**The Form #U – 3.04**

MINISTRY OF HEALTH OF UKRAIN

KHARKIN NATIONAL MEDICAL UNIVERSITY

APPROVED  
Vice-rector for scientific  
educational work

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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\_\_\_\_\_\_\_\_\_\_\_\_Department of Fundamental Medicine #2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SYLLABUS OF THE COURSE**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Propedeutics to Pediatrics \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**(The title of the course)**

Training direction\_\_\_\_\_\_\_\_\_ 1201 "Medicine" \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 (The code name and field of study)

specialty\_\_7.12010001 Medicine,  
       \_\_\_7.110105 "Medical prophylaxis"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 (code and name of specialty)

specialization \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 (name of specialization)

Institute faculty \_\_\_ Kharkiv National Medical University,

\_\_\_\_V faculty of foreign students \_\_\_\_\_\_

(name of institution, faculty)

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| --- | --- | --- |
| The work program adopted at the session of the Fundamental Medicine#2  Protocol of "28" September 2015 number 1  Head of Department  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Klimenko V.A.                (signature) (surname and initials)  “\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20\_\_ |  | Approved methodical commission on problems KhNMU \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                           (Title)  Protocol of "\_\_\_\_" \_\_\_\_\_\_\_\_ 20\_\_\_ year № \_\_\_  chairman \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (signature) (surname and initials) "\_\_\_\_" \_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_\_ year |

The Developers:

Klimenko Viktoria - the head of the department of Fundamental Medicine #2, associate professor, [Dr.scient.med](http://www.multitran.ru/c/m.exe?t=4762078_1_2&ifp=1&s1=Dr.scient.med).,

Sivoplyas-Romanova Hanna, associate professor, PhD,

1. **The purpose and objectives of the course**

The purpose of the study Propedeutics Pediatrics – to reach the ultimate goals which are based on OPP training general practitioners and is the basis for the construction of the course content. The description objectives are formulated through ability as target tasks (actions). The ultimate goals to each section are defined on the basis of specific targets in the form of certain abilities (actions), targets that achieve the ultimate goal of the discipline. Requires of EQC and OPP ultimate goals of the discipline "Propedeutics Pediatrics" students are acquiring skills:

- to conclude that the physical and psychomotor development of children of all ages.  
- to carry out a clinical examination of various organs and systems in healthy and sick children.

- to interpret the results of laboratory and instrumental studies of various systems child's body.

- to analyze the age characteristics of functions.

- to interpret the status of the body of the child - identified pathological symptoms and syndromes.

- to calculate and draw up a daily diet for young children.

**Task.** Following the completion of the course the student should:

**to know:** features of physical and psychomotor development of children, anatomical and physiological characteristics, methods of clinical and paraclinical investigations of major systems in children, symptoms and syndromes of major diseases in children, the principles of feeding infants;

**be able to:** evaluate physical and psychomotor development of children, to carry out a clinical examination of the child, assign and interpret research paraclinical child syndromologic establish the diagnosis of diseases of children.

1. **The program of the course**

**Section 1. Discipline Child Development. Feeding young children.**

***Specific goals:***

- to know the position of propedeutics in the general pediatric medicine.

- to know the principles of therapeutic and preventive care for children.

- to interpret historical stages of pediatrics development in Ukraine.

- to interpret the criteria children’s health.

- to analyze the features of different periods of childhood.

**Topic 1. The subject and place of pediatrics in the general medicine, basic stages of development.**

***Specific goals:***

• to know the main stages of Pediatrics development in the world and national.

• to know prominent pediatricians Ukraine.

Pediatrics as ascience of healthy and sick child, its place in the general medicine. Value of Pediatrics for training doctor. Objectives of the course of propaedeutic pediatrics. The main historical stages of pediatrics in Ukraine. Professors I. Troitskiy, V.E. Chernov, M.D. and V. Ponomarev V.F. Jakubowicz as organizators of the first pediatric departments in medical Universities in Ukraine. Contribution of professorsO. A. Khochol, V.A. Belousov, F.D. Rumyantsev, L.A. Finkelstein, A.I. Skrotskii, I.M. Rudneva, P.M. Gudzenko, V.M. Sidelnikova, B.J. Reznik, C.l. Ignatova, V.D. Chebotarev and others in the development of national clinical pediatrics.

**Topic 2. Periods of Childhood.**

***Specific goals:***

• to take anamnesis of disease and life.

• to evaluate peculiarities periods of childhood in children.

• to assess the general condition of the child.

Periods of childhood, their characteristic and peculiarities. Peculiarities and methodic of taking anamnesis. The methods of clinical examination of healthy and sick children. General examination The stages of intrauterine development. Teratogenic factors and their influence at different age of gestation, “critical periods”. Peculiarities of pathology in various periods of childhood. The evaluation criteria’s of general condition of ill children.

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

***Specific goals:***

• to make conclusion about health condition of newborn child.

• to interpret detected changes in a newborn child based on knowledge of anatomical and physiological characteristics.

Peculiarities of newborn infant. Physiological, transient conditions in the neonatal period. The concept about maturity of newborn. Signs of premature, classification of premature newborns. Primary toilet and patronage of newborns. The newborn infant nursing.

