



## CD 8.5.1 DISCIPLINE CURRICULUM

EDITION: 06

DATE: 20.09.2017

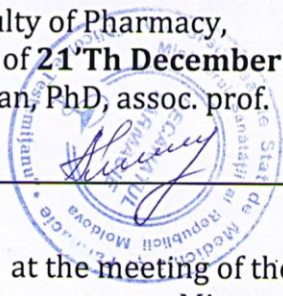
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### FACULTY OF PHARMACY STUDY PROGRAM 0916.1 PHARMACY CHAIR OF SOCIAL PHARMACY "VASILE PROCOPISIN"

#### APPROVED

at the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum, Faculty of Pharmacy,  
Minutes no. 2 of 21<sup>Th</sup> December 2017  
Chairman, PhD, assoc. prof.

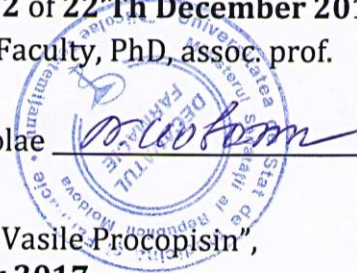
UNCU Livia



#### APPROVED

at meeting of the Council of the Faculty of Pharmacy,  
Minutes no. 2 of 22<sup>Th</sup> December 2017  
Dean of Faculty, PhD, assoc. prof.

CIOBANU Nicolae



#### APPROVED

at the meeting of the chair of social pharmacy „Vasile Procopisin”,  
Minutes no. 3 of 01<sup>Th</sup> November 2017  
Head of chair, PhD, assoc. prof.

BRUMAREL Mihail

## SYLLABUS

DISCIPLINE: PHARMACEUTICAL PROPAEDEUTIC – (internship)

Integrated studies

Type of the course: **Compulsory discipline**

Chisinau, 2017



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### I. INTRODUCTION

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

The internship at the **Pharmaceutical propaedeutic** represents a continuity of the study process of the mentioned discipline and has an applicative role in the professional training of the future pharmacist. The practice is based entirely on the knowledge and skills achieved during the theoretical and practical study.

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

Pharmaceutical propaedeutic internship aims at deepening the practical training of the future pharmacist and the possibility to apply the knowledge acquired during the study of the discipline at the faculty, by conducting activity under the supervision of the teaching staff from the department and the staff from the community pharmacies and of the medical-sanitary institutions - bases of the practical training on the whole range of activities provided in the practical recommendations regarding the practical training.

- **Languages of teaching the discipline:** Romanian, English, Russian.
- **Beneficiaries:** students of the 2-nd year, faculty of Pharmacy, specialty Pharmacy

### II. MANAGEMENT OF THE DISCIPLINE

Code of discipline		<b>S.04.O.049</b>	
Name of the discipline		<b>Pharmaceutical propaedeutic</b> (internship)	
Responsible for the discipline		<b>Mihail Brumărel</b> PhD, associate professor <b>Elena Chițan</b> assistant professor	
Year	<b>II</b>	Semester	<b>4</b>
Total number of hours, including:			<b>60</b>
Lectures	-	Practical/laboratory hours	-
Seminars	-	Self-training	<b>60</b>
Form of assessment	<b>C</b>	Number of credits	<b>2</b>



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### III. TRENING AIMS WITHIN THE DISCIPLINE

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

*at the level of application:*

- ✓ to understand the importance of propaedeutic studies for individual development in the specialty field;
- ✓ to understand role and aim of pharmacy and pharmacist in the health care system;
- ✓ to be able to award medicines to the different groups in accordance with the principles of their classification;
- ✓ to be able to award medicines to the different groups in accordance with the principles and storage conditions;
- ✓ to be able to formulate regulation conditions for various activities from the pharmaceutical field;
- ✓ to be able to apply the requirements of the Good Pharmaceutical Practice rules, that ensure the performance of pharmaceuticals and pharmaceutical services;
- ✓ to apply accumulated knowledge in the future studying of pharmaceutical vocation-related subjects: medicines technology, pharmaceutical management and legislation, pharmaceutical chemistry, pharmacognosy etc.
- ✓ to use logical, sociological methods, etc. in the research and study of medicines assistance;
- ✓ to assess the compliance of the conditions for carrying out pharmaceutical activities for pharmacy;
- ✓ to be able to assimilate more easily the knowledge at the pharmaceutical profile disciplines of the following years of studies.

