



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:	06
Date:	00.00.2017
Page 1/12	

FACULTY OF PHARMACY

STUDY PROGRAM 0916.1 PHARMACY

DEPARTMENT OF PHARMACOLOGY AND CLINICAL PHARMACY

APPROVED

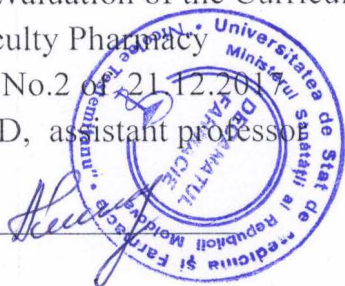
at the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum

Faculty Pharmacy

Minutes No.2 of 21.12.2017

Chairwoman, PhD, assistant professor

Uncu Livia



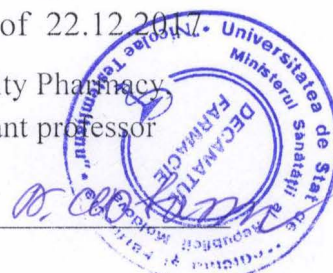
APPROVED

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

SILLABUS

DISCIPLINE PHARMACOTHERAPY WITH OTC PREPARATIONS

Integrated Studies

Type of course: **Free choice discipline**

Chişinău, 2017



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:	06
Date:	00.00.2017
Page 2/12	

I. INTRODUCTION

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

Optional Course Pharmacotherapy with OTC Preparations is a component of the pharmaceutical education and aims at studying contemporary medication with OTC medications commonly used in medical practice.

The course of lectures render the general notions of OTC preparations not included in the study program of other disciplines such as pharmacology, pharmacology and phytotherapy and clinical pharmacy. The aim of the lesson course is to get acquainted with the basic pharmacodynamic and pharmacokinetic properties of OTC preparations and the particularities of patient counseling regarding how to use them. This course will help to acquire the basic principles of OTC treatment and to advise physicians and patients on effective and harmless medication use.

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

One of the main objectives of the optional course is to formulate a broad understanding of the principles of medication with essential OTC preparations such as those used in the treatment and prophylaxis of respiratory, cardiovascular, digestive, renal, neurological, allergic diseases as well as vitamins and minerals, and preparations used in gynecological and urological practice. It is necessary to know the aspects of alcoholism medication, and OTC preparations in the medical kit. It is to be studied the general principles of selection and use patterns of OTC drugs based on many factors (age, individual sensitivity, character and severity of the pathological process, functional capacity of effector organs, etc.); prevent adverse effects of medicinal substances. Although most drugs entering this class are considered safe, because their adverse reactions are relatively minor compared to other drug classes, it is necessary to consult the pharmacist who will provide important information on the rational and effective administration of OTC medicines.

- **Languages of the course:** Romanian, English.
- **Beneficiaries:** students of the third year, faculty of Pharmacy, specialty Pharmacy.



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:	06
Date:	00.00.2017
Page 3/12	

II. MANAGEMENT OF THE DISCIPLINE

Code of the discipline			
Name of the discipline		Pharmacotherapy with OTC preparations	
Person(s) in charge of the discipline		assistant professor, Bodrug Elena	
Year	III	Semester	6
Total number of hours, including:			60
Lectures	17	Practical/laboratory hours	-
Seminars	34	Self-training	-
Form of assessment	E	Number of credits	2



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:

06

Date:

00.00.2017

Page 4/12

III. TRAINING AIMS IN WITHIN THE DISCIPLINE

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

✓ *At the level of knowledge and understanding:*

- to know the pharmacodynamic and pharmacokinetic properties of OTC preparations;
- to select OTC (essential) drugs, optimal dosages, routes, and mode of administration;
- to get accustomed with approved OTC preparations and the possibility of replacing one preparation with another.

✓ *At the application level:*

- to be able to provide consultations to doctors and patients on medication and prevention of OTC medication complications;
- to reduce the morbidity caused by self-medication;
- to be able to consult the patient about the need to replace the prescribed OTC preparation.