**Topic 4. Physical development of children, and anthropometry. Evaluation of physical development of children.**

***Specific goals:***

- to measure the main parameters of the child's body (weight, height, circumference of head and chest).

- to calculate anthropometric indexes - BMI.

- to calculate the appropriate parameters of physical development.

- to assess physical development for percentile tables and nomograms on the basis of the data obtained.

The concept of physical development, the importance of it’s assessment. Anthropometry. Methods for assessing the physical development of children. Semiotics of disorders of physical development of children.

**Topic 5. Psychomotor development of children. Assessment of psychomotor development of children. Features of the nervous system in children.**

***Specific goals:***

- to know the basic criteria and parameters psychomotor development of children of different ages.

- to explain the features of psychomotor development Newborns.

- to assess psychomotor development of children 1 year of life in months.

- to assess psychomotor development of preschool children, preschool, junior and senior school age.

- to identify a history factors affecting changes in psychomotor development.

The concept of psychomotor development of children, its features in different periods of childhood. Features neuropsychological assessment of the newborn. Semiotics of disorders of neuro-psychological development of children.

**Topic 6. Natural (breastfeeding) of infants.**

***Specific goals:***

- Collect anamnesis child feeding infants and evaluate it.

- Calculate the daily amount of food a child, depending on age.

- Calculate the necessary amount of food per feeding, depending on the age of the infant.

- Make a one-day menu for child infancy, and is breastfed.

- Assess the child's daily diet and conduct its correction (if necessary).

Breastfeeding of infants. Modern aspects of breastfeeding of infants. Principles of breastfeeding support. The value of breastfeeding for mother’s and child’s health. Breast milk: composition and biological properties. Features lactation and it’s violation. Difficulties in breastfeeding. Methods for calculating the daily amount of food and feeding regime. Rules and technique of breastfeeding. Solid food and feeding correction. Norms of food ingredients for children. The concept of free feeding.

**Topic 7. Artificial and mixed feeding. Feeding of toddlers.**

***Specific goals:***

- to explain the definition of artificial feeding infants classification of infant formula.

- to collect anamnesis of infant’s feeding and evaluate it.

- to calculate the daily amount of food, make a one-day menu for a baby with artificial feeding depending on age.

- to organize proper artificial feeding, to assess its effectiveness.

- to provide correction of feeding for a baby with artificial feeding.

- to explain the definition of mixed feeding.

- to collect anamnesis of infant’s feeding and evaluate it, to prevent progression hypogalactia in a mother.

- to calculate the daily necessary amount of food at each feeding and to make a one-day menu for a child with mixed feeding depending on age.

- to provide correction of feeding for a baby with mixed feeding.

- to collect feeding history of a toddler.

- to assess compliance with the necessary nutrition needs for a complete physical and psychomotor development.

- to make a one-day menu for healthy toddler taking into account the needs of food ingredients.

- to provide correction of feeding for a toddler.

The concept of artificial feeding. Classification and nutrients content of infant’s formulas. The technique and rules of artificial feeding. Daily maintenance of and proteins, fats, carbohydrates and calories in artificial feeding. Solid food with artificial feeding. Child's daily requirement of food ingredients. The concept of mixed feeding. The technique and rules of supplementation. Mixtures used for supplementation. Scheme mixed supplementation. Organization principles of nutrition and healthy toddlers.

**Final class,** including control of practical skills of situation tasks, test control of theoretical knowledge.

**Section 2. Anatomo-physiological peculiarities, methods of evaluation and semeiology children’s diseases.**

**Topic 8.** **Anatomo-physiological peculiarities, methods of evaluation and semeiology of the nervous system diseases in children.**

***Specific goals:***

- to know the anatomical and physiological features of the nervous system in children of all ages.

- to be able to choose from anamnesis data reflecting the presence of a child's affection peripheral and central nervous system.

- to be able to investigate and assess the condition of the nervous system.

- to interpret the symptoms of disorders of the nervous system in children and integrate them into syndromes.

Anatomo-physiological peculiarities of the nervous system in children. Methods of evaluation of the nervous system in children. Semeiology of the nervous system diseases in children.

**Topic 9.** **Anatomo-physiological peculiarities, methods of evaluation and semeiology of the skin, subcutaneous tissue, bones and muscles diseases in children.**

***Specific goals:***

* to conduct an clinical examination of the skin, subcutaneous tissue allowing for the examination techniques in children.
* - to collect anamnesis, conduct an objective examination of the musculoskeletal system in children.
* - to prescribe additional methods of examination to determine the condition of the musculoskeletal system in children.
* - to conduct syndrom-based diagnosis of skin and bone diseases in children.

Anatomo-physiological peculiarities of the skin and it’s derivates in children. Peculiarities of subcutaneous tissue structure in children. Methods of evaluation and semeiology of the skin and subcutaneous tissue diseases in children.

Anatomo-physiological peculiarities of the bone system in children. Methods of evaluation and semeiology of the bones diseases in children.

**Topic 10.** **Anatomo-physiological peculiarities, methods of evaluation of the respiratory system in children.**

***Specific goals:***

* to collect anamnesis for a patient with diseases of the respiratory system.
* to conduct an objective examination of the respiratory taking into account the child's age characteristics.
* to interpret the survey data.

