



## CD 8.5.1 DISCIPLINE CURRICULUM

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### FACULTY OF PHARMACY

### STUDY PROGRAM 0916.1 PHARMACY

### DEPARTMENT OF PHARMACOLOGY AND CLINICAL PHARMACY

APPROVED

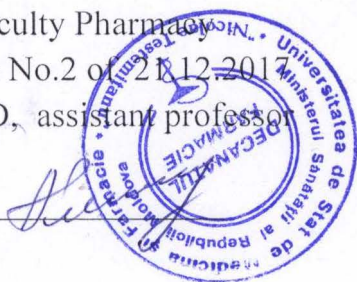
at the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum

Faculty Pharmacy

Minutes No.2 of 21.12.2017

Chairwoman, PhD, assistant professor

Uncu Livia



APPROVED

at the Council meeting of the Faculty Pharmacy

Minutes No. 2 of 22.12.2017

Dean of Faculty Pharmacy,  
PhD, assistant professor

Ciobanu Nicolae



APPROVED

approved at the meeting of the chair Pharmacology and clinical pharmacy

Minutes No.6 of 07.11.2017

Head of chair, D.Sc., PhD, professor,

Gonciar Veaceslav

## SYLLABUS

### DISCIPLINE CLINICAL PHARMACY

**Integrated studies**

Type of course: **Compulsory Discipline**

Chișinău, 2017



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### I. INTRODUCTION

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

The Clinical Pharmacy Course is a pharmaceutical discipline and a pharmaceutical specialty that uses pharmaceutical and biomedical knowledge to improve the efficacy, safety, precision and pharmaco-economics factors of drug use by patients and society.

The content of the course is structured to allow the pharmacist to participate in the team with the attending physician and the medical assistant in the medical treatment, which will contribute to the development and provision of scientific and rational pharmacotherapy at the individual and society level. The clinician pharmacist, being endowed with knowledge from the pharmaceutical, pharmacological and pharmacotherapeutic fields, is an important link in counseling physicians and patients. Therefore, clinical pharmacy objectives are: to increase the clinical effect of drug preparations by using rational and effective treatment for each patient category; reduce the risk of treatment-induced adverse reactions by monitoring the treatment course and patient compliance with the given therapy; to minimize spending on pharmacological treatment, to try to provide the best treatment alternative for a maximum number of patients.

- **Mission of the curriculum (aim) in professional training**

Actually, the necessity and importance of certain functions in medicine and private pharmacy, which depends to a great extent on the quality of the medical and pharmaceutical services provided and which directly influence the fortification of the population's health, are discussed. The efficacy of a new field in the exercise of a pharmacist profession, such as clinical pharmacy, is argued that, although drugs are increasingly effective, drug treatment is often compromised. Clinical pharmacy was born out of the finding that morbidity and mortality, linked to improper use of drugs, pose problems for patients and society: the patients are exposed to avoidable iatrogenic pathology and society is charged with the funding of care. The new concept includes all the current pharmacist's goals: the quality of medicines, the control of medical prescriptions, the control of drug interactions, plus the care of therapeutic success, helping the patient in the success of the treatment. Thus, the main goal of the clinical pharmacy discipline is the optimal use of pharmaceutical and biomedical knowledge to improve the efficiency, safety, accuracy and economy of drug use by patients and society.

- **Language (s) of the course:** Romanian, English;
- **Beneficiaries:** students of the five year, faculty of Pharmacy, specialty Pharmacy.



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### II. MANAGEMENT OF THE DISCIPLINE

Code of discipline		S.09.O.089 S.10.O.096	
Name of the discipline		CLINICAL PHARMACY	
Person(s) in charge of the discipline		Dr.in Med. Sciences, assistant professor <b>Corina Scutari</b>	
Year	V	Semester/Semesters	9, 10
Total number of hours, including:			120
Lectures	29	Practical/laboratory hours	57
Seminars	-	Self-training	34
Clinical internship			
Form of assessment	C, CD	Number of credits	4

### III. TRAINING AIMS WITHIN THE DISCIPLINE

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

✓ *At the level of knowledge and understanding:*

- To know the pathophysiological status of the pathological condition, which serves as an indication for the prescription of the respective pharmacological preparations (including those of vegetal origin);
- to justify the selection or substitution of the optimal preparation according to the disease pathophysiology variants;
- to know the optimal regimen of medication and dosage;
- to acquire the compatibility of the drug with other preparations that the patient already uses or will use in the future;
- to know the etiopathogenetic factors and the clinical symptoms of the diseases commonly encountered in medical practice;
- to know the algorithm and the conduct of the treatment of the respective diseases
- to be aware of the advisory assistance to doctors and patients regarding the prevention of complications of pharmacotherapy;
- to acquire the compatibility of medicinal products with their associated use
- to know the control of the correctness of prescribing prescriptions by practitioners.

