



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 1/11

FACULTY OF MEDICINE №2
INFECTIOUS DISEASES STUDY PROGRAM
DEPARTMENT OF INFECTIOUS DISEASES

APPROVED

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

Report Nr. 8 of 15.03.18

Chairman of the Commission, PhD, associate professor

Suman Serghei

APPROVED

at the meeting of the Faculty of Medicine №2 Council

Report Nr. 4 of 20.03.18

Dean of the Faculty, PhD, associate professor

Bețiu Mircea

APPROVED

at the meeting of Infectious Diseases Department

Report nr. 3 of 30.11.2012

Head of the Department „Infectious Diseases”

PhD, university professor

T. Holban

CURRICULUM
SUBJECT INFECTIOUS DISEASES

Integrated studies

The type of the subject: **Compulsory**

Chișinău, 2018



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 2/11

I. INTRODUCTION

The Infectious Diseases discipline refers to contagious diseases caused by biological agents (viruses, bacteria, mono or pluricellular parasites, fungi or prions) spread throughout the Republic of Moldova and abroad.

Infectious diseases, apart from the pathology of the isolated individuals, may have epidemiological importance by affecting large population groups. Today we are witnessing a recurrence of infectious pathology around the world, particularly those that are being developed within HIV / AIDS-induced immunodeficiency. At the same time, there has been a wider acceptance of infectious etiology in various fields of other pathologies (neurology, oncology, internal medicine, congenital diseases). Infectious diseases are part of our everyday life, which can not be carried out in a sterile environment, that is why the risk of infection remains permanent, and is considerably increasing due to the migration of the population. Physicians of all specialties must have the necessary knowledge for early detection, diagnosis and assistance in case of infectious disease. The structure of the medical service does not allow the infectious patients to primarily address not to the infectionist, but to the first-line doctors - family doctor, generalist, emergency doctor, etc. In their everyday work, infectious patients often prevail over other categories, especially during epidemic periods.

The Department of Infectious and Tropical Diseases and Medical Parasitology focuses on training doctors who will possess modern methods of diagnosis, treatment and control of infectious diseases.

- The mission of the Curriculum (the purpose) in the professional development:
To train doctors who will possess modern methods of diagnosis, treatment and control of infectious diseases.
- Language of instruction: English.
- Learners: students of the 6th year of study, faculty of Medicine 2.

II. COURSE MANAGEMENT

The code of the discipline	S.11.O.101		
The name of the discipline	Infectious Diseases in Adults		
Curator (s) of the course	PhD, university professor T.Holban		
Year of study	VI	Semester (s)	XI
The total number of hours, including:			150
Lectures	24	Practical work	30
Seminars	30	Individual work	66
Form of assesment	E	The number of credits	5

III. LEARNING OBJECTIVES

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

- **at the level of knowledge and understanding:**
- to know the basics of diagnostic and principles of treatment of the most common infectious diseases;
- to understand the importance of studying infectious diseases, including under the conditions of increasing immunodepression and antibiotics resistance of the population;
- to identify the risk of contracting a disease.
- **at the level of application:**
- to diagnose the most common infectious diseases;
- to estimate the results of the paraclinical investigations;
- to apply etiotropic treatment according to etiology;
- to solve situational problems, processing multilaterally and critically the information received;



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 3/11

- to be able to prove personal opinion and accept the diversities of the clinical manifestations of infectious diseases.
- **at the level of integration**
- to be able to appreciate the importance of studying Infectious Diseases in the context of Internal Medicine
- to creatively approach the problems of clinical medicine
- to deduce interrelations between Infectious Diseases and other clinical disciplines
- to have skills to implement and integrate the knowledge gained in his / her medical practice
- to be able to evaluate and self-assess the knowledge in the field
- to be able to assimilate new achievements in Infectious Diseases
- to be able to fully and individually treat patients
- to be competent in identifying the role of Infectious Diseases as a specialty in the health system of the Republic of Moldova.