Peculiarities of embryogenesis respiratory system and abnormalities it’s development. Anatomical and physiological peculiarities of the respiratory system in children. Methods of respiratory clinical examination of children (visual inspection, palpation, comparative and topographic percussion, auscultation of the lungs).

**Topic 11. Paraclinical methods of investigation and semeiology of the respiratory system diseases in children.**

***Specific goals:***

* to prescribe the number of laboratory and instrumental investigations in case of respiratory system diseases in children.
* to provide syndrome-based diagnosis of respiratory system diseases in children.

Semeiology of main disorders of respiratory system in children. Respiratory distress syndrome and respiratory failure syndrome, main symptoms. The spirography.

**Topic 12. Anatomo-physiological peculiarities, methods of evaluation of the cardio-vascular system in children.**

***Specific goals:***

* to collect anamnesis for a patient with diseases of the cardiovascular system.
* to conduct an objective examination of the cardiovascular taking into account the child's age characteristics.
* to interpret the survey data.

The embryogenesis of cardiovascular system and congenital anomalies of the heart and blood vessels. The peculiarities of blood circulation in fetus. Anatomo-physiological peculiarities of the heart and blood vessels in childhood. Method of physical examination, palpation of the cardiovascular system in children. Percussion of absolute and relative boundaries of the heart in children. Auscultation of the heart in children.

**Topic 13. Paraclinical methods of investigation and semeiology of the cardiovascular system diseases in children.**

***Specific goals:***

* to prescribe the number of laboratory and instrumental investigations in case of cardiovascular system diseases in children.
* to provide syndrome-based diagnosis of cardiovascular system diseases in children.

The main clinical signs of cardiovascular system disorders in children (cyanosis, bradycardia, tachycardia, etc.). Semeiology of congenital and acquired heart disease in children and blood vessels. Features ECG and PCG in healthy children of all ages. Echocardiography.

**Topic 14. Anatomo-physiological peculiarities, methods of evaluation, Paraclinical methods of investigation and semeiology of the digestive system diseases n children.**

***Specific goals:***

* to collect anamnesis for a patient with diseases of the digestive system.
* to conduct an objective examination of the digestive system taking into account the child's age characteristics.
* to interpret the survey data.
* to prescribe the number of laboratory and instrumental investigations in case of digestive system diseases in children.
* to provide syndrome-based diagnosis of digestive system diseases in children.

Age-related anatomical and physiological features of the digestive system in children. Methods of clinical examination of the digestive system (observation, palpation, percussion, auscultation). Semeiology of diseases digestive system in children. Paraclinical survey methods (sonography, endoscopy, thermography).

**Topic 15. Anatomo-physiological peculiarities, methods of evaluation, Paraclinical methods of investigation and semeiology of the urinary system diseases in children.**

***Specific goals:***

* to collect anamnesis for a patient with diseases of the urinary system.
* to conduct an objective examination of the urinary system taking into account the child's age characteristics.
* to interpret the survey data.
* to prescribe the number of laboratory and instrumental investigations in case of urinary system diseases in children.
* to provide syndrome-based diagnosis of urinary system diseases in children.

Anatomical and physiological features of urinary system in children. Summary of embryogenesis of the urinary system as the basis of congenital anomalies. Methods of examination of the urinary system in children.

Symptoms of the most common diseases of the urinary system in children. Semeiology of microscopic changes in urinary sediment (proteyin-, erytrotsyt-, leykotsyt- and cylindruria etc.). Syndromes of acute and chronic renal failure.

**Topic 16.** **Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the blood and immune systems diseases in children.**

***Specific goals:***

* to carry out a clinical examination of the blood and immune systems with age.
* to differentiated clinical signs of immunodeficiency, anemia, leading syndromes of disorders of blood and immune system.
* to interpret the results of laboratory and instrumental methods.

The peculiarities of the blood system in children of different age. Methods of clinical and laboratory testing of children with disorders of the blood system. Clinical and hematological semiotics of major syndromes (anemic, hemolytic, haemorrhagic etc.) and diseases of the blood system in children.

The peculiarities of the immune system in children of different age. Methods of clinical and laboratory testing of children with disorders of the immune system. The pecuilarities of the immune response in grafting a child. The concept of immunodeficiencies, classification and semiotics of immunodeficiencies. Clinical and immunological semiotics of HIV infection in children.

**Topic 17.** **Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the endocrine system diseases in children.**

***Specific goals:***

* to collect anamnesis for a patient with diseases of the urinary system.
* to conduct an objective examination of the urinary system taking into account the child's age characteristics.
* to interpret the survey data.
* to prescribe the number of laboratory and instrumental investigations in case of urinary system diseases in children.
* to provide syndrome-based diagnosis of urinary system diseases in children.

Anatomical and physiological peculiarities of the endocrine system in children. Semeiology of hyper- and hypothyroidism syndromes of endocrine glands and endocrine diseases in children. Investigation’s methods.

**Topic 18. Features of metabolism in children.**

***Specific goals:***

- to explain the peculiarities of energy, protein, carbohydrate, lipid, water, mineral and acid-base metabolism in children.

