximum number of points that a student can receive during practical classes academic year - 100. The number of student points is calculated according to the formula: average multiply the arithmetic number from the success rate of the current grades by 20. For writing and defense the medical history is assigned the following points: "5" - 5 points, "4" - 4 points, "3" - 3 points, "2" - 0 points. In general, for medical history and diagnostic testing, the student can do as much as possible get 10 points each, while the required minimum is 6 points. Maximum the number of points for the student's current educational activity is 120. Minimum (admission to credit) - 72 points (60 points for current academic performance and 6 points for medical history and testing). Practically - oriented differentiated assessment is carried out according to the schedule at the end of the semester. The credit score is given in the traditional 4-point system evaluation, at the same time, in general, the rating "5" corresponds to 80 points, "4" - 64 points, "3" - 48 points, "2" - 0 points, of which - the assessment for practical and theoretical training is 40% of of the total control points and corresponds to - "5" - 32 points, "4" - 25.6 points, "3" - 19.2 points, "2" - 0 points. The grade for testing is 20%, which corresponds to –“5” – 16 points, “4” – 12.8 points, "3" - 9.6 points "2" - 0 points. PMK is credited to a student if he scored at least 48 points out of 80. The total score for the discipline consists of the sum of points scored for the current one success and completion of PMK. Encouraging points are added to the grade for the discipline - for individual research project (defense of student scientific work 12 points, presentation at the conference 5, poster presentation - 4, report abstracts 3 points), for preparation multimedia presentations 5 points. The maximum number of these points should not be more than 12, and the total score in the discipline cannot exceed 200. Provided the possibility of re-enrollment of points obtained under the system of non formal education, respectively to the Regulations.

11. Learning resources

11.1 Material and technical support

MTS1	Information and communication systems
MTS2	Library funds, archive of radiographs, spirograms, electrocardiograms, computer tomograms, results of laboratory examination methods
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
MTS11	The use of techniques for conducting a survey of parents or a child and a clinical examination of a child.

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	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.
3	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.
4	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.
Supplemental Reading	
1	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.
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	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.
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	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.