✓ *At the application level:*

- To be able to advise prescription-based medication after a scientifically prescription review;
- to be able to guide self-medication with OTC drugs known and required by the patient;



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- to be able to recommend prescribed OTC medication for 1-2 days at the request of the patient who presents with an acute symptom of the disease, a recommendation based on the minimum consultation in the pharmacy privacy area;
- to be able to release without prescription 1-2 doses of non-OTC medicine in case of emergency;
- to be able to solve patients' pharmaco-therapeutic problems based on the patient's complete dossier (diagnosis, laboratory analysis, prescribed pharmacotherapy history and self-medication);
- to be able to provide pharmacotherapy at home.

✓ ***At the integration level:***

- To maximize the clinical effect of drug preparations by using optimally effective treatment for each patient category;
  - to interpret the general notions of etiology, pathogenesis, clinical picture and variants of organ or specific system disease evaluation;
  - to determine the main directions and objectives of pharmacological intervention in the pathological process;
  - to analyze the pharmacological groups used for the etiotropic, pathogenetic and symptomatic treatment of the respective conditions;
  - to ensure rational and harmless pharmacotherapy, the possibility of substitution of one preparation for another in the treatment of the disease in question;
  - to reduce the risk of treatment-induced adverse reactions by monitoring the treatment course and patient compliance with this therapy;
  - to minimize spending on pharmacological treatment, to try to provide the best treatment alternative for a maximum number of patients.

## IV. PROVISIONAL TERMS AND CONDITIONS

**Student of year V requires the following:**

- Confirmed skills in fundamental and clinical sciences (pathology physiology, biochemistry, clinical laboratory, microbiology, pharmacology, pharmacology and phytotherapy, pharmacotoxicology);
- Digital competences (use of the Internet, document processing, electronic tables and presentations, use of graphics programs);
- Ability to communicate and team work;
- Qualities - tolerance, compassion, autonomy.



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### V. THEMES AND ESTIMATE ALLOCATION OF HOURS

*Lectures, practical hours/ laboratory hours/seminars and self-training*

No. d/o	THEME	Number of hours		
		Lectures	Practical hours	Self- training
1.	Clinical pharmacy notion (definition, purpose, content, etc.). The main issues of clinical pharmacy.	2	3	2
2.	Study of a clinical case (accumulation of anamnesis, analysis of instrumental and laboratory investigations, examination of treatment records)	-	3	2
3.	Clinical Pharmacy of Hypertensive Disease.	2	3	2
4.	Clinical Pharmacy of Hypotension Disease.	1	3	2
5.	Clinical Pharmacy of Ischemic Cardiopathy (CPI).	1	3	2
6.	Clinical Pharmacy of Heart Failure and Atherosclerosis.	2	3	2
7.	Visit the clinic. Totalizing themes 3-7.	-	3	-
8	Clinical Pharmacy of Acute Respiratory Infections and Bronchitis.	1	3	2
9.	Clinical Pharmacy of Asthma.	1	3	2
10.	Clinical Pharmacy of Pneumonia.	1	3	2
11.	Visit the clinic. Totalizing themes 9-12.	-	3	-
12.	Clinical pharmacy of gastritis and ulcerative stomach and duodenal disease.	1	3	2
13.	Clinical hepatitis.	1	3	2
14.	Therapeutic monitoring on pathological conditions of drugs.	1	3	2
15.	Clinical Pharmacy of Liver Cirrhosis	1	3	-
16.	Clinical pharmacy of cholecystitis.	1	1	1
17.	Clinical Pharmacy of Pancreatitis.	1	1	2
18.	Clinical pharmacy of constipation.	1	1	1
19.	Clinical Pharmacy of Diarrhea.	1	1	1
20	Visit the clinic.	-	1	-
21.	Totalisation "Clinical Pharmacy of Digestive Tract Disorders".	-	1	-
22.	Clinical pharmacy of pyelonephrites.	1	1	1
23.	Clinical pharmacy of glomerulonephrites.	1	1	1
24.	Clinical Nephrolithiasis Pharmacy.	1	1	1
25.	Clinical Pharmacy of Renal Impairment.	1	1	1
26.	Visit the clinic. Summarizing themes 8-13.	1	1	-
27.	Clinical Pharmacy of Emergencies.	1	1	1
28.	Abusive use of special legal medicine.	1	-	-
29.	General notions of pharmacoepidemiology and pharmacovigilance.	1	-	-
<b>Total</b>		<b>29</b>	<b>57</b>	<b>34</b>