- to carry out a clinical examination in children with metabolic disorders.

- to recognize these clinical symptoms of metabolism disorders and to identify major syndromes.

- to interpret the results of laboratory and instrumental methods of investigation.

***Energy metabolism in children.*** Patterns of age-related changes of energy metabolism in children.

Features of neuroendocrine regulation of metabolism in children. The general idea of metabolic diseases. Thermal balance the child's body. Features of thermogenesis and thermoregulation in childhood. Semeiology of hiper- and hypo- thermiaes children.

***Protein metabolism in children.*** Features of protein metabolism and semeiology of its disorders in children.

***Carbohydrate metabolism in children.***Features of carbohydrate metabolism and its semeiology disorders in children.

***Lipid metabolism in children.*** Features of lipid metabolism and semeiology of its disorders in children

***Water-electrolyte and acid-base metabolism in children.*** Age characteristics of water and mineral metabolism and acid-base balance of the body in children.

Violation of water and mineral metabolism and clinical manifestations.

***Vitamins, their importance for development.*** Value for vitamin metabolism child's body. Semeiology hypo- and hypervitaminosis in children.

**Topic 19. Writing and defense history.**

***Specific goals:***

- to collect and to analyze the data of objective examination of the child.

- to differentiated clinical syndromes.

- to establish syndromatic diagnosis.

- to prescribe and to interpret the results of laboratory and instrumental methods.

**Final class,** including control of practical skills of situation tasks, test control of theoretical knowledge.

1. **Description of the course**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of indicators | Industry of knowledge, direction of training, education level | Characteristics of the course | |
| **Full-time education** | **Evening-time education** |
| **Number of credits - 6** | Training direction  1201 "Medicine"  (code name) | **Regulatory**  (optional) | |
| Total hours - 180 | Specialty:  7.12010001 Medicine  7.110105 "Medical prophylaxis"    (code name) | **Year of training:** | |
| III | **-** |
| **Semester** | |
| V and VI | **-** |
| **Lectures** | |
| Hours for full-time education:  classroom - 100,  self-learning - 80 | Education level: specialist | **30 h** | **-** |
| **Practical classes, seminars** | |
| **70 h** | **-** |
| **Laboratory classes** | |
| **-** | **-** |
| **Self-learning** | |
| **80 h** | **-** |
| **Individual tasks**  **-** | |
| **Type of control:** grading test | |

1. **The structure of the course**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Titles of disciplines section and themes | Number of hours | | | | | |
| The form of study (full-time) | | | | | |
| Total | Including | | | | |
|  | lec | class | lab | ind | self |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Section of discipline # 1 | | | | | | |
| Topic 1. The subject and place of pediatrics in the general medicine, basic stages of development. |  | 0,5 |  |  |  | 4 |
| Topic 2. Periods of Childhood. |  | 1,5 | 4 |  |  | 4 |
| Topic 3. Features of neonatal period. |  | 1,5 | 4 |  |  | 4 |
| Topic 4. Physical development of children, and anthropometry. Evaluation of physical development of children. |  | 2 | 4 |  |  | 4 |
| Topic 5. Psychomotor development of children. Assessment of psychomotor development of children. Features of the nervous system in children. |  | 2 | 4 |  |  | 4 |
| Topic 6. Natural (breastfeeding) of infants. |  | 2 | 4 |  |  | 4 |
| Topic 7. Artificial and mixed feeding. Feeding of toddlers. |  | 2 | 4 |  |  | 4 |
| **Final class** |  |  | 4 |  |  |  |
| Total for section # 1 |  | 12 | 28 |  |  | 28 |
| Section of discipline # 2 | | | | | | |
| Topic 8. Anatomo-physiological peculiarities, methods of evaluation and semeiology of the nervous system diseases in children. |  | 2 | 4 |  |  | 4 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Topic 9. Anatomo-physiological peculiarities, methods of evaluation and semeiology of the skin, subcutaneous tissue, bones and muscles diseases in children. |  | 2 | 4 |  |  | 4 |
| Topic 10. Anatomo-physiological peculiarities, methods of evaluation of the respiratory system in children. |  | 1 | 4 |  |  | 4 |
| Topic 11. Paraclinical methods of investigation and semeiology of the respiratory system diseases in children. |  | 1 | 4 |  |  | 4 |
| Topic 12. Anatomo-physiological peculiarities, methods of evaluation of the cardio-vascular system in children. |  | 1 | 4 |  |  | 4 |
| Topic 13. Paraclinical methods of investigation and semeiology of the cardiovascular system diseases in children. |  | 1 | 4 |  |  | 4 |
| Topic 14. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the digestive system in children. |  | 2 | 4 |  |  | 4 |
| Topic 15. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the urinary system in children. |  | 2 | 4 |  |  | 4 |
| Topic 16. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the blood and immune systems in children. |  | 2 | 4 |  |  | 4 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Topic 17. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the endocrine system inchildren. |  | 2 |  |  |  | 4 |
| Topic 18. Peculiarities of metabolism in children. |  | 2 |  |  |  | 6 |
| Topic 19. Writing and defense history. |  |  | 2 |  |  | 6 |
| **Final class** |  |  | 4 |  |  |  |
| Total for section # 1 |  | 28 | 42 |  |  | 52 |
| Total for the discipline | 180 | 30 | 70 |  |  | 80 |