IV. PRIOR CONDITIONS AND REQUIREMENTS

Obligatory	Gown, protective mask / respirator, cap, phonendoscope, surgical gloves
Recommended	Use of the individual desinfectant solutions

V. TOPICS AND PRELIMINARY DISTRIBUTION OF HOURS

A. Lectures

Nr.	Topic	Hours
1.	Introduction to the pathology of infectious diseases	2
2.	Systemic bacterial infections. Systemic inflammatory response syndrome (SIRS). Sepsis. Septicemia. Toxic shock	2
3.	Principles of etiological treatment in clinical picture of infectious disease.	2
4.	Differential diagnosis of eruptive infections.	2
5.	Viral hepatitis (part 1).	2
6.	Viral hepatitis (part 2)	2
7.	Diagnosis and management of CNS disorders in infectious pathology.	2
8.	Diagnosis and management of febrile syndrome infectious diseases.	2
9.	Diagnosis and management of acute diarrheal diseases of infectious origin.	2
10.	Botulism.	2
11.	Influenza and other acute viral respiratory infections.	2
12.	HIV / AIDS infection.	2
Total		24

B. Practical work / seminars and individual work

Nr. d/o	TOPIC	hours	
		PW/S	Individual work
1.	Introduction to the pathology of infectious diseases. Viral hepatitis A, B, C, D and E.	5	8
2.	Viral hepatitis A, B, C, D and E. Leptospirosis.	5	8
3.	Anthrax. Plague. Tularemia.	5	5
4.	CNS involvement in infectious pathology. Enteroviruses (infections with Coxsackie and ECHO viruses).	5	5



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 4/11

Nr. d/o	TOPIC	hours	
		PW/S	Individual work
5.	Yersiniosis (pseudotuberculosis and intestinal yersiniosis). Shygelosis.	5	5
6.	Tetanus. Rabies. Botulism.	5	5
7.	Borreliosis. Brucellosis. Erysipelas.	5	5
8.	HIV, AIDS infection (Part 1).	5	5
9.	HIV, AIDS infection (Part 2).	5	5
10.	Diagnosis and management of tonsillitis in infectious pathology (streptococcal, fusospirochetal, diphtheritic, herpetic, EBV, tularemic). Infectious mononucleosis.	5	5
11.	Influenza and other acute viral respiratory infections (parainfluenza, rhinovirus).	5	5
12.	Typhoid fever, paratifoids A and B. Salmonellosis and other food poisoning diseases.	5	5
Total		60	66

VI. REFERENCE OBJECTIVES AND CONTENT UNITS

Objectives	Content units
Topic 1. Introduction to the pathology of infectious diseases. Viral hepatitis A, B, C, D and E.	
<ul style="list-style-type: none"> • To define the notions of infection, infectious disease, infectious disease, symbiosis, comensualism and parasitism. • To apply clinical and paraclinical methods for the diagnosis of acute viral hepatitis A, B, C, D and E. • To acquire treatment for acute viral hepatitis. • To know the general features of the infection • To enumerate the clinical manifestations of infectious diseases. • To acquire the characteristics of the clinical periods peculiar to acute infectious disease. • To understand the confirmation of the diagnosis of viral hepatitis based on clinical skills and interpretation of paraclinical results. • To define typical and atypical forms of viral hepatitis • To recognize the clinical manifestations of viral hepatitis • To apply clinical and paraclinical methods to diagnose acute viral hepatitis A, B, C, D and E. • To acquire treatment for acute viral hepatitis 	Actuality, history, concepts
	The spread and importance of infectious diseases.
	Principles of Classification of Infectious Diseases.
	Infectious diseases. Etiological and epidemiological classification.
	Macroorganism defense mechanisms.
	Types of thermal curves in pathology of infectious diseases.
	Investigation methods.
	Principles of treatment.
	Actuality of viral hepatitis A, B, C, D and E.
	Etiopathogenicity of viral hepatitis A, B, C, D and E.
	Classification of clinical forms of viral hepatitis A, B, C, D and E.
	The clinical and paraclinical picture of acute, typical and atypical viral hepatitis.
Topic 2. Viral hepatitis A, B, C, D and E. Leptospirosis.	
<ul style="list-style-type: none"> • To define chronic viral hepatitis • To know the manifestations of chronic hepatitis • To demonstrate the ability to perform the necessary manipulations • To apply clinical and paraclinical methods to confirm chronic viral hepatitis • To integrate National Clinical Protocols data with 	Etiopathogenetic causes of chronic viral hepatitis.
	Clinical picture and complications of chronic viral hepatitis.
	Differential diagnosis of viral hepatitis with other icteric conditions.
	Paraclinical diagnosis of viral hepatitis.
	Diagnosis and management of acute and chronic liver necrosis.



