

MEDICAL UNIVERSITY – PLOVDIV

FACULTY OF MEDICINE

DEPARTMENT OF PEDIATRICS AND MEDICAL GENETICS

ACADEMIC STANDARD FOR THE COURSE “PEDIATRICS”

For professional specialty "Inspector in Public Health"

Bachelor's degree

Of the FACULTY OF PUBLIC HEALTH

1. AIM of the training in “Pediatrics”

The training in the discipline "Pediatrics" in the course of study for the specialty degree "Bachelor" "Inspector in Public Health" aims to familiarize the students with the anatomical and physiological features (AP) of the child's body and the most common diseases of individual systems. Emphasis is placed on the diseases that future midwives will encounter in their daily practice - diseases of the respiratory, blood, excretory, endocrine, cardiovascular and nervous systems, as well as the specific knowledge they must have to care for these children. An important part of the training is to acquaint them with some acute and emergency conditions in Pediatrics that they will encounter. Emphasis is placed on the approach to communication with the child depending on its condition and overcoming its fear of performing various manipulations. The importance and the place of the Medical Specialist-Inspector in Public Health as a link in the chain of specialists carrying out the diagnostic and treatment process are determined. In this way, they will be able to successfully and safely apply their knowledge and skills when working with children.

The main part of their knowledge concerns the activity of the well-baby clinic and children's consultation. The implementation of this program will support their successful professional realization. The main goal of the specialty corresponds to the mission and the concept of the university, it is in accordance with the volume and the credit rating of the discipline (according to ESTS) for the educational degree "Professional Bachelor" and professional field "Public Health Inspector".

The main tasks for achieving the goal are achieved by acquainting students with the peculiarities of the child's body, the specific pathology and the necessary workup and therapeutic interventions:

- Familiarization with AP of the newborn, infant and child at different ages, with the indicators of growth and development and the necessary environmental conditions for optimal development.
- Introduction to the most common diseases in childhood and the necessary diagnostic research and therapeutic interventions.
- Introduction to the importance of environmental factors, prevention and treatment of the most common diseases in children
- Development of students' skills for contact with the child.
- To get acquainted with the preventive activities of the children's consultation - risk groups, immunizations, preventive pediatrics.
- To get acquainted with diseases requiring epidemiological control and related to environmental factors.

After completing the training, students must have the following knowledge and skills:

- To know the AP of the newborn, infant and child at different ages, growth and development indicators
- To know the necessary optimal environmental conditions for the normal development of the child.
- To know the basic principles of nutrition of newborns, infants and children from 1 to 3 years
- To know the epidemiology, etiology and clinical picture of the most common diseases in childhood
- To know the principles and methods of preventive medicine
- To know the organization of the children's consultation
- To know the immunization calendar of the Republic of Bulgaria
- To know the possibilities for primary and secondary prophylaxis
- To know the diseases that require epidemiological control and related to environmental factors.

2. Content of the course

	Exam	Academic hours			Academic year/semester
	Semester	Total hrs	Lectures	Practicals	
Pediatrics	II	45	30	15	II yr/ IV sr.

CURRICULUM

Lectures

N	Topic	Acad. hrs
1	Introduction to pediatrics. Child mortality rates	1
2	Periods in childhood. Neuropsychological development.	1
3	Physical development of the child. Disorders in growth.	1
4	Rational feeding of the infant and the child. Nutritional problems	2
5	Feeding of children 1-3 yrs	1
6	Newborns - AFO, adaptation syndrome.	1
7	Newborn premature babies.	1
8	Congenital and acquired infections in the newborn period.	1
9	Nosocomial infections	1
10	Acute digestive disorders. Dehydration.	2
11	Chronic digestive disorders. Hypotrophy.	1
12	Acute diseases of URT.	1
13	Acute Pneumonias	1
14	Chronic Pneumonias	1
15	Congenital heart malformations.	1
16	Acquired heart disease.	1
17	Connective tissue diseases.	1
18	Anemia and hemorrhagic diathesis in childhood.	2
19	Diseases of the urinary system in childhood	1
20	Common endocrinopathies in childhood.	1
21	Diseases of calcium-phosphorus metabolism in childhood.	2
22	Acute flaccid paralysis in childhood.	2
23	Poisoning in childhood.	1
24	Well-baby clinic- Children's consultation.	2
	Total	30

Practicals

N	Topic	Academic hrs.
	Feeding technique. Milk kitchen	2
	Anatomical and physiological features and care of the newborn.	3
	Demonstration of children with digestive disorders.	3
	Demonstration of children with diseases of the respiratory system.	2
	Demonstration of children with diseases of the hematopoietic, endocrine and nervous systems.	3
	Demonstration of children with diseases of the hematopoietic, endocrine and nervous systems.	2
	Total	15

3. Prerequisites

Students must have in-depth knowledge of the human anatomy and physiology. Based on this knowledge, they will be able to learn the peculiarities of the anatomy and physiology of the child. It is necessary to be able to learn, analyse and reproduce the provided information about the causes, manifestations, deviations in the physiological constants of the internal environment of the child's body and the possibilities for treatment and prevention of the studied diseases.