1. **Topics of lectures**

|  |  |  |
| --- | --- | --- |
| The order number | Topic | Hours |
| 1 | Pediatrics as the science of healthy and ill child, its position in the general medicine. The main historical stages of pediatrics development in Ukraine. Principles of organization and methods of treatment and preventive care to children in Ukraine.  Periods of childhood, their characteristics and features. | 2 |
| 2 | The features neonatal period. | 2 |
| 3 | Physical development of children of different age groups. Principles and methods of assessing the physical development of children. Semiotics of disorders of physical development of children. | 2 |
| 4 | Psychomotor development of children of different age groups. Semiotics of disorders of psychomotor development of children. Anatomical and physiological peculairities of the nervous system in children. | 2 |
| 5 | Natural feeding of infants. | 2 |
| 6 | Artificial feeding of infants. Mixed feeding.  Feeding of healthy children older than one year (toddlers). | 2 |
| 7 | Anatomo-physiological peculiarities, methods of evaluation and semeiology of the nervous system diseases in children. | 2 |
| 8 | Anatomo-physiological peculiarities, methods of evaluation and semeiology of the skin, subcutaneous tissue, bones and muscles diseases in children. | 2 |
| 9 | Anatomo-physiological peculiarities, methods of evaluation and semeiology of the respiratory system diseases in children. | 2 |
| 10 | Anatomo-physiological peculiarities, methods of evaluation and semeiology of the cardiovascular system diseases in children. | 2 |
| 11 | Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the digestive system in children. | 2 |
| 12 | Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the blood and immune systems in children. | 2 |
| 13 | Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the urinary system in children. | 2 |
| 14 | Peculiarities of metabolism in children. | 2 |
| 15 | Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the endocrine system inchildren. | 2 |
| Total hours for lectures | | 30 |

1. **Topics for seminaries are not planned.**
2. **Topics for practical classes**

|  |  |  |
| --- | --- | --- |
| The order number | **Topic** | Number of hours |
| Section 1 | | |
| 1 | Topic 2. Periods of Childhood. | 4 |
| 2 | Topic 3. Features of neonatal period. | 4 |
| 3 | Topic 4. Physical development of children, and anthropometry. Evaluation of physical development of children. | 4 |
| 4 | Topic 5. Psychomotor development of children. Assessment of psychomotor development of children. Features of the nervous system in children. | 4 |
| 5 | Topic 6. Natural (breastfeeding) of infants. | 4 |
| 6 | Topic 7. Artificial and mixed feeding. Feeding of toddlers. | 4 |
| 7 | Final class | 4 |
| Section 2 | | |
| 8 | Topic 8. Anatomo-physiological peculiarities, methods of evaluation and semeiology of the nervous system diseases in children. | 4 |
| 9 | Topic 9. Anatomo-physiological peculiarities, methods of evaluation and semeiology of the skin, subcutaneous tissue, bones and muscles diseases in children. | 4 |
| 10 | Topic 10. Anatomo-physiological peculiarities, methods of evaluation of the respiratory system in children. | 4 |
| 11 | Topic 11. Paraclinical methods of investigation and semeiology of the respiratory system diseases in children. | 4 |
| 12 | Topic 12. Anatomo-physiological peculiarities, methods of evaluation of the cardio-vascular system in children. | 4 |
| 13 | Topic 13. Paraclinical methods of investigation and semeiology of the cardiovascular system diseases in children. | 4 |
| 14 | Topic 14. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the digestive system in children. | 4 |
| 15 | Topic 15. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the urinary system in children. Examining the patient for case history. | 4 |
| 16 | Topic 16. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the blood and immune systems in children. | 4 |
| 17 | Topic 19. Writing and defense history. | 2 |
| 18 | Grading test | 4 |
| Total hours for practical classes | | 70 |

1. **Topics for laboratory classes are not planned.**
2. **Self-learning.**

|  |  |  |
| --- | --- | --- |
| The order number | **Topic** | Number of hours |
| 1 | Topic 1. Pediatrics as the science of healthy and ill child, its position in the general medicine. The main historical stages of pediatrics development in Ukraine. | 4 |
| 2 | Topic 2. Periods of childhood, their characteristics and features. | 4 |
| 3 | Topic 3. Features of neonatal period. | 4 |
| 4 | Topic 4. Physical development of children, and anthropometry. Evaluation of physical development of children. | 4 |
| 5 | Topic 5. Psychomotor development of children. Assessment of psychomotor development of children. Features of the nervous system in children. | 4 |
| 6 | Topic 6. Natural (breastfeeding) of infants. | 4 |
| 7 | Topic 7. Artificial and mixed feeding. Feeding of toddlers. | 4 |
| 8 | Topic 8. Anatomo-physiological peculiarities, methods of evaluation and semeiology of the nervous system diseases in children. | 4 |
| 9 | Topic 9. Anatomo-physiological peculiarities, methods of evaluation and semeiology of the skin, subcutaneous tissue, bones and muscles diseases in children. | 4 |
| 10 | Topic 10. Anatomo-physiological peculiarities, methods of evaluation of the respiratory system in children. | 4 |
| 11 | Topic 11. Paraclinical methods of investigation and semeiology of the respiratory system diseases in children. | 4 |
| 12 | Topic 12. Anatomo-physiological peculiarities, methods of evaluation of the cardio-vascular system in children. | 4 |
| 13 | Topic 13. Paraclinical methods of investigation and semeiology of the cardiovascular system diseases in children. | 4 |
| 14 | Topic 14. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the digestive system in children. Examining the patient for case history. | 4 |
| 15 | Topic 15. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the urinary system in children. | 4 |
| 16 | Topic 16. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the blood and immune systems in children. | 4 |
| 17 | Topic 17. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the endocrine system in children. | 4 |
| 18 | Topic 18. Peculiarities of metabolism. | 6 |
| 19 | Topic 19. Writing and defense history. | 6 |
| **Total hours for self-learning** | | 80 |

