

ЛЬВІВСЬКИЙ НАЦІОНАЛЬНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ ДАНИЛА ГАЛИЦЬКОГО

Кафедра організації і економіки фармації

ЗАТВЕРДЖУЮ



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
2023 р.


НАВЧАЛЬНА ПРОГРАМА ДИСЦИПЛІНИ

Фармацевтичний менеджмент і маркетинг

(назва навчальної дисципліни)

підготовки фахівців другого (магістерського) рівня вищої освіти
галузі знань 22 «Охорона здоров'я»
спеціальності 226 «Фармація, промислова фармація»
для студентів IV, V курсів фармацевтичного факультету
ОК-32

Обговорено та ухвалено
на методичному засіданні кафедри
організації і економіки фармації
Протокол № 11 від 23 червня 2023 р.
Завідувач кафедри ОЕФ
 проф. Громовик Б. П.

Затверджено
профільною методичною комісією
з хімічних та фармацевтичних дисциплін
Протокол № __ від "__" червня 2023 р.
Голова профільної методичної комісії
 проф. Білоус С. Б.

DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF ORGANIZATION AND ECONOMICS OF PHARMACY

Approved by:
First Vice-Rector
for Research and Teaching
assoc. prof. Solonyko I.I. _____

“ _____ ” _____ 2023 y.

CURRICULUM OF THE DISCIPLINE

"PHARMACEUTICAL MANAGEMENT AND MARKETING"
(name of an academic discipline)

**training of specialists of the second (master's) level of higher education
in the field of knowledge 22 "Health"
specialty 226 "Pharmacy, industrial pharmacy"
for 4th and 5th year students of the Faculty of Pharmacy**

Discussed and approved at the methodical
meeting of the department of organization and
economics of pharmacy
June 23, 2023
Protocol No 11
Head of the department
_____ Prof. Hromovyk B.P.

Approved by the profile methodical
commission on chemical and pharmaceutical
disciplines
June 27, 2023
Protocol No 3
Head of the methodical commission
_____ Prof. S. B. Bilous

Lviv 2023

DEVELOPERS OF THE PROGRAM – personnel of the Department of Organization and Economics of Pharmacy: O.R. Levytska (an Associated Professor, a Doctor of Pharmaceutical Sciences), B.P. Hromovyk, Head of the Department (a Professor, a Doctor of Pharmaceutical Sciences).

REVIEWER: Head of the Department of Drug Technology and Biopharmacy of Danylo Halytskyi Lviv National Medical University, Doctor of Pharmaceutical Sciences, Professor Bilous S.B.

INTRODUCTION

Study program of the course "Pharmaceutical management and marketing"

in accordance with the Higher Education Standard of the *second (master's) level* in the field of knowledge 22 "*Health care*"

of specialty 226 "*Pharmacy, industrial pharmacy*"

of educational program of *Master of Pharmacy*

Course description (abstract)

Pharmaceutical management and marketing is one of the final components in a complex of professionally oriented disciplines that form Masters of Pharmacy. It enables the formation of modern management and market thinking in the applicants for higher pharmaceutical education.

Structure of the discipline	Number of hours				Year of study, semester	Type of control
	Total credits/ hours	Auditorial		individual students work		
		lectures	practical classes			
Pharmaceutical management and marketing. 7 Chapters	9 credits ECTS / 270 hours.	28	100	142	4-5 course, VII - IX semester	Final test control, Exam
Semester						
Chapters 1- 2 (Topics 1-5)	3,0 credits ECTS / 90 hours.	10	32	44	4 course, VII semester	Final test control
Chapters 2-4 (Topics 6-11)	3,0 credits ECTS / 90 hours.	10	38	46	4 course, VIII semester	Final test control
Chapters 5-7 (Topics 12-20)	3,0 credits ECTS / 90 hours.	8	30	52	5 course, IX semester	Exam

The subject of study of the course are the regularities, principles of formation, operation and development of the management system at pharmaceutical organizations, as well as marketing philosophy and methods of management in a competitive environment.

Interdisciplinary Relations: Pharmaceutical management and marketing completes a set of core disciplines that form Masters of Pharmacy. Study of the discipline:

- is based on the general knowledge of such disciplines as "Philosophy and Bioethics", "Ethics and Deontology in Pharmacy", "Information Technology in Pharmacy", "Pharmaceutical legislation", "Organization and Economics of Pharmacy";

- lays the foundations for the students of higher pharmaceutical education in such disciplines as "Medical and pharmaceutical commodities", "Pharmacoeconomics", "Occupational health" and "Good pharmaceutical practice", which involves the integration of teaching with these disciplines in the formation of skills to apply knowledge of management skills and marketing in pharmacy in the process of further education and in the professional activity of masters of pharmacy.