4. Academic resources

Pediatrics teachers for the bachelor's degree in Medical Specialist- Inspector in Public Health must be a habilitated person or a distinguished specialist with the PhD degree of Doctor of Medicine. He must have knowledge and experience in conducting theoretical and practical training of students. The lecturer must have outstanding abilities in the teaching specialty - specialty in "Children's Diseases" and a narrow specialty in the same, scientific publications and participation in national and international scientific forums.

5. Material resources

For the successful conduct of the theoretical and practical classes in "Pediatrics" for the specialty "Bachelor" "Medical Specialist- Inspector in Public Health" it is necessary to have a room for theoretical classes, equipped with multimedia, screen, computer with the ability to play presentations. Personal protective equipment (aprons, masks, socks) and hand disinfectants need to be available to prevent trainees from becoming infected with infectious diseases.

6. Lecture training

Presentations are prepared and provided to students so that the necessary knowledge can be obtained.

Lecture № 1 - 1 hour

Introduction to pediatrics. Infant mortality.

1. History of pediatrics.
2. Modern achievements and problems of pediatrics.
3. Demographic problems.
4. Infant mortality
 - 4.1.definition
 - 4.2.structure
 - 4.3. Possibilities for its reduction.

Lecture № 2 - 1 hour

Periods in childhood. Neuropsychological development.

1. Basic biological features of the child's organism

2. Periods in childhood

2.1. physiology

2.2 pathology

2.3. harmful environmental factors in each period.

3. Conditions for normal NPD.

4. Indicators of NPD.

Lecture № 3 - 1 hour

Physical development of the child. Disorders of growth.

1. Factors determining physical growth and development.

2. Indicators of physical development - growth and maturation.

3. Growth pathology

3.1 short stature

3.2 malnutrition

3.3 high growth

3.4 obesity.

Lecture № 4 - 2 hours

Breastfeeding of the infant. Mixed and Formula feeding.

1. Needs of basic nutrients and energy in childhood.

2. Comparison of the composition of breast milk, cow's milk and formula.

3. Breastfeeding - benefits, practice.

4. Mixed and Formula feeding - indications, practice.

5. Energy intake.

Lecture № 5 - 1 hour

Feeding of children from 1 to 3 years.

1. Novel foods and forbidden foods.
2. Diet.
3. The most common mistakes in nutrition.

Lecture № 6 - 1 hour

Newborns – anatomophysiology (AP), adaptation syndrome.

1. Classification of newborns according to gestational age and birth weight.
2. AP of the individual systems.
3. Adaptation syndrome.

Lecture № 7 - 1 hour

Newborn - premature babies.

1. Degrees of prematurity
2. Features of the individual systems
3. Specific diseases in premature babies.

Lecture № 8 - 1 hour

Congenital and acquired infections in the newborn period.

1. Etiology and pathogenesis of neonatal infections.
2. General and specific symptoms of the most common congenital infections.
3. Etiology and risk factors for acquired neonatal infections.
4. Neonatal sepsis.
5. Other common neonatal infections.

Lecture № 9 - 1 hour

Nosocomial infections (NI).

1. Criteria for NI.

1.1. kinds

1.2. etiology

1.3. Roads for transmission of NI according to the entrance point.

2. Risk factors.

3. Prevention of NI.

Lecture № 10 - 2 hours

Acute digestive disorders. Dehydration.

1. Definitions.

1.1. Etiology.

1.2. Predisposing factors.

1.3 Pathogenesis.

1.4. Clinical manifestations of acute digestive disorders.

2. Types and degrees of dehydration.

3. Treatment and prevention of acute digestive disorders.

Lecture № 11 - 1 hour

Chronic digestive disorders. Hypotrophy.

1. Definitions.

2. Pathogenesis and clinical manifestations of malabsorption syndrome.

3. Chronic diarrhea - etiology and features of clinical manifestations and treatment.

4. Hypotrophy

4.1 etiology

4.2 degrees

4.3 clinical manifestations

4.4.principles of treatment.

Lecture № 12 - 1 hour

Acute diseases of URT.

1. Classification.
2. Etiology, predisposing factors and epidemiology.
3. Features in the etiology, manifestations and treatment of common OZGDP.
4. Prevention of acute RT infections.

Lecture № 13 - 1 hour

Acute pneumonia.

1. Definition.
2. Etiology and predisposing factors.
3. Pathogenetic and pathoanatomical classification of pneumonias.
4. Features in the etiology, clinic and treatment of bronchopneumonia, staphylococcal, lobar and interstitial pneumonia.

