



CD8.5.1DISCIPLINE CURRICULUM

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FACULTY OF MEDICINE

STUDY PROGRAM 0912.1 MEDICINE

DEPARTMENT OF INFECTIOUS DISEASES

APPROVED

at the meeting of the Commission for Quality
Assurance and Evaluation of the Curriculum

Faculty Medicine

Minutes No. 8 of 15.03.2018

Chairman MD, PhD, Associate Professor

Sergei Suman

(signature)

APPROVED

at the Council meeting of the

Faculty Medicine

Minutes No. 4 of 28.08.2017

Dean of Faculty, MD, PhD, Associate
Professor

Mircea Bețiu

(signature)

APPROVED

approved at the meeting of the Chair OF INFECTIOUS
DISEASES

Minutes No.1 of 28.08.2017

Head of chair MD, PhD, Associate Professor

Gheorghe Placinta

(signature)

SYLLABUS

DISCIPLINE INFECTIOUS DISEASES IN CHILDREN

Integrated studies

Type of course: Compulsory discipline

Chisinau, 2017



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PRELIMINARY

• General presentation of the discipline: the place and role of the discipline in the formation of the specific competences of the vocational training program/specialty

Infectious Diseases in Children is one of the disciplines in the academic training of the beneficiaries which will allow the perfect knowledge of infectious diseases in children, regardless of the specialty they will choose later, with a field of integration and implementation of fundamental knowledge (pathophysiology, microbiology, molecular biology, pediatrics, epidemiology, pharmacology, etc.) in clinical practice. This discipline studies the etiology, pathogenesis, clinical manifestations, evolution, treatment and prophylaxis of infectious diseases in children as well as age peculiarities.

The student acquires practical skills in examining and investigating the patient with infectious diseases, in estimating the results, in early diagnosis of infectious diseases, emergency medical assistance and treatment of the sick child according to the age and severity of the disease.

•The mission of the syllabus (purpose) in vocational training

To provide students with knowledge about the pathogenic agents - human organism conflict, particularities of reactivation of the macro-organism, cultivation of skills, habits in specific diagnostic opportunities and treatment, measures for the prevention of infectious diseases in children.

•Languages of the subject: English

• Beneficiaries: students of the 6th year of Faculty of Medicine.



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I. ADMINISTRATION OF THE DISCIPLINE

The code of the discipline		S.11.O.102	
The name of the discipline		INFECTIOUS DISEASES IN CHILDREN	
Responsible for discipline		MD, PhD, Associate Professor, Gheorghe Placinta MD, PhD, Associate Professor, Ludmila Serbenko MD, PhD, Associate Professor, Tatiana Alexeev	
Year	VI	Semester	XI
The total number of hours, including:			90
Lectures	20	Practical work	25
Seminars	25	Individual work	20
Form of assessment	CD	Number of credits	3



II. TRAINING OBJECTIVES IN THE DISCIPLINE

At the end of the course, the student will be able to:

✓ *at a the level of knowledge and understanding:*

- Have knowledge in specifying the clinical picture, age peculiarities, evolution and complications of infectious diseases in children.
- To achieve clinical thinking and the ability to analyze and systematize the results of clinical and paraclinical examination in infectious diseases in children.
- Have knowledge in early diagnosis of infectious diseases in children.
- To know the consequences of infectious diseases in children.
- To know the indications of hospitalization and the rules for the transport of patients with infectious disease in children.
- Have knowledge in clinical symptoms and changes in cerebrospinal fluid in viral and bacterial meningitis.
- To create the treatment plan for children with infectious diseases.
- Have knowledge in diagnosis and treatment of infectious diseases at home (ARI, ADD, other infections) in accordance with Clinical Protocols and National Standards.
- To know the diagnosis and treatment algorithm and the argumentation of emergency assistance at pre-hospital stage in infectious diseases in children:
 - meningococcal infection;
 - meningitis, meningo-encephalitis
 - hyper-pyrexia with febrile seizures in ARI and other diseases
 - food poisoning
 - neurotoxicosis.
- To provide emergency medical assistance to children with:
 - septic shock (toxin-infectious)
 - acute cerebral edema
- To develop the specifics in the criteria of admission in the community of convalescence and in the dynamic supervision of children with infectious diseases.
- To know the immunoprophylaxis of infectious diseases (National Immunization Schedule).

