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Approved

At the meeting of the Faculty Council
Medicine no. 2
Minutes No. 3 of 25.02.2014

Dean of Faculty of Medicine no. 2
MD, PhD, Associate Professor
M. Betiu



Approved

At the meeting of Medical clinic, Discipline
of Clinical synthesis, Department of Internal
medicine
Minutes No. 7 of 31.01.2014

Head of the clinic,
MD, PhD, University Professor
S. Matcovschi

SYLLABUS FOR STUDENTS OF FACULTY OF MEDICINE NO. 2

Name of the course: **Internal medicine – Clinical synthesis**

Code of the course: **S.07-12.O.58**

Type of course: **compulsory**

Total number of hours – 154

lectures - 32 hours, practical lessons - 122 hours

Number of credits provided for the course: 11

Lecturers teaching the course:

University Professor, MD, PhD, Sergiu Matcovschi

Associate Professor, MD, PhD, Natalia Capros

Associate Professor, MD, PhD, Nelea Draguta

Associate Professor, MD, PhD, Tatiana Dumitras

Chisinau 2014



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I. Aim of the discipline:

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

II. Objectives obtained in teaching the discipline:

- At the level of knowledge and understanding
 - improvement and strengthening of knowledge accumulated in the field of internal medicine at years 4 and 5, enrich and deepen them;
 - study of atypical variants of internal diseases;
 - correct assessment of the data obtained in the examination of a patient in the view of instrumental and laboratory examination;
 - learning of the tactics of diagnosis and treatment.
- At the level of application
 - better knowledge and experience accumulation diagnosis, differential diagnosis and treatment of internal diseases;
 - assessment of the results of laboratory and instrumental investigations;
Meeting and drafting of medical documents;
 - provision of clinical training in internal medicine in conditions maximally close to independent physician practice;
 - elaboration of scientific research projects in internal medicine.
- At the level of integration
 - Assessment of the importance of internal pathology in the context of general medicine and related medical disciplines;
 - evolution of physiological processes, etiology and pathophysiology of diseases in adults;
 - further development of clinical thinking based on principles of syndrome diagnosis, intrasyndromal differential diagnosis, and strictly individual treatment of various internal diseases;
 - creative approach to internal medicine problems;
 - deduction of interrelations between internal medicine and other medical disciplines (physiology, oncology, endocrinology etc.)
 - ability to evaluate and self-assess knowledge in the field;



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- ability to understand new developments in internal medicine.

III. Provisional terms and conditions

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

Profound knowledge in the subjects studied in previous years (internal medicine semiology, physiology, oncology, endocrinology etc.) is required for better learning of the discipline.

IV. Main theme of the course of Internal Medicine (Clinical Synthesis):

A. Lectures:

Nr.	Topic	Hours
1.	Differential diagnosis of pulmonary infiltrate syndrome.	2
2.	Differential diagnosis of bronchoobstructive syndrome.	2
3.	Differential diagnosis and treatment of allergosis.	2
4.	Differential diagnosis of chest pain.	2
5.	Arrhythmias. Differential diagnosis and treatment.	2
6.	Arrhythmias. Differential diagnosis and treatment.	2
7.	Arterial hypertension. Classification, differential diagnosis and treatment.	2
8.	Noncoronary diseases of the myocardium. Differential diagnosis and treatment.	2
9.	Differential diagnosis of dysphagia.	2
10.	Differential diagnosis of intestinal disorders.	2
11.	Differential diagnosis of hepatomegaly.	2
12.	Differential diagnosis of jaundice syndrome.	2
13.	Differential diagnosis of portal hypertension and its complications.	2
14.	Differential diagnosis of edema syndrome.	2
15.	Differential diagnosis of articular syndrome.	2
16.	Syndrome of fever of unknown origin.	2

B. Practical lessons:

Nr.	Topic	Hours
1.	Differential diagnosis of pulmonary infiltrate syndrome. Differential treatment of pneumonias.	5
2.	Differential diagnosis of bronchoobstructive syndrome.	5
3.	Differential diagnosis and treatment of disseminated pulmonary diseases.	7
4.	Differential diagnosis of pleural effusion.	7
5.	Differential diagnosis and treatment of allergosis.	5
6.	Acute and chronic heart failure. Pathogenesis, classification and differential	7