Lecture № 14 - 1 hour

Chronic pneumopathies in childhood.

1. Chronic pneumonia - definition, etiology, clinical manifestations, treatment.
2. Tuberculosis - epidemiology, pathogenesis, pulmonary and extrapulmonary clinical manifestations, treatment, prevention.
3. Bronchial asthma - definition, etiology, pathogenesis, clinical manifestations and treatment.

Lecture № 15 - 1 hour

Congenital heart malformations (CHM).

1. Etiology of CHM.
2. Pathogenetic classification of CHM.
 - 2.1. Interventricular defect and other defects with left - right shunt.
 - 2.2. Tetralogy of Fallot and other defects with right - left shunt. 2.3. Coarctation of the aorta.

Lecture № 16 - 1 hour

Acquired heart disease.

1. Classification of acquired cardiopathies.
2. Etiology and clinical manifestations of endocarditis, myocarditis and pericarditis.

Lecture № 17 - 1 hour

Connective tissue diseases.

1. General features of connective tissue diseases.
2. Types of juvenile chronic arthritis.
3. Differential diagnosis of the joint syndrome.
 - 3.1. Lupus erythematosus.
 - 3.2. Dermatomyositis.
 - 3.3. Rheumatic disease.
 - 3.4. Vasculitis - common types.

Lecture № 18 - 2 hours

Anemia and hemorrhagic diathesis

1. Classification of anemias.
 - 1.1. Iron deficiency anemia.
 - 1.2. Other common types of anemia in childhood.
2. Hemorrhagic diathesis
 - 2.1. Classification

2.2. Common diseases.

Lecture № 19 - 1 hour

Diseases of the urinary system in childhood.

1. Classification and features of diseases of the urinary system.

1.1. Pyelonephritis - etiology, predisposing factors, clinical manifestations, diagnosis and treatment.

1.2 Glomerulonephritis - etiology, pathogenesis, clinical manifestations, complications, differential diagnosis and treatment.

1.3. Nephrotic syndrome - definition, diseases with nephrotic syndrome.

Lecture № 20 - 1 hour

Common endocrinopathies in childhood.

1. Classification according to location and function.

1.1. Diabetes mellitus - types, etiology, clinical manifestations, complications and treatment.

1.2. Metabolic syndrome.

1.3. Hypothyroidism.

1.4. Gusha.

1.5. Acute adrenal insufficiency.

Lecture № 21 - 2 hours

Diseases of calcium-phosphorus metabolism in childhood.

1. Regulation of calcium-phosphorus metabolism.

2. Metabolism of vitamin D.

3. Rickets - etiology, clinic, X-ray and biochemical disorders, treatment and prevention.

3.1. Spasmophilia.

3.2. Hypervitaminosis D.

4. Osteoporosis in childhood.

Lecture № 22 - 2 hours

Acute flaccid paralysis in childhood.

1. Etiology of acute flaccid paralysis.
2. Differential diagnosis of flaccid and spastic paralysis
 - 2.1 Poliomyelitis and poliomyelitis-like diseases
 - 2.2. Acute polyradiculoneuritis
 - 2.3 Facial neuritis
 - 2.4. Mononeuropathy
 - 2.5. Myasthenia
 - 2.6. Myositis.

Lecture № 23 - 1 hour

Poisoning in childhood.

1. Meaning
2. Types
3. Diagnosis
4. General principles of treatment
5. Prevention.

Lecture № 24 - 2 hours

Well-baby clinic- Children's consultation.

1. Types of prevention.
2. Definition and organization of work of the children's consultation.
 - 2.1.Risk groups.
 - 2.2. Patronage activity.
 - 3.3. Immunization calendar.
 - 3.4. Immunoprophylaxis

3.5. Hardening of children

7. Practical Training

Conducted in small groups. Methodological guidelines, manuals and clinical tasks are provided for the practical exercises. Individual and team tasks are set.

THEMATIC PLAN

Exercise № 1 - 2 hours

Feeding technique. Dairy kitchen:

1. Breastfeeding
2. Feeding with a spoon and a pacifier
 - 2.1. practice
 - 2.2 advantages
 - 2.3. risks
3. Organization of work in a dairy kitchen

Exercise №2-2 hours

1. Nutrition recommendation for children with:
 - 1.1. Celiac disease
 - 1.2. Allergic diseases
 - 1.3. Anorexia
 - 1.4. Obesity
2. Recommendations for follow-up

Exercise № 3 - 3 hours

Anatomical and physiological features and care of the newborn.

1. Appearance of full-term and premature newborn.
2. Features of:
 - 2.1.skin
 - 2.2 respiratory rate and rhythm
 - 3.1. wakefulness and sleep mode.