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### VI. REFERENCE OBJECTIVES OF CONTENT UNITS

Objectives	Content units
<b>Chapter 1. Clinical Pharmacy of Cardiovascular Diseases</b>	
<ul style="list-style-type: none"> <li>• To define clinical pharmacy.</li> <li>• To know the purpose and objectives of the clinical pharmacy, the directions of pharmaceutical assistance in the community pharmacy and hospital.</li> <li>• To know the etiopathogenesis, the clinical picture, the diagnosis and principles of the clinical pharmacy and the pharmaceutical support of hypertension.</li> <li>• To learn about hypertensive crises (seizures), clinical forms and assistance for urgent hypertensive conditions.</li> <li>• To be familiar with etiopathogenesis, clinical picture, principles of urgent pharmacotherapy and maintenance of hypotension.</li> <li>• To be aware of etiopathogenesis, clinical manifestations, principles of pharmacotherapy and pharmaceutical care of ischemic heart disease</li> <li>• To acquire the clinical and evolutionary features of heart failure, the principles of pharmacotherapy and pharmaceutical care.</li> <li>• To be aware of etiopathogenesis, clinical manifestations, principles of pharmacotherapy of hyperlipidemias and atherosclerosis.</li> <li>• To know the advice of OTC and medical prescription of cardiovascular diseases.</li> </ul>	<ol style="list-style-type: none"> <li>1. Clinical Pharmacy - a discipline and a pharmaceutical specialty that optimally exploits pharmaceutical and biomedical knowledge to improve the efficacy, safety, accuracy and economy of drug use by patients and society.</li> <li>2. Hypertension. Hypertensive pushes (crises). Hypotension. Ischemic heart disease. Angina pectoris. Myocardial infarction.</li> <li>3. The pathophysiological basis of heart failure. Chronic left, right, global chronic heart failure.</li> <li>4. Hyperlipidemia. Atherosclerosis.</li> </ol>
<b>Chapter 2. Clinical treatment of bronchial-pulmonary diseases</b>	
<ul style="list-style-type: none"> <li>• To acquire the definition of the bronchopulmonary disorders, their classification, the causes and the main clinical manifestations.</li> <li>• To know the etiopathogenesis, classification, clinical picture, clinical and paraclinical diagnosis, principles of pharmacotherapy and prophylaxis of acute respiratory infections.</li> <li>• To learn about etiopathogenesis, classification, symptomatology, clinical and paraclinical diagnosis and pharmaceutical assistance for acute and chronic bronchitis.</li> <li>• To learn about etiopathogenesis, classification of clinical forms, clinical picture, principles of emergency pharmacotherapy and maintenance of bronchial asthma.</li> </ul>	<p>Breathing pathology. Hypoxia. Respiratory insufficiency. Theoretical basis of pathogenetic treatment in various types of hypoxia.</p> <p>Acute respiratory infections. Acute and chronic bronchitis.</p> <p>Bronchial asthma. Status asthmaticus. Acute pneumonia.</p> <p>Antitussive, expectorant and mucolytic preparations, analgesic / antipyretic, nasal decongestants.</p>





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Objectives	Content units
<p>To know the etiopathogenesis, classification of clinical forms, differentiated symptomatology according to clinical forms, clinical and paraclinical diagnosis, principles of acute pneumonitis pharmacotherapy.</p> <p>To be familiar with the OTC prescription and medical prescription of the bronchopulmonary disorders.</p>	