✓ *At the integration level:*

- To be competent to present informative mechanisms of regulation and control of the function of the effector system and its physiological interconnection with other organs and systems of the organism;
- to be able to analyze the main pharmacological groups used for the etiotropic, pathogenetic and symptomatic treatment of these conditions;
- to be able to characterize the medicines, the basic action of which is intended to adjust the modified function of the effector system and the principles of drug treatment, taking into account the clinical manifestations and variants of the disease assessment;
- to be able to assess and predict possible undesirable effects of the preparations;
- to be able to provide rational and harmless medication, and the possibility of substitution of one preparation with another in the treatment of the respective condition.

IV. PROVISIONAL TERMS AND CONDITIONS

Student of the 3rd year requires the following:

- proven skills in fundamental and clinical sciences (physiology, pathophysiology, biochemistry, pharmacology);
- digital skills (use of the Internet, document processing, spreadsheets and presentations, use of graphics software);
- ability to communicate and teamwork;
- qualities – tolerance, compassion, autonomy.



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:

06

Date:

00.00.2017

Page 5/12

V. THEMES AND ESTIMATE ALLOCATION OF HOURS

Lectures, practical hours/seminars and self-training

No.	Theme	Number of hours		
		Lectures	Seminars	Self training
1.	OTC medicines Pharmacotherapy (PCT) used in pain syndrome	1	2	-
2.	OTC medicines Pharmacotherapy (PCT) used in allergic disorders	1	2	-
3.	OTC medicines Pharmacotherapy (PCT) used in respiratory disorders (part I)	1	2	-
4.	OTC medicines Pharmacotherapy (PCT) used in respiratory disorders (part II)	1	2	-
5.	OTC medicines Pharmacotherapy (PCT) used in neurological disorders	1	2	-
6.	OTC medicines Pharmacotherapy (PCT) used in digestive disorders (part I)	1	2	-
7.	OTC medicines Pharmacotherapy (PCT) used in digestive disorders (part II)	1	2	-
8.	OTC medicines Pharmacotherapy (PCT) used in cardiovascular disorders	1	2	-
9.	OTC medicines Pharmacotherapy (PCT) used in urinary tract disorders	1	2	-
10.	OTC medicines Pharmacotherapy (PCT) used in locomotor system disorders	1	2	-
11.	OTC medicines Pharmacotherapy (PCT) used in skin disorders	1	2	-
12.	OTC medicines Pharmacotherapy (PCT) used in pediatric practice	1	2	-
13.	OTC medicines Pharmacotherapy (PCT) used in geriatric practice	1	2	-
14.	OTC medicines Pharmacotherapy (PCT) used in gynecological practice	1	2	-
15.	OTC medicines Pharmacotherapy (PCT) used in urologic practice	1	2	-
16.	Pharmacotherapy (PCT) with vitamins and minerals	1	2	-
17.	Medical kit	1	2	-
Total		17	34	-



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:

06

Date:

00.00.2017

Page 6/12

VI. REFERENCE OBJECTIVES AND CONTENT UNITS

Objectives	Content units
Chapter 1. OTC preparations pharmacotherapy in pain syndrome, in allergic and respiratory conditions	
<ul style="list-style-type: none"> To know classification of OTC preparations used in pain syndrome; to know the of the pharmacodynamic and pharmacokinetic particularities of analgesic action OTC preparations; to know the principles of OTC preparations classification used in allergic disorders; to understand the pharmacological action, indications, contraindications and side effects of OTC preparations with anti-allergic action; to know the classification principles of OTC preparations used in respiratory diseases; to understand the pharmacological action, indications, contraindications and side effects of OTC preparations used in respiratory diseases. 	<p>Analgesics/antipyretic. Non-steroid anti-inflammatory drugs. Allergy preparations. Antihistaminic preparations. Spasmolytic preparations. Cough medicines, expectorant and mucolytic remedies. Antiseptic tablets for tonsillitis and pharyngitis. Antiviral preparations. Nasal decongestants.</p> <p>Vitamins and minerals.</p>
Chapter 2. OTC preparations Pharmacotherapy in neurological, digestive and cardiovascular diseases	
<ul style="list-style-type: none"> To know the classification of OTC preparations used in neurological disorders; to know the pharmacodynamic and pharmacokinetic particularities of OTC preparations used in neurological disorders; to know the classification principles of OTC preparations used in digestive disorders; to understand the pharmacological action, indications, contraindications and side effects of OTC preparations used in digestive disorders; to know the classification principles of OTC preparations used in cardiovascular diseases; to understand the pharmacological action, indications, contraindications and side effects of OTC preparations used in cardiovascular diseases. 	<p>Nootropic preparations. OTC analgesic preparations. Antimigraine preparations. Preparations that diminish and increase gastric and intestinal secretion. Enzymes and anti-enzymes. Laxatives. Purgative. Antidiarrheal. Antiflatulent. Gastroprotective. Hepatoprotective. Preparations for the prevention of cardiovascular diseases and thromboembolic complications.</p>
Chapter 3. Pharmacotherapy with OTC preparations in urinary tract diseases, dermatological, gynecological and urological, in pediatric, and geriatric practice	
<ul style="list-style-type: none"> To know the classification of OTC preparations used in urinary tract disorders; to know the pharmacodynamic and pharmacokinetic particularities of the OTC preparations used in urinary tract disorders; to know the pharmacological action, indications, 	<p>Preparations for the prophylaxis of urinary tract disorders. Dermatocosmetic preparations. Acne preparations. Contraceptive preparations. Preparations used in menopause. Preparations for urological diseases prophylaxis.</p>



