



CD8.5.1CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 20.09.2017

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FACULTY OF MEDICINE
PROGRAM OF STUDY0912.1 MEDICINE
INTERNAL MEDICINE DEPARTAMENT
DISCIPLINE INTERNAL MEDICINE – CLINICAL SYNTHESIS

APPROVED

at the sitting of the Quality Assurance and
Curriculum Evaluation Commission
of Faculty of Medicine

Protocol Nr. 8 from 18.03.2017

Chairman Univ. prof., MD, PhD

Suman Serghei

APPROVED

at the sitting of the Faculty of Medicine nr. 2,
Protocol nr. 4 from 20.03.2017

Dean of the Faculty of Medicine nr. 2,
Assoc. prof., MD, PhD.

Mircea Bețiu

APPROVED

at the sitting of Discipline Internal Medicine – Clinical Synthesis

Protocol Nr. 4 from 30.11.2017

Chief of Discipline Internal Medicine- Clinical Synthesis

Univ. prof., MD, PhD S. Matcovschi

CURRICULUM

DISCIPLINE: INTERNAL MEDICINE – CLINICAL SYNTHESIS
Integrated studies

Type of the discipline: **Mandatory**

Chișinău, 2017



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I. PRELIMINARY

- ✓ **General presentation of the discipline: place and role of the discipline in the specific competence formation of the professional specialty training program:**

The Internal Medicine is an integrative clinical medical discipline. Studying it in the university will create skills and necessary support to suggest the correct diagnosis based on history, clinical examination and laboratory findings, learning the concepts necessary for the differential diagnosis and creation of necessary skills to address emergencies, acquirement of prophylaxis and treatment of internal diseases.

- ✓ **The aim of the discipline of Internal Medicine (Clinical Synthesis):**

Strengthening the basic knowledge of the pathology of the internal organs and their implementation in practice; knowledge of the development, diagnosis, appropriate treatment and prevention of the internal diseases, development of the clinical reasoning and medical synthesis which are the defining elements in the preparation of any physician.

- ✓ The taught discipline languages: Romanian, English;
- ✓ Beneficiaries: 6 years students, faculty of Medicine 1 and 2, specialty of Medicine.

II. DISCIPLINE ADMINISTRATION

Code of the discipline	S.11.O.098		
Name of the discipline:	Internal medicine – Clinical synthesis		
Responsible of the discipline	dr. hab. med. sci., univ. prof. Sergiu Matcovschi		
Year	6	Semester/Semesters	11-12
The total number of hours is, included:			510
Lectures	80	Practical lessons	100
Seminars	100	Individual activity	150
Practical training			80
Evaluation form	CD	Number of credits	17

III. THE OBJECTIVES OF THE TRAINING IN THE DISCIPLINE:

At the end of the discipline study the student will be able:

- ***At the level of knowledge and understanding***
 - to improve and strengthen the knowledge accumulated in the field of the Internal Medicine in the 4th and 5th year, enrich and deepen them;
 - study of atypical variants of internal diseases;
 - the correct assessment of the data obtained in the examination of the patient in the view of instrumental and laboratory examination;
 - learn the tactics of diagnosis and treatment.
- ***At the application level***
 - better knowledge and experience accumulation in diagnosis, differential diagnosis and treatment of the internal diseases;
 - assessing the results of the laboratory and instrumental investigations; Meeting and drafting medical documents;
 - providing clinical training in the internal medicine in conditions maximally close to independent physician practice;
 - elaboration of scientific research projects in the internal medicine.
- ***At the level of integration***



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- assessing the importance of internal pathology in the context of general medicine and related medical disciplines;
- the evolution of the physiological processes, etiology and pathophysiology of diseases in adults;
- further development of clinical thinking based on the principles of the syndrome diagnosis, the intrasyndromal differential diagnosis and strictly individual treatment of various internal diseases;
- creative approach to the internal medicine problems;
- the deduction of interrelations between the internal medicine and other medical disciplines (physiology, oncology, endocrinology etc.);
- the ability to evaluate and self-assess knowledge in the field;
- the ability to understand new developments in the internal medicine.

IV. THE PREPARATION AND PRELIMINARY REQUIREMENTS:

To acquire better discipline of the Internal Medicine (Clinical Synthesis) developing a profound knowledge in the subjects studied in the previous years (internal medicine semiology, physiology, oncology, endocrinology etc.) is required.