### Chapter 3. Clinical Pharmacy of Digestive Tract Disorders

<ul style="list-style-type: none"> <li>To know the etiopathogenesis, the evolutionary forms, the clinical picture, the clinical and paraclinical diagnosis of gastritis and gastroduodenal ulcer.</li> <li>To be familiar with the non-medical and medical treatment of gastritis and gastroduodenal ulcer depending on the clinical form and the severity of the disease</li> <li>To grasp the classification of liver disease and its differentiation.</li> <li>To know about etiopathogenesis, epidemiology, clinical picture, clinical and paraclinical diagnosis of viral hepatitis, chronic hepatitis and liver cirrhosis.</li> <li>To be familiar with the contemporary aspects of classification and characterization of the treatment groups used in the treatment of viral hepatitis, chronic hepatitis and liver cirrhosis.</li> <li>To know etiopathogenesis, evolutionary forms, clinical picture, clinical and paraclinical diagnosis, principles of cholecystitis and pancreatitis.</li> <li>To know the etiopathogenesis, symptomatology and principles of drug treatment of diarrhea and constipation</li> <li>To know the advice of OTC medication and to prescribe the balls of the digestive tract.</li> </ul>	<p>Disorders of secretory function of the stomach. Pathogenetic therapy in gastric hypoparathy. Disorders of stomach motor function. Heartburn, vomiting, vomiting.</p> <p>Acute and chronic gastritis. Gastro-duodenal ulcer. Preparations that influence the secretion of stomach glands and digestive capacity of the stomach and duodenum, gastroprotectors.</p> <p>Liver Pathology. The notion of jaundice. Viral hepatitis A, B, C, D. Chronic hepatitis. Hepatic cirrhosis. Hepatotropic and antiviral preparations.</p> <p>Disruption of digestion caused by incomplete bile secretion and pancreatic juice.</p> <p>Acute and chronic pancreatitis. Acute and chronic cholecystitis. Cholestatic, cholecystokinetic and pancreatic enzyme inhibitors.</p> <p>Diarrhea. Constipation. Antidiarrheal, laxative and purgative preparations.</p>
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### Chapter 4. Clinical Pharmacy of Excretory System Disorders



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Objectives	Content units
<ul style="list-style-type: none"> <li>• To know the particularities of the clinical pharmacy of uroexcretory disorders.</li> <li>• To know the etiopathogenesis, the clinical picture, the principles of the pharmacotherapy of the uroexcretory diseases.</li> <li>• To learn about etiopathogenesis, symptomatology, clinical and paraclinical diagnosis, principles of acute and chronic pyelonephritis.</li> <li>• To know the etiopathogenesis, symptomatology, clinical and paraclinical diagnostics, principles of pharmacotherapy of acute and chronic glomerulonephritis.</li> <li>• To know the general notions about urinary lithiasis (nephrolithiasis), the theories of lithogenesis</li> <li>• To know the etiopathogenesis, symptomatology, clinical and paraclinical diagnosis, principles of nephrolithiasis pharmacology.</li> <li>• To know the etiology, classification, clinical changes of organs and systems in chronic renal failure.</li> <li>• To know the clinical and paraclinical diagnosis and the etiotropic, pathogenic and symptomatic treatment of chronic renal failure.</li> <li>• • To know the advice of OTC medication and prescription of uroexcretory system diseases.</li> </ul>	<p>Pathology of the kidneys. Pyelonephritis. Glomerulonephritis.</p> <p>The function of kidney excretion. General notion of the excretion system. Adjusting renal activity. The quantity, content and properties of urine. Excretion of urine and drug substances. Talk about diseases of the excretory system.</p> <p>Urinary lithiasis (nephrolithiasis). Access to renal colic.</p> <p>Chronic renal failure (IRC). IRC pathophysiology. Deregulation of kidney excretory function and its consequences in chronic renal failure.</p>





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

#### ✓ Professional (specific) (SC) competences

**PC1:** Knowledge and interpretation of the etiopathogenesis, symptomatology and methods of treatment of pathological conditions frequently encountered in medical practice, knowledge and counseling of OTC medication and prescription-based, after a scientific review of the prescription, knowledge of the principles of classification of different drugs by membership grouping, mechanism of action, chemical structure, etc., knowledge of drug interaction and compatibility in their associated use, knowledge of the international name of medicinal products and their more common commercial synonyms for replacement of a preparation with another analogue, if necessary, knowledge of the pharmacotherapy with OTC drugs.