CD 8.5.1 DISCIPLINE CURRICULUM

Edition: 06

Date: 00.00.2017

Page 7/12

Objectives	Content units
<p>contraindications and side effects of OTC preparations used in skin conditions;</p> <ul style="list-style-type: none">• to know the particularities of the pharmacodynamics and pharmacokinetics of OTC preparations used in gynecological disorders;• to know the pharmacological action, indications, contraindications and side effects of OTC preparations used in urological disorders;• to understand the pharmacological action, indications, contraindications and side effects of OTC preparations used in pediatric and geriatric practice.	<p>OTC Preparations used in pediatric and geriatric practice.</p>



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

✓ PROFESSIONAL (SPECIFIC) (SC) COMPETENCES:

PC1: knowledge and understanding of the specific pharmacology language, knowledge and understanding of the sources of OTC drugs and their medical practice implementation stages, explanation and interpretation of the mechanisms of action and pharmacological effects of OTC drugs from different groups, knowledge of the classification principles of the different drugs by group membership, mechanism of action, chemical structure, and so on, knowledge of the medicinal products international common name (ICN) and their more common commercial synonyms for replacement of a preparation with another analogue, if deemed, comparative analysis of the pharmacological groups of the respective group.

PC2: knowledge of OTC preparations pharmacological action, indications, contraindications, adverse effects, posology, drug interactions.

PC3: use and adaptation of pharmacological knowledge in counselling in ICN and synonyms of OTC drugs, posology and administration; knowing how to access and select online materials.

PC4: individual scientific projects presenting and the scientific research circle partaking with new results in the field of OTC preparations pharmacotherapy.

PC5: knowledge of the preclinical drug research methodology; identification of scientific research issues in the field of pharmacology, scientific correlation with biopharmaceutical knowledge.

PC6: displaying the situational problems solving ability; information technologies usage in tests solving and pharmacological effects rendering via digital technologies.

✓ TRANSVERSAL COMPETENCES (TC):

TC 1: promoting effective, safe and pharmaco-economically advantageous drugs in the therapy of various pathologies; compliance with pharmaceutical ethics and deontology rules in OTC drugs prescribing, and release of medical remedies for the population and medical institutions

TC 2: personal approach formation; pharmacist-patient and pharmacist-doctor interaction skill developing, teamwork within different drug counseling roles; improving the decision-making autonomy in the prescription, selection and release of medicines.

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



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:	06
Date:	00.00.2017
Page 9/12	

✓ STUDY OUTCOMES

At the end of the discipline, the student will be capable to:

- to be able to assess the importance and role of OTC pharmacotherapy in the context of pharmacology and integration with related pharmaceutical disciplines;
- to be able to determine the OTC drug group membership;
- to know the preparations indicated in the respective diseases and the concrete indications for the given preparation;
- to know the comparative peculiarities of the OTC drugs of the respective group;
- to be able to use pharmacology knowledge and methodology in the ability to explain the mechanisms of action and the pharmacology of OTC drugs;
- to have the ability to select information from the literature (references, manuals, compendia, pharmacotherapy guides etc.);
- to be able to inform the patient about the rational use of OTC drugs, their possible side effects with prophylaxis and prevention;
- to acquire the fundamental and applicative OTC drugs knowledge as a reference for their subsequent use in medical practice.