✓ *at the level of application:*

- To examine the child with infectious diseases
- To establish and argument the early diagnosis of infectious diseases in children
- To create the home care plan
- To read the blood count in children with infectious diseases according to the age and etiology of the disease
- To have knowledge in the procedure of isolation and treatment of infectious disease at home
- To create the paraclinical examination plan for children with infectious diseases, mentioning the main (specific) diagnostic methods
- To characterize the eruption in various eruptive infectious diseases
- To characterize the changes in pharynx in various infectious diseases with tonsillitis
- To know the method of gastric lavage in children
- To appreciate the presence and degree of dehydration in infants and children in acute diarrheal diseases



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- To know the character of faeces in patients with ADD and viral hepatitis
- To know the oral rehydration therapy (plan A, B)
- To determine the meningeal signs in children with fever
- To correctly interpret the results of laboratory tests, CSF, bacterial examination of faeces, nasopharyngeal excretion, virological examination of blood, serological reactions (AT, IHA, PCR) of intestinal microflora in dysmicrobism.

✓ **at the level of integration:**

- To know the specificities of the causative agents of infectious diseases in children
- To know the infectious disease morbidity in children
- Have knowledge in pathogenesis and morphopathology of infectious diseases
- To know the contemporary principles and methods of diagnosis of infectious diseases
- To know the principles of specific therapy of infectious diseases (serotherapy, immunotherapy)
- To know the principles of antibiotic therapy for infectious diseases
- To know the principles of prophylaxis and control of infectious diseases and anti-epidemic measures in the outbreaks
- To know the forming principles of a medical observation sheet for patients with infectious diseases in children.
- To know the structure, function and pathophysiological features of CNS, respiratory tract, digestive system and other systems in infants and young children
- To know the particularities of infectious diseases in adults
- To know the indications and possess the technique of lumbar puncture, with the subsequent interpretation of the results of the CSF analysis.



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III. PRELIMINARY TERMS AND CONDITIONS

1. The student is present at the practical lessons with thorough knowledge in the field (pharmacology, pathophysiology, microbiology, epidemiology, pediatrics).
2. The student is obliged:
 - To know the language of teaching
 - To have a proper outfit for a doctor (white dressing gown, mask, footwear, stethoscope, training notebook) .
 - To adhere to the anti-epidemic regime in the clinic, to preserve the cleanliness, order, tranquility and sleep of the sick child, to be benevolent with the patient, his parents or the guardian of the child.
 - To have communication and teamwork skills.
 - To promote the principles of ethics and deontology in the medical care of the sick child
 - To have digital skills (use of the Internet, processing medical records, protocols, electronic tables, etc.)



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IV. THEMESAND ESTIMATEALLOCATION OF HOURS

Lectures, seminarsand self-training

No. d/o	THEME	Number of hours		
		Lectures	Practical hours	Self- training
1.	Rules of admission, distribution in salons and discharge of children with infectious diseases, documentation. Dynamic observation of the patients.		4	2
2.	Acute gastrointestinal infections in children. Shigellosis. Salmonellosis. Escherichiosis, etc. Evolutionary features, clinical picture, treatment in children. Dehydration syndrome, pathogenesis, clinical picture, diagnosis, treatment. Oral rehydration. Acute diarrhea caused by staphylococci, pathogenic enterobacteria and viruses.	2	9	3
3.	Viral hepatitis A in children. Etiology. Clinical and evolutionary features. Clinical forms. Differential diagnosis. Diagnostic. Treatment. Prophylaxis.	2	3	1
4.	Streptococcal infection in children. Scarlet fever. Differential diagnosis.	2	2	2
5.	Measles in children. Rubella in children. Differential diagnosis.	2	2	1
6.	Diphtheria in children.	2	2	1
7.	Influenza and ARI peculiarities in children	2	5	2
8.	Mumps in children	2	2	1
9.	Pertussis. Parapertussis.	2	2	1
10.	Chickenpox. Differential diagnosis with other herpes infections. Herpes simplex in children.	2	3	1
11.	Enteroviral infection. Poliomyelitis.		4	1
12.	Meningococcal infection in children	2	5	2
13.	Practical skills		5	2
14.	Test		2	
Clinical practice		70		
Total		20	50	20



V.REFERENCE OBJECTIVES OF CONTENT UNITS

For each topic provided by the analytical curriculum, the aim will be that the student:

- **To define:**
 - Clinical particularities according to the age of the child, specific to each infectious disorder;
- **To know:**
 - Incidence, modern aspects of the etiopathogenesis of infectious diseases frequently encountered in children
 - Clinical and paraclinical (laboratory and instrumental) diagnosis of each disease studied and their importance in diagnosis
 - Classification of infectious diseases
 - Clinical syndromes characteristic of each infectious disease studied with particularities in children and their significance for the nosological diagnosis.
 - The principles of treatment of infectious diseases depending on the child's age, comorbidities and complications.
- **To demonstrate the ability:**
 - To perform clinical diagnosis of infectious diseases in children
 - To perform the differential diagnosis and its argumentation
 - To describe laboratory and instrumental data and their importance for the diagnosis of infectious diseases
 - To build the clinical diagnosis (basic disease, complications and comorbidities)
 - To create the personalized treatment plan (of the basic disease and comorbidities) with its argumentation
- **To apply:**
 - Knowledge gained in management of children with infectious disease
 - Diagnostic algorithm, differential diagnosis and treatment in possible emergencies to the severe child
 - Knowledge gained in the analysis of case studies and practical work
 - Knowledge gained in optimizing therapeutic compliance
 - Knowledge related to the preparation of the documentation (medical records , transfer epicrisis, stage epicrisis, discharge epicrisis, extract from the observation sheet, etc.)
- **To integrate:**
 - Knowledge of fundamental, preclinical and clinical disciplines
 - In practice and everyday life knowledge of specific prophylaxis of infectious diseases in children (including the timetable of vaccination)



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VI. PROFESSIONAL (SPECIFIC (SC)AND TRANSVERSAL (TC))COMPETENCES AND STUDY OUTCOMES

✓ Professional (specific) (SC) competences

- PC1.Acquiring the skills to recognize an infectious disease in children
- PC2.Knowledge, understanding and use of specific medical language
- PC3. Correct and developed formulation of the clinical diagnosis
- PC4. Establishment of a laboratory and paraclinical investigation plan for correct therapeutic and prophylactic decisions
- PC5. The preparation of the medical documentation (the observation sheet, transfer and discharge epicrisis extracted from the sheet of observation).

✓ Transversal competences (TC)

- TC1.Acquiring information on the role of the infectious disease specialist in the multidisciplinary team that will act in epidemic / pandemic situations
- TC2.Forming of the personal attitude
- TC3. Improving the ability to interact with parents and children suffering from infectious diseases, severe and very severe forms.
- TC4. Fitting in interdisciplinary projects, and extra curricular activities.
- TC5. Identifying opportunities for continuous training and efficient use of learning resources and techniques for own development.

✓ Study outcomes

At the end of the module the student will be able to:

- To know the evolutionary and age specificities of infectious diseases in children
- To know the methodology of early diagnosis of infectious diseases in children
- To understand the principles of clinical, laboratory and instrumental examinations in differential diagnosis of contagious diseases
- To know the particularities of the diagnostic algorithm for the argumentation of a personalized etiopathogenic and symptomatic treatment
- To take optimal decisions in granting emergency medical assistance to patients with infectious diseases in critical situations
- To be able to acquire daily the new achievements in infectious diseases and to perform interdisciplinary clinical synthesis (microbiology, neurology, pediatrics, etc.)

Note. Study outcomes(are deduced from the professional competencies and formative valences of the informational content of the discipline).



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VII. STUDENT'S SELF-TRAINING

No.	Expected product	Implementation strategies	Assessment criteria	Implementation terms
1.	Work with information sources and National Clinical Protocols	Reading the lecture and the material in the manual on the subject Reading questions on the subject, which requires a reflection on the subject Work systematically in the library and media library. Exploring current electronic sources on the topic	Ability to extract the essentials, interpretive abilities. The quality of systematization of the information obtained through its own activity.	During the module
2.	Work with online materials	Studying on-line materials on the discipline web site, and on other sites with specialized databases and literature	Presentation of information in practical works and seminars	During the module
3.	Preparing presentations and reports	Analysis of relevant bibliographic sources for the topic. Analysis, systematization and synthesis of information on the proposed theme. Compilation of the report in accordance with the requirements in force and its presentation	The volume of work, the degree of penetration in the essence of the report, the level of argumentation, the quality of the conclusions, the presentation method.	During the module
4.	Examination of patients during practical work	Patient examination, correct assessment of data obtained from the patient's immediate examination, paraclinic data; tactics of diagnosis, differential diagnosis and individualized treatment	Correct formulation and argumentation of the patient's diagnosis, investigation plan and treatment	During the module
5.	Case study analysis	Choice and description of the case study. Analysis of etiological factors, results of laboratory and paraclinical investigations, treatment plan in the case study. Prognosis of the case investigated.	Analysis, synthesis and argumentation of data obtained through own investigation. Formation of an algorithm of knowledge based on the obtained conclusions	During the module



VIII. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

• *Teaching and learning methods used*

In the teaching process of discipline Infectious Diseases in Children, different didactic methods are used for the effective acquisition and achievement of didactic objectives, such as: lecture, practical lesson, clinical debate, problem solving, simulation of different clinical situation, group and individual work methods, study of the curricular documents and bibliography.