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 5/11

Objectives	Content units
<p>real clinical case</p> <ul style="list-style-type: none"> To know epidemiology and clinical-paraclinical manifestations in leptospirosis To memorize for a long term the principles of chronic viral hepatitis and leptospirosis. 	Determination of Child-Pugh and Metavir scores.
	Medical examination of patients with acute and chronic viral hepatitis.
	Actuality, etiology and pathogenesis of leptospirosis.
	Leptospirosis. Clinical picture.
	Diagnosis and management of leptospirosis complications.
	Leptospirosis. Paraclinic diagnosis. Principles of treatment.
	Medical examination of patients with leptospirosis.
Topic 3. Systemic bacterial infections. SIRS. Sepsis. Septicemia. Toxic shock	
<p>To define the notion of SIRS, Sepsis, Septicemia and Toxic shock</p> <p>To know the etiopathogenesis, classifications and clinics of the above-mentioned notions.</p> <p>To discern the correct clinical-therapeutic approach.</p>	Definitions
	Etiology and pathogenesis.
	Classifications
	Clinical picture
	Laboratory tests.
	Clinical and therapeutic approach.
Topic 4. Differential diagnosis of eruptive infections.	
<p>To know the etiology and modes of transmission of eruptive infections.</p> <p>To knowing how to morphologically define the eruptive element.</p> <p>To differentiate eruptive infections based on clinical evolving.</p>	Etiology.
	Clinical and evolutive features
	The principles of differential diagnosis.
Topic 5. Diagnosis and management of CNS disorders in infectious pathology. Enteroviral infections.	
<p>To be aware of the current CNS infections in immunosuppressed and immunocompetent in the context of increasing microbial resistance.</p> <p>To know the etiopathic basis of CNS infections.</p> <p>To apply the methods of clinical and paraclinical diagnosis to the real / virtual patient.</p> <p>To integrate the knowledge of the 5th and 6th years of studies in order to differentiate between CNS infections.</p> <p>To memorize the principles of CNS treatment in infectious pathology.</p> <p>To learn topicality, etiology, pathogenesis, clinical classification, clinical picture, paraclinical diagnosis and treatment principles of enterovirus infection with Coxackie and ECHO viruses.</p>	Actuality.
	Etiology.
	Pathogenesis.
	Particularities of the clinical picture.
	Laboratory and paraclinical diagnosis.
	Differential diagnosis of infections that develop with meningian syndrome (meningococcal, pneumococcal, enteroviral, herpetic infections, tuberculosis, AIDS).
Principles of treatment.	
Topic 6. Diagnosis and Management of Infectious Diseases with Febrile Syndrome.	
<p>To know etiopathogenesis</p> <p>To differentiate infections with febrile syndrome based on clinical evolution.</p> <p>To remember the principles of treatment</p>	Etiology.
	Pathogenesis.
	Particularities of the clinical picture.
	Laboratory and paraclinical diagnosis.
	Differential diagnosis
	Principles of treatment.
Topic 7. Diagnosis and management of acute diarrheal diseases of infectious origin.	
<p>To know the etio-pathogenetic classification.</p> <p>To differentiate acute diarrheal diseases according to clinical evolution.</p>	Etiology.
	Pathogenesis.
	Particularities of the clinical picture.



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 6/11

Objectives	Content units
To know the paraclinical methods of etiological confirmation. To acquire the method of rehydrating the patient. To memorize the principles of etiotropic, pathogenetic and symptomatic treatment.	Laboratory and paraclinical diagnosis.
	Differential diagnosis
	Principles of treatment.
Topic 8. Antrax. Plague. Tularemia.	
To raise awareness of zoonanthroposis. To assimilate the clinical picture based on etiopathogenesis. To acquire the methods of paraclinical diagnosis. To memorize the principles of treatment.	Actuality.
	Etiology.
	Pathogenesis.
	Classification of clinical forms. Clinical picture.
	Paraclinical diagnosis.
Principles of treatment.	
Topic 9. Tetanus. Rabies. Botulism.	
To be aware of the actuality of tetanus, rabies, botulism. To know their etiological, epidemiological and clinical classifications. To know and memorize the clinical signs, explaining them pathogenetically. To memorize the paraclinical diagnosis methods. To acquire the method of fractional desensitization and the principles of etiotropic, pathogenetic and symptomatic treatment. To know the principles of non-specific and specific prophylaxis.	Actuality.
	Etiology.
	Pathogenesis.
	Clinical picture.
	Paraclinical diagnosis.
Principles of treatment.	
Topic 10. Borreliosis. Brucellosis. Erysipelas.	
To become aware of the actuality of borreliosis, brucellosis and erysipelas. To know their etiological, epidemiological and clinical classifications. To know and memorize the clinical signs, explaining them pathogenetically. To memorize the paraclinical diagnosis methods. To adopt the principles of etiotropic, pathogenetic and symptomatic treatment. To know the principles of non-specific and specific prophylaxis.	Actuality.
	Etiology.
	Pathogenesis.
	Classification of clinical forms.
	Clinical picture.
	Paraclinical diagnosis.
Principles of treatment.	
Topic 11. HIV, AIDS infection	
To be aware of the actuality of HIV infection, AIDS in the context of the up-to-date epidemic situation. To assimilate the cognitive pathogenesis of HIV infection, AIDS. To know the clinical evolution of HIV, AIDS, including its peculiarities in children. To understand the causality of phases of confirmatory etiological diagnosis and the need for other paraclinical investigations. To integrate the principles of antiretroviral treatment into the National Clinical Protocol.	Actuality.
	Etiology.
	Pathogenesis.
	Classifications.
	Acute HIV infection – clinical manifestations and management
	Clinical picture of HIV infection and AIDS.
	Particularities of HIV infection in children.
Paraclinical diagnosis.	
Principles of antiretroviral therapy.	
Topic 12. Diagnosis and management of tonsillitis in infectious pathology (streptococcal, fusospirochetal, diphtheritic, herpetic, EBV, tularemic). Infectious mononucleosis.	