V. THE CONTENT OF THE DISCIPLINE

TIMETABLE AND ORIENTAL DISTRIBUTION OF HOURS

Lectures, practical lessons / laboratory works/seminars and individual activity

Nr. d/o	TOPIC	Hours	
		Lectures	Practical lessons
1.	Differential diagnosis of syndrome of pulmonary consolidation (common diseases).	2	5
2.	Differential diagnosis of syndrome of pulmonary consolidation (rare diseases).	2	5
3.	Differential diagnosis of broncho-obstructive syndrome (common diseases).	2	5
4.	Differential diagnosis of broncho-obstructive syndrome (rare diseases).	2	5
5.	Differential diagnosis of diffuse interstitial pneumopathies.	2	5
6.	Differential treatment of interstitial pneumopathies.	2	5
7.	Differential diagnosis of mediastinal syndrome.	2	5
8.	Differential diagnosis of pleural effusion.	2	5
9.	Differential diagnosis of allergic diseases.	2	5
10.	Differential treatment of allergic diseases.	2	5
11.	Differential diagnosis of acute heart failure.	2	5
12.	Differential diagnosis of chronic heart failure.	2	5
13.	Differential diagnosis of cardiac chest pain.	2	5
14.	Differential diagnosis of non-cardiac chest pain.	2	5
15.	Differential diagnosis of cardiac arrhythmias.	2	5
16.	Differential diagnosis of cardiac blocks.	2	5
17.	Differential diagnosis of secondary arterial hypertension.	2	5
18.	Differential diagnosis of primary non-coronary diseases of the myocardium.	2	5
19.	Differential diagnosis of acquired cardiomyopathies.	2	5
20.	Differential diagnosis of pericardial syndrome.	2	5
21.	Differential diagnosis of dysphagia.	2	5
22.	Differential diagnosis of diarrhea.	2	5
23.	Differential diagnosis of constipation.	2	5
24.	Differential diagnosis of acute and chronic abdominal pain.	2	5



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Nr. d/o	TOPIC	Hours	
		Lectures	Practical lessons
25.	Differential diagnosis of hepatomegaly.	2	5
26.	Differential diagnosis of jaundice.	2	5
27.	Differential diagnosis of intrahepatic portal hypertension.	2	5
28.	Differential diagnosis of extrahepatic portal hypertension.	2	5
29.	Differential diagnosis of malabsorption syndrome.	2	5
30.	Differential treatment of malabsorption syndrome.	2	5
31.	Differential diagnosis of articular syndrome.	2	5
32.	Differential diagnosis of back pain.	2	5
33.	Differential diagnosis of fibromyalgia syndrome.	2	5
34.	Differential diagnosis and treatment of connective tissue diseases.	2	5
35.	Differential diagnosis of multivisceral syndrome in connective tissue diseases.	2	5
36.	Differential diagnosis of syndrome of fever of unknown origin.	2	5
37.	Differential diagnosis of renal syndrome.	2	5
38.	Differential diagnosis of edemas syndrome.	2	5
39.	Differential diagnosis and treatment of acute renal failure.	2	5
40.	Differential diagnosis and treatment of chronic renal failure.	2	5
Total		80	200

VI. REFERENCE OBJECTIVES AND CONTENTS UNIT

Reference objectives and contents unit

For each subject provided by the program the aim will be the following:

- **define the syndrome discussed in each topic;**

- **to know:**

- a detailing of the syndrome, which includes pathophysiology, semiology, modern methods of investigation, meaning of the syndrome for nosological diagnosis;
- the diseases that are manifested by the syndrome concerned;
- modern aspects of etiology and pathogenesis of the diseases discussed in each subject;
- a clinical and paraclinical (laboratory and instrumental) diagnosis of each nosological entity with its argument;

- **demonstrate ability:**

- to perform the clinical and paraclinical (laboratory and instrumental) diagnosis of each nosological entity with its arguments;
- to perform the differential diagnosis and its argumentation;
- to develop the clinical diagnosis (basic disease, complications and comorbidities);
- to draw up the paraclinical examination plan with his arguments;
- to draw up the personalized treatment plan (basic illness and comorbidities) with his argument;

- **apply:**

- knowledge and practical skills accumulated;
- algorithm for diagnosis, differential diagnosis and treatment in eventual emergency situations;
- the knowledge related to the preparation of the medical documentation (observation sheet, stage epicrisis, transfer and discharge, extract from the observation sheet, statistical sheet).

