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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 of Pharmacy Minutes No. 2 of 09.11 2021 Chairwoman of the Committee, PhD, associate professor UNCU Livia APPROVED at the meeting of the Faculty Council, Faculty of Pharmacy Minutes No. 3 of 96. 2.2021 Dean of the Faculty PhD, associate professor

CIOBANU Nicotae

APPROVED

approved at the meeting of the Department of Pharmacology and Clinical Pharmacy Minutes No. 2 of 15.09.2021 Head of Department, PhD, associate professor,

SCUTARI Corina _

SILLABUS

DISCIPLINE MEDICATION OF SPECIFIC AND NON-SPECIFIC DISEASES

Integrated studies

Type of course: **Optional discipline** Curriculum developed by the team of authors: Bodrug Elena, PhD, associate professor Scutari Corina, PhD, associate professor

Chișinău, 2021



I. PRELIMINARY

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 course of *Medication of Specific and Non-Specific Diseases* is a component of the pharmaceutical education field and aims the studying of contemporary medication of specific and non-specific disorders commonly encountered in medical practice.

During the lectures, are given the general notions about specific and nonspecific diseases, which are not included in the study program of other disciplines such as pharmaco- and phytotherapy and clinical pharmacy. The purpose of the lesson course is to remove or reduce the causes of the disease, influence on the mechanisms of the pathological process on one side, and to stimulate the recovery mechanisms on the other. Rapid healing of the patient occurs in the use of drugs that attenuate the cause and mechanisms of disease development in association with substances that increase the body's reactivity to the disease. This course will help acquire the basic principles of drug treatment of specific and nonspecific diseases and pursue a consultative help to doctors and patients on making effective and safe medication.

• Mission of the curriculum (aim) in professional training

The mission of the discipline is to formulate the conception about selection of essential drugs in neurological, psychological, immunodeficiency processes, cancer, dysbacteriosis, pulmonary tuberculosis, HIV / AIDS and also knowledge of medications, drugs and alcohol addiction. The courses include the analysis of basic issues related to general notions about etiology, pathogenesis, clinical picture, contemporary methods and principles of medication for the most common specific and nonspecific diseases.

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



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II. MANAGEMENT OF THE DISCIPLINE

Code of the discipline		S.07.A.060.1		
Name of the discipline		Medication of specific and non-specific affections		
Responsible (s) of discipline		PhD, associate professor, Bodrug Elena		
Year	IV	Semester / Semesters	7	
Total hours, including:			60	
Course	15	Practical / laboratory work	-	
Seminars	30	Individual work	15	
Form of assessment	E	Number of credits	2	



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III. TRAINING AIMS WITHIN THE DISCIPLINE

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

✓ At the level of knowledge and understanding:

- To know the definition, etiopathogenetic factors and clinical symptoms of specific and non-specific affections.
- To be familiar with the pharmacodynamic and pharmacokinetic properties of drugs included in the medication of specific and non-specific disorders.
- To know the main groups of drugs used in the medication of the respective diseases.
- To select the (essential) drug (s), the optimal dosages, the routes and the mode of administration in the medication for the respective conditions.
- To acquire homologous preparations and the possibility of replacing a preparation with another one.

✓ At the application level:

- To be able to provide consultancy to doctors and patients to prevent the complications of medication for specific and non-specific disorders;
- to reduce morbidity caused by drug pathology, the main cause of which is self-healing;
- to appreciate the symptoms in the case of neurological, psychiatric disorders, gestures, immunodeficiency processes, cancer, dysbacteriosis, pulmonary tuberculosis, HIV / AIDS;
- to appreciate the symptoms of drug and alcohol addiction;
- to apply various methods of prophylaxis of specific and non-specific disorders;
- to apply general selection principles and drug use patterns to many factors (age, individual sensitivity, the nature and severity of the pathological process, the functional capacity of the effector organs, etc.).