1. **Individual tasks are not planned.**

**11. Teaching methods**

According to the curriculum, the types of students’ educational activities include: a) lectures, b) practical classes, c) self-training of students (STS), d) summative assessment (final classes with a grading test in the end), e) tutorials.

The topics of the lecture course address key issues in conformity with respective Propedeutics Pediatrics sections.

Practical classes are conducted pursuant to the conveyor principle according to topics and process charts. The duration of practical classes is 4 hours, with 2 hours devoted to the defense of a medical case history. Classes are held in the children's sections of the department’s clinical base.

The academic workload of students is measured in ECTS credits, which are awarded to students as a result of the successful assimilation of the respective section (test credit).

*The recommended techniques of conducting practical classes are as follows:*

1. Every class starts with a 10 to 15-minute test or quiz in order to assess the initial level of knowledge and degree of readiness for class.
2. Within the next 30-45 minutes the teacher explains and demonstrates the method of examination of children or introduces the principles of proper nutrition to students etc.
3. During the next 50-60 minutes students work independently with healthy and sick children, obtain medical history, and examine them according to the topic of the class. In the course of this independent work the teacher provides methodological assistance to students and draws their attention to the most substantial issues of the workshop’s topic.
4. In the following 40-50 minutes the teacher together with the students makes a round to inspect the aforementioned child patients. The teacher discusses every case and provides explanations, emphasizing on the peculiarities of a certain examination methodology. In the course of the clinical analysis the teacher conducts a final evaluation of the students’ level of knowledge.

In the end of the class, the teacher makes a 10 to 15-munite summary of the lesson’s results, gives tasks for self-training to students, points out the key issues of the following topics and offers a list of recommended books for self-education.

**12. Control methods**

***Current educational activity*** (hereinafter - the ***CEA***) is carried out by the teacher of an academic group. After the students have mastered each topic of the course their academic achievements are evaluated on a 4-point (traditional) scale. The teacher automatically receives the average semester grade (with the accuracy up to one hundredth) for everyday activity via the electronic journal of the ACS system. Subsequently, if in the current semester the academic course ends with a test, the average grade of the current academic progress is converted into a 200-point ECTS scale, but if the academic course is not completed in the current semester, the academic control in the semester is current or there is a test. In this case the lecturer transforms the average grade of the student’s current academic progress into a 120-point ECTS scale.

***Current educational activity of students*** is controlled during practical classes according to specific goals. The following means are used to determine the level of the students’ readiness for practical classes: tests, case problem-solving, oral examination, interpretation and evaluation of the results of laboratory and instrumental studies, the control of practical skills etc.

The topical curriculum provides for **two summarizing classes** with compulsory control of practical skills, the assessment of clinical and laboratory data as well as instrumental examinations of healthy and sick children and the issue of rational feeding of infants. In addition, students draw up and defend a child's medical case history.

***The final class*** (hereinafter - ***FC***) is conducted after a logically completed part of the course which consists of a set of educational elements of the working program combining all types of training (theoretical, practical etc.) as well as the elements of education and vocational training (academic course, all types of practices, assessment), which are implemented by the respective forms of the academic process.

The final class (***FC***) is held by the teacher of an academic group. The forms in which the ***FC*** is conducted should be standardized and should include supervision of all types of training (theoretical, practical, self-practice and others) envisaged in the working program of course. Students are estimated by traditional grades at the final class.

Upon completion of the course the students pass a **grading test.**

**The grading test (GT)** is held by theteacher of an academic group at the final class of a certain academic course. The admission to the **GT** is determined by the points received in the course of current everyday educational activity ranging from a minimum of 70 points and a maximum of 120 points. The estimate for the GT itself ranges from 50 to 80 points. The final grade for the course is a sum of points received for the ***CEA*** and the ***GT*** ranging from a minimum of 120 and a maximum of 200 and corresponding with the traditional grade "satisfactory", "good", "excellent" (Table 6).