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	diagnosis. Differential treatment of chronic heart failure.	
7.	Differential diagnosis of chest pain.	5
8.	Arrhythmias. Differential diagnosis and treatment.	5
9.	Arrhythmias. Differential diagnosis and treatment.	5
10.	Arterial hypertension. Classification, differential diagnosis and treatment.	5
11.	Noncoronary diseases of the myocardium. Differential diagnosis and treatment.	5
12.	Differential diagnosis of dysphagia.	5
13.	Differential diagnosis of intestinal disorders.	5
14.	Differential diagnosis of hepatomegaly.	5
15.	Differential diagnosis of abdominal pain.	7
16.	Differential diagnosis of jaundice syndrome.	5
17.	Differential diagnosis of portal hypertension and its complications.	5
18.	Differential diagnosis of edema syndrome.	5
19.	Acute and chronic renal failure. Differential diagnosis.	7
20.	Differential diagnosis of articular syndrome.	5
21.	Differential diagnosis and treatment of connective tissue diseases. Disorders of internal organs in connective tissue diseases.	7
22.	Syndrome of fever of unknown origin.	5

V. *Recommended literature:*

- A. *compulsory:*

1. Harrison's Principles of Internal Medicine. 17th Edition. 2008.
2. Bonow R. O., Mann D. L., Zipes D. P. Braunwald's heart disease: a textbook of cardiovascular medicine. 9th edition.
3. Goldman L., Schafer A. Cecil Essentials of Medicine. 6th edition.
4. Kumar and Clark. Clinical Medicine. 6th edition.

- B. *additional:*

1. Fraser R.S., Pare P., Fraser R.G., Pare P.D. Synopsis of Diseases of the Chest. 2nd edition, 1992.
2. Woodhead M., Blasi F., Ewig S. et al. ERS Task force in collaboration with ESCMID. Guidelines for the management of adult lower respiratory tract infections. *Eur Respir J*, 2005, Vol. 26, suppl. 6, p. 1138-1180.
3. Stanford Guide for Antimicrobial therapy. 2003
4. Mandell L.A., Wunderink R.G., Anzueto A. et al. Infectious Disease Society of America/ American Thoracic Society Consensus Guidelines on the management of community-acquired pneumonia in adults. *Clin Infect Dis*, 2007, Vol. 44, suppl. 2, p. 27-72.
5. Ambros F., Matcovschi S., Caproș Natalia, Dumitraș Tatiana. Clinical examination and a case history taking. Pocket guide. CEP "Medicina", Chișinău, 2005.
6. Nikolenko Ion, Dumitras Tatiana. Pulmonary function testing and chest imaging (illustrated guide). Chisinau, 2011.



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VI. *Teaching and learning methods*

The discipline of Internal Medicine Clinical Synthesis is taught in a classic form with lectures and practical lessons. The lectures are theoretical presentation of the material.

Practical lessons consist of:

- *Treating of patients.* Students treat 4-5 patients daily under the control of their lecturer and attending physician. Students fill in case histories, statements of observation sheets, medical certificates and other medical documents. Students perform clinical presentation of patients during visits of the head of the department and lecturer. Students participate in patient`s paraclinical investigations (radiography, endoscopy, etc.) and specialists` consultations.
- *The disease daily evolution* and other notes from the case history are checked and signed by the lecturer or attending physician. The lecturer visits each student to check student`s mastery of history taking, physical examination of the patient, filling of the case history, making of the diagnosis, indication of treatment etc. Special attention is given to clinical thinking, differential diagnosis, differential treatment (selection of drug doses, filling of receipts, avoiding polypragmasia). Students study the characteristics of the disease progression and treatment efficacy. In fatal cases students are present at autopsy and participate in clinical-anatomical conferences.
- *Seminars.* During seminars the most important chapters of Internal medicine such as disease etiology, pathophysiology, clinical presentation, diagnosis and differential diagnosis, treatment, prevention and work capacity expertise are analyzed and discussed. Lesson follows the form of discussion, during which the lecturer appreciates the students' knowledge, explains the unclear material. At the end of each chapter discussed the lecturer makes a generalization.
- *Analysis of clinical cases.* Patients with diseases, the diagnosis of which is complicated, or patients with rare pathology that represents theoretical and practical interest are selected for analysis. Characteristics of disease progression and atypical development of the disease are analyzed. The diagnosis is argued and differential diagnosis is made. The treatment is indicated with argumentation of each indication. Disease prevention and work capacity expertise is discussed.
- *Duties in the clinic.* During the study of the discipline of Internal Medicine - Clinical synthesis each student makes two duties in the clinic, during which, together with the doctor on call, he makes an evening visit of patients, corrects, if necessary, their treatment, assists in medical emergency, improves the knowledge in diagnosis, differential diagnosis and practical skills.
- During *the morning conference* (second day) students report about the patients hospitalized the day before, clinical evolution of severely ill patients and of those under surveillance and medical emergency assistance.
- *Clinical conferences.* Students actively participate in conferences organized according to the schedule with reports, illustrative material, presenting patients with complicated diagnosis and rarely encountered cases of interest.
- *Teaching and research* by students is to prepare materials in various fields of internal medicine, of illustrative materials, summary reports, participation in clinical and scientific conferences.