✓ At the integration level:

- To interpret the general notions of etiology, pathogenesis, clinical picture and variants of evaluation of specific and non-specific affections;
- to determine the main directions and objectives of contemporary medication for specific and non-specific affections;
- to be able to analyze the main pharmacological groups used for the etiotropic, pathogenetic and symptomatic treatment of the respective diseases;
- to characterize preparations, the basic action of which is intended to correct the modified function of the effector system and the principles of drug treatment, taking into account the clinical manifestations and variants of the evaluation of the disease;
- to assess and predict possible unwanted effects of preparations;
- to ensure rational and harmless medication, the possibility of substitution of one preparation for another in the treatment of the respective disease.



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IV. PROVISIONAL TERMS AND CONDITIONS

Student of the fourth year requires the following:

- Certified skills in fundamental sciences (physiology, pathological physiology, biochemistry, toxicological chemistry, toxicological plants, pharmacology);
- Digital competences (use of the Internet, document processing, electronic tables and presentations, use of graphics software);
- Ability to communicate and team work;
- Qualities tolerance, compassion, autonomy.

V. THE MESAND ESTIMATE ALLOCATION OF HOURS

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

Nr.		Nun	Number of hours		
INF.	Тһеме	Lectures	Practical hours	Self training	
1.	Chronic fatigue syndrome medication	1	2	-	
2.	Headache medication	1	2	-	
3.	Insomnia medication	1	2	2	
4.	Medication of depressive states	1	2	-	
5.	Alzheimer's disease medication		2	2	
6.	Gestosis medication	1	2	-	
7.	Medication of sterility and contraception	1	2	-	
8	HIV / AIDS medication	1	2	2	
9.	Medication of immunodeficiency states	1	2	-	
10.	Medication of prostate inflammatory diseases	1	2	-	
11.	Medication of pulmonary tuberculosis	1	2	-	
12.	Osteoporosis medication	1	2	-	
13.	Drug addiction medication	1	2	-	
14.	Medication of alcoholism	1	2	-	
15.	Medication of dysbacteriosis	1	2	1	
	Total	15	30	15	



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VI. CLINICAL SKILLS ACQUIRED AT THE END OF THE COURSE

- To be able to provide consultancy to doctors and patients to prevent the complications of medication of specific and non-specific disorders;
- to reduce morbidity caused by drug pathology, the main cause of which is self-healing;
- to appreciate the symptoms in the case of neurological, psychiatric disorders, gestations, immunodeficiency processes, cancer, dysbacteriosis, pulmonary tuberculosis, HIV/AIDS;
- to appreciate the symptoms of drug and alcohol addiction;
- to apply various methods of prophylaxis of specific and non-specific disorders;
- to apply general selection principles and drug use patterns to many factors (age, individual sensitivity, the nature and severity of the pathological process, the functional capacity of the effector organs, etc.).



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VI. REFERENCE OBJECTIVES AND CONTENTS UNITS

OBJECTIVES

CONTENT UNITS

Chapter 1. Medication of neurological diseases, Alzheimer's disease and HIV / AIDS

1 8	,			
 To define the medication of the specific and non-specific affections, to know the purpose and the tasks, the main directions of the contemporary medication To know the etiopathogenesis, the clinical picture, the principles of contemporary medication of specific and non-specific neurological disorders To know the definition, etiopathogenesis, clinical picture, principles of contemporary medication of Alzheimer's disease To be aware of etiopathogenesis, epidemiology, clinical manifestations, etiotropic and symptomatic medication of HIV / AIDS syndrome. 	The medication for specific and non- specific disorders - all the methods of treatment used in medical practice. Depressive states. Chronic fatigue syndrome. Headache. Headache classification and clinical forms. Insomnia. Alzheimer's disease. HIV/AIDS Syndrome. Preparations with CNS influence.			
Chapter 2. Gestosis, sterility, inflammator medication	ry prostate, immunodeficiency conditions			
 To define gestures, sterility, inflammatory prostate diseases, immunodeficiency, surgical, cancerous conditions. To know etiopathogenesis, clinical picture, principles of medication of gestation , sterility. To know contemporary methods of contraception, contraceptive pharmacology. To acquire etiopathogenesis, clinical picture, principles of inflammatory prostate disease medication. To be familiar with the etiopathogenesis, classification, clinical and laboratory manifestations, principles of medication of immunodeficiency processes. 	Sterility. Contraceptive preparations. HELLP syndrome. Preeclampsia. Eclampsia. The notion of immunity, antibodies and genetic defects of immunity. Chronic infections. Recurring abscesses. Bacterial prostatitis. Inflammatory prostatitis.			
Chapter 3 . Medication of pulmonary tuberculosis, osteoporosis, drug addiction, alcoholism, dysbacteriosis.				