- **PC2:** Knowing and advising pharmacological action, indications, contraindications, adverse effects, mode of administration, drug interactions of OTC and recited prescriptions, after a scientifically prescription review.

- **PC3:** Use and adaptation of clinical pharmacy knowledge in patient counseling on pharmacotherapy, in front-line pharmacotherapy counseling in non-pharmacological treatment counseling; knowing how to access and select online materials.

- **PC4:** Presentation of individual scientific projects and fitting into the scientific circle with new results in the field of clinical pharmacy.

- **PC5:** Knowledge of the clinical research methodology of the drug; identifying issues of scientific research in the field of clinical pharmacy, scientific correlation with biopharmaceutical and medical knowledge.

- **PC6:** Use of problem solving capabilities; the use of information technologies to solve tests and medical prescription through digital technologies.

#### ✓ Transversal competences (TC)

**TC 1:** Promoting effective, harmless and pharmaco-economically beneficial drugs in the therapy of various pathologies; compliance with pharmaceutical ethics and deontology rules in the prescribing of OTC drugs and the release of drug remedies for the population and medical institutions.

**TC 2:** Formation of personal attitude; pharmacist-patient interaction, pharmacist-doctor, group activity with different drug counseling roles; improving the decision-making autonomy in the preservation, selection and release of medicines.

**TC 3:** Achievement of teamwork by carrying out scientific projects; promoting the spirit of initiative, dialogue and cooperation through various techniques of acquiring the material; respect for positive attitude, empathy and respect for others, critical analysis and formulation of conclusions, for the pharmacist's daily activity.



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### ✓ STUDY OUTCOMES

- To evaluate the importance and role of clinical pharmacy in the context of general medicine and integration with related pharmaceutical and medical disciplines.
- To can select the drug groups used to treat the disease.To know the comparative peculiarities of the drugs of the respective group.
- To be competent to use the knowledge and methodology of clinical pharmacy in the ability to explain the etiopathogenesis, symptomatology and disease progression.
- To apply pharmacological knowledge to the ability to explain the current pharmacotherapeutic methods of the disease.To explain and interpret the laboratory analyzes of the pathology concerned.  
To inform and advise the patient in the community pharmacy and recommend first-line pharmacotherapy.  
To explain and interpret pharmacotherapy from the patient's treatment sheet.
- To develop the patient's pharmaceutical file, including the history of the disease, prescription drugs, clinical and paraclinical data, etc.
- To possess the ability to select information from literature (straightening, textbooks, compendia, pharmacotherapy, etc.).
- To inform the patient about the rational use of the drug, the possible side effects, the prophylaxis and the fight against them.
- To acquire the theoretical and applicative knowledge of medicines as a reference for their subsequent use in the community pharmacy and hospital.
- To be competent to use critically and confidently the scientific information obtained using the new information and communication technologies.



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### VIII. STUDENT'S SELF-TRAINING

No.	Expected Product	Implementation Strategies	Assessment criteria	Implementation terms
1.	<b>Working with information sources:</b>	To read the lecture or the material in the manual to the theme carefully. To read the self-training questions in the subject, which require a reflection on the subject. To get acquainted with the list of additional information sources on the topic. Select the source of additional information for that theme. To wording of generalizations and conclusions regarding the importance of the theme / subject.	Ability to extract the essentials; interpretative skills; the volume of work	During the semester
2.	<b>Working with the practical hours' notebook:</b>	Until solving the tasks on the notebook to analyze the information on the subject in the lecture and handbook. Solving consecutive tasks: identifying drugs used to treat characteristic symptoms, prescribing preparations in all existing pharmaceutical forms, indicating preparations in various states, completing pharmaceutical forms. Selection of additional information, using electronic addresses and additional bibliography.	Workload, problem solving, ability to formulate conclusions	During the semester
3.	<b>Solving clinical cases</b>	Solving clinical cases with anamnesis, clinical data, paraclinical data, laboratory data interpretation, and treatment form analysis (prescribed drugs, dose, route of administration, drug interactions).	Quality of clinical case resolution, analysis and interpretation of clinical data, ability to diagnose and formulate conclusions.	During the semester
4.	<b>Preparing and defending presentations</b>	Selection of the research theme, establishment of the research plan, establishment of the terms of realization. Establishing PowerPoint project / theme components - theme, purpose, results, conclusions, practical applications, bibliography.	The volume of work, the degree of penetration in the essence of the project theme, the level of scientific argumentation, the quality of the	During the semester



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No.	Expected Product	Implementation Strategies	Assessment criteria	Implementation terms
			conclusions, the elements of creativity, the formation of the personal attitude, the graphic presentation, the way of presentation.	

### IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

- Teaching and learning methods used***

The teaching of the Clinical Pharmacy discipline uses different methods and didactic methods, oriented towards the efficient acquisition and achievement of the objectives of the didactic process. In the theoretical lessons, along with traditional methods (lesson-exposure, lesson-conversation, synthesis lesson), modern methods (lesson-debate, lecture-conference, problem-lesson) are also used. Practical forms of individual, frontal, group work. Control work (clinical cases, situation problems) in writing to highlight the initial level of knowledge; practical activities (group work): problem solving, clinical cases, video demonstration. In order to acquire deeper material, different semiotic systems (scientific language, graphical and computerized language) and teaching materials (tables, schemes, photographs) are used. Inside lessons and extracurricular activities are used Communication Technologies - PowerPoint presentations. Verifying knowledge on questions from methodological guidelines and putting tasks on the next topic of practical work (homework).

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

Brainstorming", "Multi-voting"; "The round table"; "Group Interview"; "Case Study"; "Creative Controversy"; "Presentation".

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

**Current:** frontal and / or individual control by testing, control luxuries, group discussions, situation situation analysis, case studies. Formative assessment consists of 4 totals and 2 notes on individual work. Each totalization and individual work is noted separately with notes from 0 to 10 and can be sustained 2-3 times. Summities consist of 3 self-training questions and 2 clinical cases. The annual average is formed from the sum of points accumulated during the study year divided by 6.

**Final:** Differentiated Colloquium. Differentiated colloquium in Clinical Pharmacy discipline is not admitted students with the annual average under note 5, as well as students who have not recovered absences from courses and practical papers. Differentiated colloquium consists of



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the oral test. The oral test is carried out by including 4 questions in the Clinical Pharmacy discipline and 2 problems of the situation.

**The final mark** will consist of 2 components: annual average score (coefficient 0.5), oral test (coefficient 0.5).

The annual average grade and the final examination note will be expressed in numbers according to the scoring scale (according to the table), and the final mark obtained will be expressed in two decimal places to be added to the notes book.

### 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
8,51-9,00	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.*



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### **X. RECOMMENDED LITERATURE:**

#### **A. Mandatory:**

1. Cristea A. Farmacie clinică. Vol.I: Farmacia clinică în farmacia de comunitate. București. Editura medicală, 2006, 428 p.
2. Cristea A. Farmacie clinică. Vol.II: Farmacia clinică în farmacia de spital. București. Editura medicală, 2012, 1048 p.
3. Gonciar V., Scutari C. Farmaco- și fitoterapia în cardiologie. Ch.:CEP "Medicina", 2005, 156 p.
4. Gonciar V., Scutari C., Matcovschi S. Farmaco- și fitoterapia în bolile sistemului respirator. Ch.:CEP "Medicina", 2006, 119 p.
5. Gonciar V., Scutari C., Dumbravă V. Farmaco- și fitoterapia în gastroenterologie. Ch.:CEP "Medicina", 2006, 183 p.
6. Herfindal E., Gourley D. Et al. Clinical pharmacy and therapeutics. Fifth edition. USA, Copyright, 2007, 1628 p.

#### **B. Additional:**

1. Gonciar V., Scutari C., Cazacu V. și al Indicații metodice pentru lucrări practice la farmacia clinică. Ch.:CEP "Medicina", 2017, 126 p.
2. Зупанец И.А. и др. Клиническая фармация. (фармацевтическая опека) для студентов высших медицинских учебных заведений специальностей «Фармация», «Клиническая фармация». Харьков, «Золотые страницы», 2012, 776 с.
3. Клиническая фармация. Учебно-методический практикум. Под ред. И.А. Зупанца, И.С.Чекмана., Харьков, «Золотые страницы», 2010, 152с.