### IV. PROVISIONAL TERMS AND CONDITION

Internship is only allowed for students who have studied and passed the pharmaceutical propaedeutic discipline and who, according to medical examination results, are admitted for practical work in pharmaceutical companies and institutions.

### V. THEMES AND ESTIMATE ALLOCATION OF HOURS

No.	Name of working sites, activities and practical skills	Number of hours Individual work
1.	<b>Acquaintance with pharmacy.</b> (Open access pharmacy (community); space of community pharmacy, equipment with furniture and technique, safety and health protection in the pharmacy, sanitary conditions in community pharmacies, history of pharmacy).	12
2.	<b>Acquaintance with medicines' assortment, parapharmaceutical products and their storage places.</b> (Medicines classification; Assessment of legal status of medicines supply form pharmacy; Medical devices and other products from community pharmacy; Classification).	12
3.	<b>Reception of products in community pharmacy.</b> (Reception of medicines; Reception of other parapharmaceutical products; Storage of received products).	6
4.	<b>Organization of optimal storage of pharmaceuticals, medical devices and parapharmaceutical products in community pharmacy.</b> (Principles and norms of warehousing and storage of goods in the pharmacy; Storage peculiarities of various groups of medicines; Feature storage industrial dosage form; Principles of storage of medicines containing narcotic and psychotropic substances; Peculiarities of storage of other pharmaceutical products: medical devices, plant products, parapharmaceutical; Monitoring of warehousing and storage of products in pharmacy).	12



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No.	Name of working sites, activities and practical skills	Number of hours Individual work
5.	<b>Medical prescription. Dispensing of medicines through community pharmacy.</b> (General rules for drug release in the pharmacy. Prescription forms; OTC medicines).	12
6.	<b>Code of ethics of pharmacists. Main principles and their application in pharmaceutical practice.</b> (Deontological code of pharmacists in Republic of Moldova; Practical implementation of ethical principles in community pharmacy practice; Case studies of ethical problems in community pharmacy).	6
<b>Total:</b>		60

### VI. REFERENCE OBJECTIVES OF CONTENT UNITS

Objectives	Content units
<ul style="list-style-type: none"><li>✓ to understand role and aim of pharmacy and pharmacist in the health care system;</li><li>✓ to assess the requirements compliance of the pharmaceutical operational environment for pharmacy;</li><li>✓ to be able to formulate conditions for regulating diversified pharmaceutical activities;</li><li>✓ to be able to award medicines to the different groups in accordance with the principles and storage conditions;</li><li>✓ to be able to formulate regulation conditions for various activities from the pharmaceutical field;</li><li>✓ to be able to apply the requirements of the Good Pharmaceutical Practice rules, that ensure the performance of pharmaceuticals and pharmaceutical services</li></ul>	Acquaintance with pharmacy.
	Acquaintance with medicines' assortment, parapharmaceutical products and their storage places.
	Reception of products in community pharmacy.
	Organization of optimal storage of pharmaceuticals, medical devices and parapharmaceutical products in community pharmacy.
	Medical prescription. Dispensing of medicines through community pharmacy.

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

#### Professional (specific) (SC) competences:

**PC1:** Knowledge of the theoretical bases of the disciplines included in the faculty curriculum, of the general principles in the elaboration, analysis and registration of pharmaceutical and parapharmaceutical products; knowledge of the general principles of organization and functioning of pharmaceutical institutions with different legal forms of activity; knowledge of the legislative framework in the field of pharmacy; knowledge of the pharmacist's rights and obligations.

**PC2:** Knowledge of medicine in terms of action, indications, contraindications, adverse events of administration and their interactions; the practical implementation of patient counselling and pharmaceutical assistance.

**PC2:** Knowledge of medicine in terms of action, indications, contraindications, adverse events of administration and their interactions; the practical implementation of patient counselling and pharmaceutical assistance.