VIII. STUDENT'S SELF TRAINING

No.	Expected Product	Implementation Strategies	Assessment criteria	Implementation terms
	Working with information sources:	Reading carefully the lecture or the material in the manual to the theme. Getting acquainted with the list of additional information sources on the topic. Reading the text entirely, carefully and writing the essential content. 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
	Working with the practical hours' notebook:	Until notebook tasks solving, to analyze the information on the subject in the lecture and handbook. Solving consecutive tasks: brief characterization of mandatory OTC drugs, indication of preparations in the respective conditions.	Workload, problem solving skills, ability to formulate conclusions	During the semester
	Preparing and defending presentations /portfolios:	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 workload, the project theme insight, the scientific argumentation level, the conclusions quality, the creativity elements, the exhibition consistency, the graphic presentation, the presentation way	During the semester



IX. METHODOLOGICAL SUGGESTION FOR TEACHING-LEARNING ASSESSMENT

• *Teaching and learning methods used*

When teaching the OTC Pharmacotherapy subject, different methods and teaching methods are used, oriented towards the efficient acquisition and achievement of the didactic process objectives. In the theoretical lessons, along with traditional methods (lesson-exposure, lesson-conversation, synthesis lesson), modern methods (lesson-debate, lesson-conference) are also used. In the group are used practical forms of individual activity. Practical activities (group work): problem solving, clinical cases, video demonstration. Communication Technologies - PowerPoint presentations are used during lessons and extracurricular activities.

Verifying the knowledge pertaining to studied questions and assigning tasks for the next topic of practical work (self-training work at home).

Final: Exam (semester VI).

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

„Brainstorming”, „Multi-voting”; „Round table”; „ Group interview”; „Case Study”; „Creative controversy”; „Portfolio”.

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

Current: frontal and/or individual control via:

- Motivation (actuality of the subject). Determining the purpose of practical work, answering students' questions.
- Written control testing to highlight the initial level of knowledge.
- Practical activities: solving of problems, questions from the Methodological Indications for Laboratory Work in OTC Preparations Pharmacotherapy.
- Verification of final knowledge and assignment of tasks for the next topic of the practical work (individual work).

There are two totalization tests during the study year at the OTC Pharmacotherapy discipline. At the end of each semester, the student's individual work is appreciated.

Thus, formative evaluation is made up of two totalization tests and one grade of self-training work.

The annual average is formed from the sum of the accumulated points during the study year based on the totalization scores and the individual student's score

Final: The OTC Pharmacotherapy Promotion Examination does not accept students with the average annual score below grade 5, as well as students who have not recovered absences from lectures and practical hours.

The OTC Pharmacotherapy Exam (summative assessment) exam consists of the oral test, which includes two questions in the Ticket of OTC Pharmacotherapy discipline and a situational problem.

Final mark consists of two components: average annual mark (coefficient 0.5) and oral test (coefficient 0.5).



CD 8.5.1 DISCIPLINE CURRICULUM

Edition: 06
Date: 00.00.2017
Page 11/12

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 and oral test) - are expressed in numbers according to the mark scale (according to the table), and the final mark obtained is expressed in a number with two decimals, which is transferred to student's record-book.

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



CD 8.5.1 DISCIPLINE CURRICULUM

Edition:	06
Date:	00.00.2017
Page 12/12	

X. RECOMMENDED LITERATURE

A. Compulsory:

1. Gonciar V., Scutari C., Cekman I. ș.a. Farmacologie, Chișinău, 2013.
2. Ghicavîi N., Bacinschi N., Gușuică Gh. Farmacologie: Manual. Ediția a II-a. Chișinău, 2010.
3. Harchevici D. A. „Farmacologia”. СЕР. Medicina, Chișinău. 2008.
4. ОТС: Ответственное самолечение. Справочник безрецептурных препаратов. Под ред. Зупанца И.А. и Чекмана И.С. Киев, 2008, 347с.

B. Additional:

1. Cristea Aurelia –Nicoleta „Tratat de Farmacologie”, București, 2005.
2. Fulga I. Farmacologie. 2006.
3. Matcovschi C. și al. „Ghid farmacoterapeutic”. Chișinău, 2010.