The forms of monitoring and evaluating are listed pursuant to the program of the work practice ”Propedeutics Pediatrics” and the Instruction on the evaluation of academic activities in the course of the European credit transfer system in the organization of the educational process” approved by order № 352 of the Kharkiv National Medical University of Ministry of Health of Ukraine dated 01.10.2015

Self-training of students (STS) is a part of academic activities and is included in the composition of ECTS credits of every section and course as a whole. In the new curriculum the STS covers 44.4%.

Aspects to be checked:

1. the level of knowledge development regarding the scientific and theoretical content of the section acquired during classes (the form of tests, structured tasks etc.);
2. the level of development of compulsory skills and abilities that are a part of the section;
3. completion of the student’s individual tasks;
4. the amount of educational material attributed to self-training as separate educational topics (controlled in the form of tests).

**The grade for the section** consists of the sum of grades for current educational activity (in points) and of the grade for the final class (in points), which is awarded in the course of the evaluation of theoretical material and practical skills in accordance with the list determined by the practice program.

The **maximum number of points** which may be consequently obtained by students is 200 points; this includes 120 points for current educational activity and 80 points for the final lesson.

***Current educational activity of students*** is controlled during practical classes according to specific goals in the course of each practical class as well as during self-training in the hospital department. It is recommended to apply the following means of diagnostics of the students’ level of readiness: control of practical skills, solving cases and test control of theoretical knowledge.

The current assessment of students on respective topics is conducted in the traditional 4-point grade scale ("excellent", "good", "satisfactory" and "unsatisfactory") with further conversion into a multiscore scale.

**The grade "Excellent"** is given when the student knows the program in toto, illustrating the answers with various examples; gives clear and comprehensive answers without any hints; delivers the material without any inaccuracies or errors; performs practical tasks of a different degree of complexity.

**The grade "Good"** is given when the student knows the whole program and understands it well, gives correct, consistent and structured but not completely comprehensive answers to questions, although he is able to answer additional questions without mistakes; solves all cases and performs practical tasks experiencing difficulties only in the most complex situations.

**The grade "Satisfactory"** is given to the student based on his satisfactory level of knowledge and understanding of the entire subject. The student is able to solve modified tasks with the help of hints; solves cases and applies practical skills experiencing difficulties in simple cases; is unable to deliver a consistent answer, but answers direct questions correctly.

**The mark "Unsatisfactory"** is given when the student's knowledge and skills do not meet the requirements of the grade "satisfactory".

Given the number of practical classes the grades are converted into the multiscore scale as follows:

**The mark "Excellent" – 72-80 scores**

**The mark "Good" – 60-71 scores**

**The mark "Satisfactory" – 50-59 scores**

**The mark "Unsatisfactory" – 0 scores**

**13. Conversion of the average grade for current activity**

**into a multiscore scale.**

The conversion is performed under the "Instruction on the evaluation of academic activity of students…" (Table 1).

Table 1

**Conversion of the average score for current activity into a multipoint scale**

**(for courses that end with a grading test)**

| 4-point scale | 200- point scale |  | 4- point scale | 200- point scale |
| --- | --- | --- | --- | --- |
| 5 | 120 | 3.91-3,94 | 94 |
| 4.95-4,99 | 119 | 3.87-3,9 | 93 |
| 4.91-4,94 | 118 | 3.83- 3,86 | 92 |
| 4.87-4,9 | 117 | 3.79- 3,82 | 91 |
| 4.83-4,86 | 116 | 3.74-3,78 | 90 |
| 4.79-4,82 | 115 | 3.7- 3,73 | 89 |
| 4.75-4,78 | 114 | 3.66- 3,69 | 88 |
| 4.7-4,74 | 113 | 3.62- 3,65 | 87 |
| 4.66-4,69 | 112 | 3.58-3,61 | 86 |
| 4.62-4,65 | 111 | 3.54- 3,57 | 85 |
| 4.58-4,61 | 110 | 3.49- 3,53 | 84 |
| 4.54-4,57 | 109 | 3.45-3,48 | 83 |
| 4.5-4,53 | 108 | 3.41-3,44 | 82 |
| 4.45-4,49 | 107 | 3.37-3,4 | 81 |
| 4.41-4,44 | 106 | 3.33- 3,36 | 80 |
| 4.37-4,4 | 105 | 3.29-3,32 | 79 |
| 4.33-4,36 | 104 | 3.25-3,28 | 78 |
| 4.29-4,32 | 103 | 3.21-3,24 | 77 |
| 4.25- 4,28 | 102 | 3.18-3,2 | 76 |
| 4.2- 4,24 | 101 | 3.15- 3,17 | 75 |
| 4.16- 4,19 | 100 | 3.13- 3,14 | 74 |
| 4.12- 4,15 | 99 | 3.1- 3,12 | 73 |
| 4.08- 4,11 | 98 | 3.07- 3,09 | 72 |
| 4.04- 4,07 | 97 | 3.04-3,06 | 71 |
| 3.99-4,03 | 96 | 3.0-3,03 | 70 |
| 3.95- 3,98 | 95 | Less than 3 | Not sufficient |

The **grading test** at the end of the course is a process in which the knowledge obtained during the course (semester) is tested. Inter alia, the following is tested:

* level of theoretical knowledge;
* development of creative thinking;
* skills necessary for individual work;
* competences, that is the ability to reproduce obtained knowledge and apply it when solving practical problems.