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OBJECTIVES	CONTENT UNITS
 To acquire etiopathogenesis, clinical forms and principles of drug treatment, including the multidrug-resistant form of tuberculosis. To know the etiopathogenesis, the clinical picture, the principles of osteoporosis medication To acquire the general notions of dysbacteriosis: etiopathogenesis, clinical manifestations, contemporary medication To learn about etiopathogenesis, clinical manifestations, diagnosis, principles of medication. To know the etiopathogenesis, the phases of alcoholism, the clinical manifestations, the principles of the treatment of alcoholism 	Pulmonary and extrapulmonary tuberculosis. Primary and secondary osteoporosis; idiopathic, menopausal and senile-induced. Compensated, subcompensated and decompensated disbacteriosis. Physical, mental distress. Abstinence syndrome. Alcoholism and its phases.



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VII. PROFESSIONAL (SPECIFIC (SC)) AND TRANSVERSAL (TS) SKILLS AND STUDY OUTCOMES

✓ Professional Skills (PS)

PS1: Knowing, understanding and interpretation of etiopathogenesis, symptomatology and medication of specific and non-specific disorders, knowing the interaction and drug compatibility with their associated use, knowledge of the international name of medicinal products and their more common commercial synonyms for replacing a preparation with another analogue if necessary, resolving problem situations and formulating conclusions..

PS2: Knowledge of pharmacodynamic and pharmacokinetic properties of drugs used in specific and nonspecific affections, knowledge and explanation of the selection of main drug groups, main drug (s), optimal dosages, routes and mode of administration.

PS3: Use and adaptation of knowledge in the field of specific and non-specific disease medication in counseling patients on ICD and drug synonyms, posology and mode of administration, pharmaco-therapeutic complications; knowing how to access and select online materials.

PS4: Presentation of individual scientific projects and fitting into the scientific circle with new results in the field of specific and non-specific disease medication.

PS5: Knowledge of the clinical research methodology of the drug; identifying issues of scientific research in the field of specific and non-specific disease medications, scientific correlation with biopharmaceutical and medical knowledge.

PS6: The use of problem-solving capabilities, clinical cases, the use of information technologies to solve the tests, and the reproduction of etiopathogenesis, symptomatology and medication of specific and non-specific disorders from the study program to optional discipline through digital technologies.

✓ Transversal Skills (TS)

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

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

TS 3: Making teamwork by performing 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.

✓ Study outcomes

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

- To evaluate the importance and role of medication for specific and non-specific disorders in the context of general medicine and integration with related pharmaceutical disciplines.
- To be able to select the groups of drugs used in the medication of specific and non-specific disorders.
- To know the comparative peculiarities of the drugs of the respective group



- To apply knowledge from the medication of specific and non-specific affections in the ability to explain the etiopathogenesis, symptomatology and evolution of the affection.
- To apply pharmacological knowledge in the ability to explain the contemporary methods of medication for specific and non-specific disorders.
- To possess the ability to select information from the literature (books, 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 community pharmacy and medical practice.
- To be competent to use critically and confidently the scientific information obtained using the new information and communication technologies.