Seminars are based on widely used clinical and illustrative material (tables, diagrams, micrographs) and topic tests.

Practical lessons are planned:

- At the bed of patients, with the examination and discussion of the thematic patients, with the interpretation of the laboratory and paraclinical investigations and with the estimation of the treatment schedule

- Involvement of beneficiaries in the presentation of clinical cases with various infectious pathologies

- Practical lessons in an interactive way with a didactic strategy centered on active and interactive learning: multidirectional communication with formation of formative skills

- At the end of each chapter, the lecturer makes a generalization

Recommended learning methods:

- **Observation.** Determination of clinical and paraclinical age peculiarities of infectious diseases in children
- **Analyze.** Highlighting the essential elements. Studying each element as part of the composition of the whole
- **Infectious Disease Analysis.** Selection of necessary information. Recognition and description of infectious diseases detected.
- **Classification.** Determining the criteria by which classification of infectious diseases should be performed.
- **The didactic and research activity** consists in the preparation by the beneficiaries of materials related to infectious diseases in children, illustrative materials, synthesis reports, participation with communications at clinical conferences, scientific and practical conferences etc.

• *Applied teaching strategies / technologies (specific to the discipline)*

Strategies (applied didactic technologies specific to the subject): Exposition, interactive lecture, group work, individual study, work with manual and scientific text, solving case-problem situations, simulation, interactive listening



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- **Methods of assessment**(including the method of final mark calculation)

Current: Frontal and/or individual control by:

- A. Applying docimological tests
- B. Solving problems/exercises
- C. Analysis of case studies
- D. Making role plays on the topics discussed
- E. Control work

Final: Differentiated Colloquium. The modality/final grade will consist of the average score of 2 control and individual work (share 0.4), final test in computerized system (share 0.3) and practical skills (share 0.3).

Method of mark rounding at different assessment stages

Intermediate marks scale (annual average, marks from the examination stages)	National Assessment System	ECTS Equivalent
1,00-3,00	2	F
3,01-4,99	4	FX
5,00	5	E
5,01-5,50	5,5	
5,51-6,0	6	
6,01-6,50	6,5	D
6,51-7,00	7	
7,01-7,50	7,5	C
7,51-8,00	8	
8,01-8,50	8,5	B
8,51-8,00	9	
9,01-9,50	9,5	A
9,51-10,0	10	

The average annual mark and the marks of all stages of final examination (computer assisted, test, oral) - are expressed in numbers according to the mark scale (according to the table), and the final mark obtained is expressed in number with two decimals, which is transferred to student's record-book.

Absence on examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student has the right to have two re-examinations.

**IX. RECOMMENDED LITERATURE:*****A. Compulsory:***

1. Boli infecțioase la copii: (ghid practic pentru studenți)/sub red.: Galina Rusu USMF "Nicolae Testemițanu 2015
2. Rusu Galina (redacția). Manual. Boli infecțioase la copii, Chișinău, 2012
3. Culegere de teste la boli infecțioase la copii sub redacția G.Rusu, USMF "Nicolae Testemițanu"2016
4. Chiotan M. Boli infecțioase.- București: Ed. Național, 2011
5. Методические разработки для студентов по инфекционным болезням у детей. Chișinău: Medicina, 2005
6. Сборник тестов по инфекционным болезням у детей. Chișinău: Medicina, 2007
7. В.Ф.Учайкин. Руководство по инфекционным болезням у детей. ГЭОТАР, Медицина, Москва, 2014, 809 с.
8. Учайкин, Василий Федорович Инфекционные болезни у детей учебник. – М.,2013
9. Mikhailova A. M., Minkov I. P., Savchuk A. I. Infectious diseases in children. Odessa. State Medical University, 2003
10. Pilly E..Maladies infectieuses et tropicales.2014
11. Harrison`s Infectious Diseases - Kasper D., Fauci A. – 2013

B. Additional:

1. National Medico-Economic Standards, Chișinău, 2009-2013
2. Updated National Clinical Protocols
3. National Clinical Protocols for Family Physicians
4. Pediatric protocols
5. Инфекционные болезни. Россия. Журнал
6. Российский педиатрический журнал
7. Детские инфекции. Журнал