**PC3:** Use and adaptation of theoretical knowledge from the field of pharmacy to practical situations; making professional work more efficient by introducing innovative elements from pharmaceutical field; applying the requirements of pharmaceutical legislation in practice; establishing the correlation between the components of the pharmaceutical activity process and the health care system of the population.



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**PC4:** Diagnosing the particularities and organizational culture of the institution in the pharmaceutical system where the specialist operates; designing and coordinating pharmaceutical activity in various institutions: state-owned or private-type pharmacies; hospital pharmacies; pharmaceutical warehouse; medicines factories, laboratories for quality control and certification of medicines, etc.; the active engagement of the specialist in the process of accomplishing the mission of the pharmaceutical institution.

**PC5:** Determining the criteria of personal activity according to real conditions and in a concrete social context.

**PC6:** Adopting messages in various socio-cultural environments, promoting the principles of tolerance and compassion towards patients.

### Transversal competences (TC):

**TC1:** Compliance with pharmaceutical ethics and deontology rules at the preparation, analysis, transport and dispensing of medical remedies to the population and medical institutions.

**TC2:** Determination of the needs in the continuing professional training of the pharmacist.

**TC3:** Promoting the spirit of initiative, dialogue, cooperation, positive attitude and respect for others, empathy, altruism and continuous improvement of own activity.

### Study outcomes:

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

- To know the structure and mission of the health system;
- To know the structure of the medicines assistance system and the interconnection of its component parts;
- To know the role and purpose of the medicines assistance system and its achievement pathway;
- To know the current role of the pharmacist in the health system and the basic requirements towards the pharmacist;
- To know the essence of pharmaceutical activity and the basic requirements for the exercise of pharmaceutical activity;
- To know the types of pharmaceutical companies and the basic conditions of their activity;
- To know the notions of medicine, pharmaceutical form and other notions deriving from them;
- To know the classification principles and classifications of medicines and the basic activities of their use in medical practice;
- To know the organizational principles of the storage of medicines;
- To know the role and functions of professional pharmaceutical organizations;
- To become more confident in choosing the right profession in the spirit of respect and love for it through its role in society.

## VIII. THE STUDENT'S SELF-TRAINING

No.	Expected product	Strategies for achieving	Evaluation criteria	Deadline
1	Internship agenda	Performing assigned tasks, for each sector of activity in the community pharmacy.	The fullness and correctness of the fulfillment of the individual tasks stipulated in the methodical rec-	During the internship





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No.	Expected product	Strategies for achieving	Evaluation criteria	Deadline
			ommendations regarding the internship	
2	Study on the location of the pharmaceutical unit.	Making copies of documents authorizing the types of activity that pharmacy performs. Performing a study on the assessment of location norms based on geographic and demographic indicators, of pharmacy in which the student performs the practice. Processing the results and enrolling them in the practical internship agenda	The correctness of the assessment of the rules for the pharmacy location. Analysis, interpretation and argumentation of the results.	During the internship
3	Historical pharmacy study	Carrying out a study on the history of the emergence and founding of the pharmacy. The study will include data on pharmacy opening, who was the first head of pharmacy, who were and are current employees (name, degree, position held, photos and information considered important.	Fullness and accuracy of the information presented. Sources of information used in the study.	During the internship

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

#### • *Teaching and learning methods used*

During the internship, the individual work of the student prevails. In order to facilitate the realization of the program of practice and individual work, students have access to the entire teaching material used in teaching the discipline during the semester.

Students are encouraged to make extensive use of such learning methods as observing, analyzing comparison, classifying, drafting schemes, modelling situations, interviewing, questioning, etc.

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

For the individual activity it is recommended to study the additional material from mandatory and additional bibliographic sources, from the databases available through the communication networks, use of the legislative and normative acts regulating the pharmaceutical activity, the available materials on the results of the activity of the pharmacy-practice base.

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

**Current:** Currents checks during the internship.

**Final:** Final mark of internship is the annual average mark, that consists of oral interview on program acquiring and student individual work during the internship.

Annual average mark will be expressed in numbers according to the grading scale indicated in table.