Nr.	Expected Implementation strategies E		Evaluation criterias	Deadline	
1.	Working with information sources:	Read the lecture or the material in the manual on the subject. Reading self-training questions in the subject that require 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. Reading the text entirely, carefully and writing the essential content. Wording of generalizations and conclusions regarding the importance of the theme / subject.	ubject onal t the t the writing sions		
2.	Working with the practical lesson notebook:	Until solving the tasks on the notebook, to analyze the information on the subject in the lecture and handbook. Solving consecutive tasks. Brief characterization of mandatory preparations, registration of all pharmaceutical forms of mandatory medicines, indication of preparations in various pathologies. Selection of additional information, using electronic addresses and additional bibliography.	Workload, situation problem solving, ability to formulate conclusions	During the year	
3.	Preparing and supporting presentations / portfolios:	Selection of the research theme, establishment of the research plan, setting the terms of realization. Establishing project /PowerPoint presentation components - theme, purpose, results, conclusions, practical applications, bibliography. Reviews colleagues.Teacher reviews	The volume of work, the degree of penetration in the essence of the project theme, the level of scientific argumentation, the quality of the conclusions, the elements of creativity, the formation of the personal attitude, the coherence of the	During the year	

VIII. STUDENT'S INDIVIDUAL WORK



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Nr.	Expected product	Implementation strategies	Evaluation criterias	Deadline
		exposure and the scientific correctness, the graphic presentation, the presentation method		

IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

• Teaching and learning methods used

In the teaching of the discipline *Medication* of specific and non-specific diseases are used 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. Practical activities (group work): problem solving, clinical cases, video demonstration. 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 (Self training).

Final: Exam (semester VII).

 Applied teaching strategies / technologies (specific to the discipline): "Brainstorming", "Round table"; "Group interview"; "Study case"; "Portofolio".

Methods of assessment (including specifying the methodology for calculating the final grade).

- **Current**: frontal and/or individual control through testing, control papers, group discussions, papers. The formative assessment is made up of 2 totalisations and 1 grade for self training. Each totalization and individual work is noted separately with grades from 0 to 10 and can be sustained 2-3 times. The annual average is formed from the sum of points accumulated during the study year divided by 3.
- **Final:** The Exam on the optional discipline *Medication* of *specific and non-specific diseases* includes oral examination. Oral part includes 2 questions from *Medication* of *specific and non-specific diseases* and 2 indications for the use of appropriate drugs.
- **The final grade** will consist of 2 components: average annual score (coefficient 0,5), and oral part (coefficient 0,5)

The average annual mark and the marks of all the final exam stages (assisted by computer, test) - all 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 passed in the note book.



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The roundup of the grades at the evaluation steps				
THE INTERMEDIATE MARKS GRILL(annual average, marks from the exam stages)	National rating system	Equivalent ECTS		
1,00-3,00	2	F		
3,01-4,99	4	FX		
5,00	5			
5,01-5,50	5,5	E		
5,51-6,0	6			
6,01-6,50 6,5		D		
6,51-7,00	7	D		
7,01-7,50				
7,51-8,00	8	C		
8,01-8,50				
8,51-8,00 9		В		
9,01-9,50				
9,51-10,0	10	Α		

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.

XI. RECOMMENDED BIBLIOGRAPHY

A. Mandatory:

- 1. Gonciar V., Scutari C., Matcovschi S. Farmaco- și fitoterapia în neurologie. Chișinău: CEP "Medicina", 2007, 112 p.
- 2. Основы клинической фармакологии и рациональной фармакотерапии. Под ред. Белоусова Ю.Б., Леоновой М.В. 2002 г., М.: Изд-во «Бионика», 2002, 358 с.
- 3. Рациональная фармакотерапия ревматических заболеваний. Под ред. Насоновой В.А., Насонова Е.Л. М.: Изд-во «Литтерра», 2003 г., 506 с.



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B. Additional:

- 1. Basic and clinical pharmacology. 2007, 1232 p.
- 2. Dumritrache C., Grigore D. Osteoporoza. Aspecte metabolice și endocrine. București, 1995, 246 p.
- 3. Grecu Gh., Grecu-Gabos I. Depresia: aspecte istorice, etiopatogenetice, clinice și terapeutico-profilactice. Târgu-Mureș: Editura Ardealul, 2000, 539 p.
- 4. Harrison T.R. Principiile medicinei interne. Copyright, 2001, vol. I, 1552 p.
- 5. Oprea N., Nacu A. Psihiatrie. Chișinău: CEP Medicina, 2007, 456 p.