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VII. *Suggestions for individual activity*

In terms of teaching, one of the least effective methods of learning is a passive listening of lectures, even when structuring and illustrating them very thoroughly. You can be convinced by your own experience. For example, if you want to cook a cake, what do you think is more effective, to watch a good program on TV or take cooking recipe and try to bake the cake in the kitchen? Practice is more effective than reading about how to do, but better is to teach others to do the same. This is why the discipline is best known by the teachers who teach it.

If you want to have success in learning the discipline of Internal Medicine - Clinical synthesis you should work actively with the material. What this means:

1. Initially read the material, but do not simply follow it in the order of the diagonal. Take notes. Try to formulate your own highlights. Study the diagrams and pictures in the manual and notebook. Reply to this test.
2. Come to lectures and practical lessons, but not just to make presence! Take notes. Study the information carefully and ask yourself: Do you agree with the teacher? Do you understand what is it? Does it correspond with the material taught in the manual?
3. Ask questions! Ask your teacher, each other and yourselves. Ask in the auditorium, in the corridors and teachers offices. That means that you are trying to understand and process the material taught and can only be welcomed. You can stay after practical lessons for individual consultations.
4. Organize your colleagues into groups of 2-3 to meet with you regularly to discuss the material and prepare for practical lessons. Usually, in small working groups the understanding is much broader and clearer than working individually. In addition, the ability to explain the material learned to your colleagues will be very useful in the future.
5. Use the time reasonably. The discipline of Internal Medicine - Clinical synthesis forwards high requirements. More subjects taught in this academic year submit the same requirements. Therefore, you have to manage your time and find reasonable "gold" balance of the effort between to acquire knowledge, other responsibilities and personal life.

VIII. *Methods of assessment*

At the discipline of Internal Medicine - Clinical synthesis students are evaluated daily, and at the end of each practical lesson marks are announced.

At the end of the academic year students have the State examination which includes the discipline of Internal Medicine - Clinical synthesis.

The students with mark less than 5 and those who have not recovered the absences are not admitted to State exam.

State examination (including assessment of knowledge in the disciplines of Internal Medicine, Surgery, Pediatrics, Obstetrics and Gynecology) is a combination of (1) situational problem and (2) oral test.

Assessment of situational problem (with grades from 10 to 0) is done by the State Examination Board.

The following points are estimated:

- Presumptive diagnosis reasoning;



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- The presentation of program of clinical investigations and differential diagnosis reasoning;
- Development of treatment program, including emergency;
- Disease prevention, medical expertise and placing.

Oral test is performed by the State Examination Commission. Students have 30 minutes to prepare the response. The sample is marked with marks from 10 to 0. Topics for exams are presented to the students with at least one month before the exam. The final mark consists of the mark for practical skills and mark for oral test with corresponding coefficients.

Knowledge is assessed with a mark from 10 to 1 with no decimal places, as follows:

- Mark 10 or "excellent" (equivalent to ECTS - A) is given to those who acquire 91-100% of the material;
- Mark 9 or "very good" (equivalent ECTS - B) is given to those who acquire 81-90% of the material;
- Mark 8 or "good" (equivalent ECTS - C) is given to those who acquire 71-80% of the material;
- Marks 6 and 7 or "satisfactory" (equivalent to ECTS - D) are given to those who acquire 61-65% and 66-70% of the material respectively;
- Mark 5 or "weak" (equivalent to ECTS - E) is given to those who acquire 51-60% of the material;
- Marks 3 and 4 (equivalent ECTS - FX) are given to those who acquire 31-40% and 41-50% of the material respectively;
- Marks 1 and 2 or "unsatisfactory" (equivalent to ECTS - F) are given for 0-30% of the material.

Methods of mark rounding

The average of current and final marks	Final mark
5	5
5,1-5,5	5,5
5,6-6,0	6
6,1-6,5	6,5
6,6-7,0	7
7,1-7,5	7,5
7,6-8,0	8
8,1-8,5	8,5
8,6-9,0	9
9,1-9,5	9,5
9,6-10	10

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

IX. Language of study : English.