- **integrate** knowledge in the fields of fundamental, preclinical and clinical disciplines.

**VII. PROFESSIONAL COMPETENCES (SPECIAL (SC) AND TRANSVERSAL (TC)) AND STUDY FINALS****✓ Professional skills**

- Approach of the patient with multiple comorbidities.
- Correct formulation of the clinical diagnosis.
- Making personalized differential diagnosis.
- Creating the patient investigation plan.
- Prescription of individualized treatment (basic disease + comorbidities).
- Preparation of medical documentation (observation file, stage epicrisis, transfer and discharge, extraction from the observation file, statistical file).
- Presentation of individual clinical cases.

✓ Transversal skills (CT)

- Improving of decision-making capacity.
- Formation of personal attitude.
- Ability to social interaction, group work with different roles.
- Improving of digital skills.
- Developing of different learning techniques.
- Selection and analysis of scientific literature on the clinical case and formulation of conclusions.

✓ The finality of the discipline

- To know the evolutive peculiarities of internal diseases based on co-morbidities.
- To know the methodology of differential diagnosis of internal diseases.
- To know the role of clinical, laboratory and instrumental investigations in the differential diagnosis of internal diseases.
- To be competent to prescribe personalized treatment in patients with multiple comorbidities.
- To be able to deduce interrelations between internal medicine and other medical disciplines (physiology, oncology, hematology, etc.) by performing interdisciplinary clinical synthesis.
- To be able to acquire the new achievements of internal medicine daily.

VIII. STUDENT'S INDIVIDUAL ACTIVITY

Nr.	Expected product	Implementation strategies	Evaluation criterias	Deadline
1.	Working with informational sources:	Carefully lectures and manual materials reading. To read the subject questions, which require a subject reflection. To get acquainted with the list of additional information sources on the topic. To select the additional information sources of the topic. Carefully reading of the entirely text and the essential content writing. Generalizations and conclusions formulation regarding the importance of the topic / subject.	Ability to extract the essentials; interpretative skills; the work volume.	Throughout the module
2.	Working with online materials	On-line materials studying from the WEB page of the discipline and from other sites with specialized databases	Results presentations at practical works and seminars	Throughout the module

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		and literature		
3.	Different learning techniques application		The volume of work, the level of insight into different subjects, the level of scientific argumentation, the quality of the conclusions, the elements of creativity, the demonstration of the problem understanding, the demonstration of the clinical reasoning, the practical abilities, the formation of the personal attitude	Throughout the module
4.	Examination of patients during practical work and guards.	Patient examination, correct assessment of the data obtained in the patient's immediate examination, in the laboratory and instrumental examination; acquisition of diagnostic tactics, differential diagnosis and individual treatment.	Correct formulation and argumentation of the patient's diagnosis, investigation plan and treatment plan.	Daily, during the module
5.	Preparation and support of presentations / reports.	Selecting of the presentations / reports topic and the terms of the achievement. Peer reviews. Teacher reviews.	The work volume, the degree of penetration in the essence of the presentation / reports, the argumentation level, the conclusions quality, the creativity elements, the personal attitude formation, the graphic presentation, the presentation method.	Throughout the module

IX. METHODOLOGICAL SUGGESTIONS OF TEACHING-LEARNING-EVALUATION**✓ *The teaching and learning methods used:***

The discipline of Internal Medicine -Clinical Synthesis is taught in a classic form with lectures and practical lessons. The lectures are reproduced through theoretical presentations of the material. The practical lessons consist of:

Treating patients. Students treat 4-5 patients daily under the control of their lecturer and an attending physician. Students fill in case histories, statements of observation sheets, medical certificates and other medical documents. Students perform the clinical presentation of patients during the visits of the Head of the Department and lecture. Students participate in patient's paraclinical investigations (radiography, endoscopy, etc.) and specialists consultations.

The daily evolution of the disease and other notes from the case history will be checked and signed by the lecturer or attending physician. The lecturer visits each student to check the student's mastery of history taking, physical examination of the patient, fill in the case history as well as to



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make the diagnosis, to indicate treatment etc. Special attention will be given to the clinical thinking, differential diagnosis, differential treatment (selection of drug doses, fill in receipts, avoiding polypragmasia). The students study the characteristics of the disease progression and treatment efficacy. In fatal cases the students will be present at the autopsy and participate in the clinical-anatomical conferences.