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 7/11

Objectives	Content units
<p>To memorize classifications of tonsillitis. To know and understand the clinical signs of tonsillitis, infectious mononucleosis and their complications. To memorize the paraclinical diagnostic methods. To adopt the principles of etiotropic, pathogenetic and symptomatic treatment.</p>	Actuality.
	Etiology.
	Pathogenesis.
	Clinical picture.
	Paraclinical diagnosis.
	Complications.
	Principles of treatment.
Topic 13. Influenza and other acute viral respiratory infections (parainfluenza, rhinovirus).	
<p>To determine the factors that determine the prevalence of influenza and other acute viral respiratory infections. To understand the ethiopathic-pathogenetic differences between seasonal and pandemic influenza. To understand the causes of shift and drift. To know and learn about the clinical signs of influenza, parainfluenza, rhinovirus and their complications. Memorize the paraclinical diagnosis methods. To adopt the principles of etiotropic, pathogenetic and symptomatic treatment.</p>	Actuality.
	Etiology.
	Pathogenesis.
	Clinical picture.
	Paraclinical diagnosis.
	Principles of treatment.
Topic 14. Typhoid fever, paratifoids A and B.	
<p>To understand the ethiopathic etiology of clinical evolution. To know and acquire the clinical signs of typhoid fever, paratifoids and their complications. To memorize the paraclinical diagnosis methods. To adopt the principles of etiotropic, pathogenetic and symptomatic treatment.</p>	Actuality.
	Etiology.
	Pathogenesis.
	Clinical picture.
	Paraclinical diagnosis.
	Complications.
	Principles of treatment.
Topic 15. Principles of etiological treatment in the infectious disease therapy.	
<p>To acquire the rationale of antibiotic therapy. To know the stages of monitoring the treatment of the infectious patient. To carry out the synthesis of National Clinical Protocols on antiviral treatments.</p>	Rational Antibiotic Therapy.
	Treatment monitoring
	Antiviral treatment

VII. PROFESSIONAL SKILLS (PS) AND TRANSVERSAL (TC) COMPETENCES AND CONCLUSIONS OF THE COURSE

✓ **Professional skills (specific) (PS)**

- ✓ • PS1. A thorough knowledge of the particularities of the structure, development and functioning of the human body in various physiological and pathological states.
- ✓ • PS2. Performing various practical manipulations and procedures to carry out professional activities specific to the specialty of medicine based on the knowledge of the fundamental sciences;
- ✓ • PS3. Developing the diagnosis, treatment and rehabilitation plan in various pathological situations and selecting the appropriate therapies, including emergency medical assistance;
- ✓ • PS4. The use of medical techniques, instrumental and laboratory investigations, digital technologies to manage the patient's therapeutic course.
- ✓ • PS5. Planning, co-ordinating and conducting health promotion activities and prophylactic measures to improve individual and community health.
- ✓ • PS6. Evaluating and assuring the quality of medical services in relation to maneuvers, processes and associated treatments.



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 8/11

✓ Transversal competences:

✓ **Transversal competences (TC)**

- ✓ TC1. Responsible execution of professional tasks applying the values and norms of professional ethics, as well as the provisions of the legislation in force. Promoting logical reasoning, practical applicability, assessment and self-assessment in decision-making;
- ✓ •TC2. Performing activities and exercising the roles specific to the team work in various medical institutions. Promoting the spirit of initiative, dialogue, cooperation, positive attitude and respect for others, empathy, altruism and continuous improvement of their own activity;
- ✓ •TC3. Objective self-evaluation of the need for continuous professional training in order to provide quality services and adapt to the dynamics of health policy requirements and for personal and professional development. Effective use of language skills, knowledge in information technologies, research and communication skills.