3.4. Feeding, sucking and swallowing.

4.4. Belching and vomiting.

4.5. Feces.

5.5. Urination.

3. Care in the delivery room.

4. Skin care.

5. Clothing.

6. Growth conditions.

Exercise № 4 - 2 hours

Demonstration of children with digestive disorders.

1. Differentiation of vomiting from regurgitation

2. Diarrheal bowel movements.

3. Manifestations of malnutrition.

4. Manifestations of obesity

-determining degrees of obesity

- recommendations for nutrition/diet

Exercise № 5 - 2 hours

Presentation of a clinical case - diseases of the respiratory system.

1. Manifestations of respiratory failure.

2. Differentiation and etiology of inspiratory and expiratory dyspnea.

3. Types of cough.

4. Manifestations of chronic hypoxia.

5. Inhalation therapy.

Exercise № 6 - 2 hours

Presentation of a clinical case with diseases of the hematopoietic, endocrine and nervous systems.

1. Clinical manifestations of anemia.

1.1. Thalassemic syndrome - external manifestations, treatment, complications.

2. Hemorrhagic diathesis - skin and mucous manifestations.
3. Children with myelosuppression - prevention of infections.
4. Diabetes mellitus - prevention of infections.
5. Struma.
6. Rickets.
7. Paresis
 - 7.1 peripheral
 - 7.2 central.

Exercise № 7 - 2 hours

Children's consultation

1. Structure.
2. Filter.
3. Rhythm of visits.
4. Immunizations
 - 4.1. calendar
 - 4.2. contraindications
 - 4.3. complications.
5. Massage.
6. Hardening procedures.

Exercise № 8 -1 hour

Behavior in emergencies:

- Poisoning;
- Foreign body.

8. Information resources. Basic literature. Websites

The teacher must have developed lectures on the subject, which he also presents on paper. The teacher develops a list of recommended literature in the discipline, for each of its components with a priority of the available sources. Each year, students receive a list of sites with relevant and up-to-date information.

9. Control works /tests

The current control of the acquired knowledge is done by conducting tests or clinical tasks. Students are provided with timely information and explanations of the results of the control, which will support their further preparation. The results of these tests are included as a component in the final assessment for the semester.

10. Independent work and commitment of the student

The independent work of the student is guided by the teacher, who guides them in finding literary sources and in the methods of their assimilation. Training tests are provided, incl. on line, for independent work and exercises of students.

11. Cooperation between students and the teaching team

This cooperation should be expressed in:

- Cooperation of the teacher with the student for his preparedness, current difficulties in mastering the material and opportunities with an individual learning program to achieve more.
- Individual consultations are used if necessary.

12. Exams

The semester work marks are provided for the assessment of the students in the curriculum of the specialty: at least two (one in the middle and one at the end of the semester) written tests.

13. Assessment standards:

The standards for assessing the student's achievements are defined as follows:

*Poor (2) receives a student with scarce knowledge, which cannot serve as a basis for upgrading the next levels of education in other clinical disciplines.

*Average (3) receives a student who reproduces the knowledge in a "ready-made scheme", lacking the main points of the developed topic and readiness for independent use of the acquired knowledge and professional skills; the terminology is not mastered in a satisfactory way; the exposition is characterized by poor language; only some basic practical skills have been mastered.

*Good (4) receives a student who develops the topic descriptively, reproductively, has limited independence in using the acquired knowledge and acquired professional competencies; in the exposition, although there is a good language culture, inaccuracies in the concepts used are allowed; basic practical skills have been acquired, but not to their full extent, and there are gaps.

*Very good (5) gets a student who develops the topic independently productively, non-standardly, looking for a new algorithm and analysis of the used literature data; makes an attempt to present and substantiate his thesis; adequately uses the concepts from the scientific field of the studied discipline, has a good language culture; with minimal gaps.

*Excellent (6) is awarded to a student who independently, logically and creatively presents the topic; reasonably and originally uses and interprets the literature related to the specific issue; is well informed and ready to use the acquired knowledge and professional competencies; there is accuracy and a rich linguistic culture of the exposition. There are no gaps.

14. Formation of the final mark

It is determined by:

1. Mark from the final written exam (test)
2. Marks of the assessment of the current control

Final assessment = k_1 * assessment of current control + k_2 * assessment of written exam,

Where $k_1 = 0.3$; $k_2 = 0.7$

If one of the components of the final grade is Poor (2), then the final mark is necessarily Poor (2).

Provision of the students' access to exam materials and results is fixed within 5 working days after the exam.

Developed by:.....

Assoc. Prof. dr I. Geneva, PhD

Updated and approved by The Departmental Council, No. 3 of May 29, 2020.

Approved by:/Signature/

/ Prof. Dr. I. Ivanov, MD /

Head of the Department