Seminars. During the seminars the most important chapters of the Internal medicine such as the disease etiology, pathophysiology, clinical presentation, diagnosis and differential diagnosis, treatment, prevention and work capacity expertise will be analyzed and discussed. The lesson takes the form of discussion, during which the reader appreciates the students' knowledge, explains the unclear material. At the end of each discussed chapter the lecturer makes a generalization.

The analysis of clinical cases. The patients with diseases, the diagnosis of which is complicated or the patients with rare pathology that represents a theoretical and practical interest will be selected for analysis.

The characteristics of the disease progression and atypical development of the disease will be analyzed. The diagnosis will be argued and the differential diagnosis will be made. The treatment will be indicated with the argumentation of each indication. The disease prevention and work capacity expertise will be discussed.

The guards in the clinic. During the study of the discipline of Internal Medicine - Clinical Synthesis each student will make two guards in the clinic during which together with the doctor on call will make an evening visit of patients correcting, if necessary their treatment as well as assisting in medical emergencies, thus improving their knowledge in the diagnosis, differential diagnosis and practical skills.

During the morning conference (the next day) the students will report about the patients hospitalized the day before, the clinical evolution of the severely ill patients and of those under surveillance and medical emergency assistance.

The clinical conferences. Students actively participate in the conferences organized according to the schedule with reports, illustrative material, presenting patients with a complicated diagnosis and rarely encountered cases of interest.

The teaching and research by students foresees the preparation of materials in various fields of the internal medicine, illustrative materials, summary reports, participation in the clinical and scientific conferences.

• ***Applied didactic strategies / technologies (discipline-specific):***

"Group Interview"; "Case Study"; "The round table".

Practical work at the patient's bed.

• ***Methods of assessment***(including an indication of how the final grade is calculated)

✓ **Current:** frontal and / or individual control by:

- questioning;
- analysis of clinical case;
- solving of a problem / clinical cases;
- application of docimological tests;
- quizzes.

✓ In the Internal medicine discipline - clinical synthesis, students' knowledge will be evaluated daily, and at the end of each practical lesson the note will be announced.

✓ Final: Colloquium.

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Evaluation steps and marks round up modality

Intermediate note grid (annual average, grades from the exam stages)	Național marks sistem	Echivalent ECTS
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 scores of all the final examination (computer assisted, test, oral) - all will be expressed in numbers according to the scoring scale (according to the table), and the final grade obtained will be expressed in two decimal digits, that will be transferred to the notes book.

X. RECOMMENDED BIBLIOGRAPHY:**A. Mandatory:**

1. Siegenthaler W. Differential diagnosis in internal medicine. From symptom to diagnosis. Theme. 2007.
2. Harrison's Principles of Internal Medicine. 19th Edition. 2015.
3. Churchill's Pocketbook of Differential Diagnosis, 4th Edition, 2014.

B. Additional:

1. Caproș N. Coronary artery disease, environmental and genetic factors. Chișinău, 2012.
2. Fraser R.S., Pare P., Fraser R.G., Pare P.D. Synopsis of Diseases of the Chest. 2nd edition, 1992.
3. Rheumatology, 3rd edition. By M.C. Hochberg, A.J. Silman, J.S. Smolen, M.E. Weinblatt and M.H. Weisman. Mosby, 2003.
4. Schmitz P., Martin K., Miller. Internal Medicine. Just the Facts. The McGraw-Hill Companies. 2008.
5. Woodhead M., Blasi F., Ewig S. et al. Guidelines for the management of adult lower respiratory tract infections. *Clinical Microbiology and Infection* 2011, Vol. 17, suppl. 6, p. 1-24.

C. Guides for students

1. Ambros F., Matcovschi S., Caproș Natalia, Dumitraș Tatiana. Clinical examination and a case history taking. Pocket guide. CEP „Medicina”, Chișinău, 2005.
2. Nikolenko Ion, Dumitraș Tatiana. Pulmonary function testing and chest imaging (illustrated guide). Chisinau, 2011.
3. Vlasov L. Innovative approaches in pathophysiology and management of hepatorenal syndrome. Chișinău, 2015.
4. Vlasov L., Țerna E. Abnormalities of renal function in chronic liver diseases. Chișinău, 2016.