✓ **Conclusions of the course**

- to know the diagnostic markers and the principles of treatment of the most common infectious diseases;**
- to understand the importance of studying infectious diseases, mainly in the context of the migration of population and climate change;**
- to identify the risk of contracting an infectious disease.**
- to perform the diagnosis of the most common infectious diseases;**
- to estimate the results of the paraclinical investigations;**
- to apply etiotropic treatment according to etiology;**
- to solve situational problems, processing multilaterally and critically the information received;**
- to be able to prove personal opinion and accept the diversities of the clinical manifestations of infectious diseases.**
- to be able to appreciate the importance of studying Infectious Diseases in the context of Internal Medicine**
- to creatively approach the problems of clinical medicine**
- to deduce interrelations between Infectious Diseases and other clinical disciplines**
- to have skills to implement and integrate the knowledge gained in his / her medical practice**
- to be able to evaluate and self-assess the knowledge in the field**
- to be able to assimilate new achievements in Infectious Diseases**

VIII. INDIVIDUAL STUDENT'S WORK

Nr.	The expected result	Implementation Strategies	Evaluation criteria	Time of implementation
1.	Exploring the Sources of Information	Reading the summary of lectures and / or the material from the textbook to the topic, in order to memorize it. Marking topics that are unintelligible or need clarification. If necessary, selecting the source of additional information on the topic. Making generalizations and conclusions.	The ability to choose the important matters; interpretative abilities; volume of the work.	During the module



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 9/11

2.	Clinical case investigation	Establishing clinical case. Drawing up the research plan. Setting the terms of execution. Determining the technical presentation method Planning the presentation components. The actual realization. Discussions and conclusions.	Presentation of the clinical case investigation	During the module
3.	Reports	Choosing the topic of the research; elaboration of the plan, setting the terms of the realization and bibliographic sources.	Report's presentation	During the module
4.	Bibliography review	Choosing the subject Online search Selecting the material Synthesis of the studied material Discussions Conclusions	Bibliography review presentation	During the module

IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

Teaching and learning methods used

Lectures

- *Introductive*
- *Daily*
- *Answering the questions*
- *Conclusions*

Seminars

- *Case investigation*
- *Rope play*
- *Workshops*
- *Individual work*
- *Clinical observation*
- *Work with medical documentation*
- *Synthesis*
- *Problem solving in group*
- *Demonstration*
- *Brainstorming*
- *Games*
- *Group debates*
- *Small groups discussions*
- *Presenting audio-visual aids*

- **Applied didactic strategies / technologies (specific to the discipline)**

“Four corners” , „Brainstorming”; „Case investigation”; „Round table/interactive discussions”; Creative controversy: Problem solving in group

Methods of assessment *(including the methodology of the final grade calculation)*



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 10/11

Daily:

- Thematic controls
- Tests
- Clinical case investigation
- Observations of benefits
- Practical demonstration
- Feed back
- Written assessments

Final:

- Practical skills assessment
- Test
- Oral exam

Methodology of the final grade calculation:

Current marks: Practical skills – 20% Semester average mark – 30%	50 %
Exam Result: Written part – 20% Oral part – 30%	50 %

How to round up marks in the evaluation steps

Intermediate marks scale (annual average, grades from the exam steps)	National scoring 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	D
6,01-6,50	6,5	
6,51-7,00	7	C
7,01-7,50	7,5	
7,51-8,00	8	B
8,01-8,50	8,5	
8,51-8,00	9	A
9,01-9,50	9,5	
9,51-10,0	10	

The average annual mark and the scores of all the final examinations (computer assisted, test, oral) - will be expressed in numbers according to the scoring scale (according to the table), and the final grade obtained, expressed in two decimal digits will be transferred to the mark book.

Failure to attend the examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student is allowed to have 2 repeated attempts of the failed exam.

X. RECOMMENDED BIBLIOGRAPHY:

- A. Obligatory:

1. Harrison`s principles of internal medicine. Part six. Infectious diseases-19-th edition, 2015.

- B. Additional:



CD 8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 28.02.2018

Pag. 11/11

1. *Infectious Diseases eMedicine* http://emedicine.medscape.com/infectious_diseases.