Marks 5 and more are equivalent with mark "attested", which will be transferred to the student record book.



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### Method of marks rounding at the assessment stages

Grille of average marks	National scoring system	Equivalent ECTS
1,00-3,00	2	F
3,01-4,99	4	FX
5,00	5	E
5,01-5,50	5,5	
5,51-6,00	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	

**Remark:** Failure to appear at colloquium without good reason is recorded as "absent" and is equivalent to "fail" qualificative. The student has the right to 2 repeated re-examinations of the unpassed colloquium.

## X. RECOMMENDED LITERATURE:

### A. Compulsory:

1. Carata, A. Management, marketing și legislație farmaceutică. Vol.1. Management în domeniul farmaceutic. București: Editura Didactică și Pedagogică, R.A, 2008, 303 p.
2. Desselle, S.P.; Zgarrick D.P. Managementul farmaciilor. Informații esențiale pentru practica farmaceutică. Vol.1. Ediția 2. Pritco, 2011. 353 p. ISBN 978-973-769-814-2
3. Desselle, S.P.; Zgarrick D.P. Managementul farmaciilor. Informații esențiale pentru practica farmaceutică. Vol.2. Ediția 2. Pritco, 2011. 298 p. ISBN 978-973-769-814-8
4. Remington, J. P. The Science and Practice of Pharmacy, Vol.1. 22nd Edition, Pharmaceutical Press, 2013. 3024 p. ISBN 978-085-711-062-6.
5. Safta, V.; Brumărel, M.; Ciobanu, N.; Adauji, S. Management și legislație farmaceutică. Chișinău: F.E.P. Tipografia Centrală, 2012. 800 p.
6. Wiedenmayer, K.; Summers, S. R.; Mackie, C.A.; Gous, A. G. S.; Everard, M. Developing pharmacy practice. A focus on patient care. The Netherlands, The Hague: World Health Organization Department of Medicines Policy and Standards in collaboration with International Pharmaceutical Federation, 2006, 97 p.



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<https://www.fip.org/files/fip/publications/DevelopingPharmacyPractice/DevelopingPharmacyPracticeEN.pdf>

7. From Making Medicines to Optimizing Outcomes: The evolution of a profession 1912-2012. Report on Pharmacy, Pharmaceuticals and Global Health, commissioned by FIP and prepared by the UCL School of Pharmacy on the occasion of the Federation's Centennial Congress, 2012. 88 p. [https://www.fip.org/centennial/files/static/UCL\\_BOOKLET\\_Web.pdf](https://www.fip.org/centennial/files/static/UCL_BOOKLET_Web.pdf)
8. Materialul prelegerilor Propedeutica farmaceutică.
9. Pharmacist Ethics and Professional Autonomy: Imperatives for Keeping Pharmacy Aligned with the Public Interest, FIP 2014.  
[https://www.fip.org/www/uploads/database\\_file.php?id=358&table\\_id=](https://www.fip.org/www/uploads/database_file.php?id=358&table_id=)
10. Safta, V. Farmacie socială. Chişinău: S.n., 2011. 376 p.

### B. Additional:

1. Eţco, C. Management în sistemul de sănătate. Chişinău: Epigraf, 2006. 862 p.
2. Voitcu, M.; Cărauş E.-M. Management sanitar şi farmaceutic. Iaşi: "Gr. T. Popa", 2003. 245 p. ISBN 973-790-626-8
3. Bejan, V. Elemente de propedeutică farmaceutică. Chişinău, 2010.
4. Facultatea Farmacie la 40 de ani (File de istorie), sub red. V. Procopişin, N. Ciobanu. Chişinău, 2004.
5. Făuritorii unei istorii de aur. 60 ani de învăţământ superior în Moldova, Chişinău, 2005.
6. From Making Medicines to Optimizing Outcomes: The evolution of a profession 1912-2012, Report on Pharmacy, Pharmaceuticals and Global Health, commissioned by FIP and prepared by the UCL School of Pharmacy on the occasion of the Federation's Centennial Congress, 2012.
7. Pharmacist Ethics and Professional Autonomy: Imperatives for Keeping Pharmacy Aligned with the Public Interest, FIP 2014.