The grading test is held by the teacher of the group at the last class.

***The method of conducting a grading test***

The grading test involves solving of a block of test questions, the evaluation of practical skills and theoretical knowledge pertaining to all topics of the course.

1. The task of solving a block of test questions is given at the last or penultimate class in the semester. The test involves no less than 30 basic (anchor) FRI test questions. The evaluation criteria applied is the following: if 90% of questions are answered correctly, the test is "passed". Students who failed to pass this test are not admitted to the next stage of the grading test.
2. Evaluation of practical skills and theoretical knowledge pertaining to all topics of the course on the day of the grading test.

Evaluation of practical skills is performed according to the criteria "completed" or "not completed". The assessment of theoretical knowledge is carried out pursuant to Table 5.

**Table 5**

**Assessment of theoretical knowledge if practical skills are evaluated according to the criteria "completed" or "not completed"**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number of questions | «5» | «4» | «3» | Oral answers to questions on the card tickets that include the theoretical part of the course | A student gets from 10 to 16 points for every answer, which correspond to:  "5" - 16 points;  "4" - 13 points;  "3" - 10 points. |
| 1 | 16 | 13 | 10 |
| 2 | 16 | 13 | 10 |
| 3 | 16 | 13 | 10 |
| 4 | 16 | 13 | 10 |
| 5 | 16 | 13 | 10 |
|  | 80 | 65 | 50 |

1. Tasks on practical and vocational training that show the skills and abilities during the follow-up of the topical patients, the evaluation of laboratory and instrumental research methods defined in the lists of the course working programs (CWP) and educational and qualification characteristics (EQC).
2. The task on the diagnostics and medical aid in emergency conditions (within CWP and EQS of the specialization).
3. Carrying out medical procedures under List 5 of the Academic branch standards.

**Assessment of the student’s individual tasks**

The list of individual tasks (participation with reports in student conferences, specialized contests, preparation of analytical reviews and presentations with checking for plagiarism) that determines the number of points for their successful performance which can be added as incentive points (up to a maximum of 10 points) is to be approved at the department’s meeting.

**Points for individual tasks are given to a student only once by a commission (consisting of the head of the department, head teacher, the teacher of the group) in case of the student’s successful performance and defense of his results. In any case, the total amount of points for the CEA may not exceed 120 points.**

**Evaluation of self-training work of students**

The mastering of topics which are given for individual learning is checked during the final class and the grading test.

**Grade for the course**

The knowledge obtained during the course is evaluated directly after the grading test. The grade for the course represents a sum of points for **CEA** and **grading test** and ranges from a minimum of 120 points to a maximum of 200 points.

Table 6

**Conformity of course evaluation in points with the traditional grade system**

|  |  |
| --- | --- |
| Evaluation of the course in points | Traditional grade for the course |
| 180–200 | «5» |
| 150–179 | «4» |
| 120–149 | «3» |

Only students who have obtained grades for all summarizing classes and the grading test receive a grade for the whole course.

After the completion of the course the head teacher or teacher puts down the points and corresponding grade in the student’s grade book and fills in the report sheet of the course under form У-5.03В – **grading test**.

The grade "**unsatisfactory**" is given to students who were admitted to the grading test, but failed to pass it or were not admitted to the grading test at all.

**14. Methodical support**

1. Methodical recommendations of the department.

2. Tables, scales, height meters, centimeter tapes, tonometers, phonendoscopes, spirographes, electrocardiographes, medical case histories, training dummies.

1. **Recommended Books**

**Basic**

1. Propedeutics of Pediatrics: Manual for foreign students / V.A. Fjoklin, V.A. Klimenko, O.M. Plachotna, T.V. Sirenko, A.I. Kojemiaka, O.V. Sharikadze at al. – Kharkiv, 2010. – 348 p.
2. Kapitan T. Propaedeutics of children’s diseases and nursing of the child: Textbook for students of higher educational institutions. – Vinnitsa: The State Cartographical Factory, 2006. – 736 pp.
3. Kliegman: Nelson Textbook of Pediatrics, 18th ed.
4. Bates’ guide to physical examination and history taking / Lynn S. Bickley, Robert A. Hoekelman. – 7th ed.

**Auxiliary**

1. ORENSTEIN, PEGGY. 1994. School Girls: Young Women, Self-Esteem, and the Confidence Gap. New York: Anchor Books.
2. PIPHER, MARY B. 1994. Reviving Ophelia: Saving the Selves of Adolescent Girls. New York: Putnam.
3. SHONKOFF, JACK P., and PHILLIPS, DEBORAH A., eds. 2001. From Neurons to Neighborhoods: The Science of Early Childhood Development. Washington, DC: National Academy Press.
4. WOLMAN, BENJAMIN B. 1998. Adolescence: Biological and Psychosocial Perspectives. Westport, CT: Greenwood Press.
5. NEWMAN, PHILLIP R., and NEWMAN, BARBARA M. 1997. Childhood and Adolescence. Pacific Grove, CA: Brooks/Cole.

**16. Information resourses**

**1.** The library of Kharkiv National Medical University

2. Repositarium of Kharkiv National Medical University

3. Internet.