1. PURPOSE AND OBJECTIVES OF THE COURSE

1.1. The purpose of teaching the course "Pharmaceutical Management and Marketing" is to give the graduates of higher pharmaceutical education a complex of professional competencies to create a

comprehensive system of successful management of the pharmaceutical organization, including necessary skills for effective marketing activities.

1.2. The main tasks of studying the course "Pharmaceutical Management and Marketing" are:

- formation of professional knowledge, skills and ideas in the applicants for higher pharmaceutical education in creating a holistic, effective and flexible management system for a pharmaceutical organization in an ever-changing market environment;
- providing a theoretical basis for the study of other courses of the curriculum;
- creation of an educational base that determines the professional competence and general erudition of the Master of Pharmacy.

1.3 Competencies and learning outcomes facilitated by discipline (relationship with the regulatory content of higher education applicants' training, formulated in terms of the learning outcomes of the Higher Education Standard).

In accordance with the requirements of the Higher Education Standard, the discipline provides students with **competencies**:

a) general competencies (GC):

GC 1. The ability to act socially responsible and civilly conscious.

GC 2. Ability to apply knowledge in practical situations.

GC 3. The desire to preserve the environment.

GC 4. Ability to think abstractly, analyze and synthesize, to learn and to be modernly trained.

GC 5. Ability to show initiative and entrepreneurship.

GC 6. Knowledge and understanding of the subject area and understanding of professional activity.

GC 7. The ability to adapt and act in a new situation.

GC 8. The ability to communicate in the official language, both verbally and in writing, the ability to communicate in a foreign language (mainly English) at a level that ensures effective professional activity.

GC 9. Skills of using information and communication technologies.

GC 10. Ability to choose communication strategy, ability to work in a team and with experts in other fields of knowledge / types of economic activity.

GC 11. Ability to evaluate and ensure the quality of work performed.

GC 12. Ability to conduct research at the appropriate level

GC 13. Ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, rights and freedoms of man and citizen in Ukraine.

GC 14. Ability to preserve and multiply moral, cultural, scientific values and achievements of the society on the basis of understanding of history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, use different types and forms motor activity for active rest and leading a healthy lifestyle.

b) special (professional) competencies (PC):

PC 10. Ability to develop, implement and apply management approaches in the professional activities of pharmacy, wholesale, intermediary, manufacturing and other pharmaceutical organizations, to argue the principles of HR management and self-management, demonstrate leadership skills.

PC 12. Ability to use in professional activity knowledge of regulatory, legal acts of Ukraine and recommendations of good pharmaceutical practices.

PC 13. Ability to demonstrate and apply in practice communication skills, fundamental principles of pharmaceutical ethics and deontology based on moral obligations and values, ethical standards of professional conduct and responsibility in accordance with the Code of Ethics of Pharmaceutical Workers of Ukraine and the Guidelines.

PC 17. Ability to organize and carry out general and marketing management of assortment, commodity-innovation, pricing, marketing and communication policies of pharmaceutical market entities

based on the results of market research and taking into account market processes in national and international markets, manage risks in the pharmaceutical supply system .

Detailing competencies according to the NCC descriptors in the form of the Competence Matrix.

Competence Matrix

№	Competence	Knowledge	Skill	Communication	Autonomy and responsibility
GC1	Ability to act socially responsible and civilly conscious.	Know your social and civil rights and responsibilities	Form your civic consciousness, be able to act in accordance with it	Ability to convey your social and social position	Be responsible for your civic position and activities
GC2	Ability to apply knowledge in practical situations.	Know the methods of implementing knowledge in solving practical issues	Be able to use professional knowledge to solve practical situations	Establish contacts with practitioners.	Be responsible for the timeliness of the decisions made
GC4	Ability to think abstractly, analyze and synthesize, learn and be modernly trained.	Know the current trends of the industry and analyze them	Be able to analyze professional information, make informed decisions, acquire modern knowledge	Make the right connections to reach the goals.	Be responsible for the timely acquisition of modern knowledge.
GC5	Ability to show initiative and entrepreneurship.	To know the features of the modern professional environment and professional activity	Be able to take initiative; constantly seek out new opportunities beyond the resources available, engage in self-development and self-realization	Use the qualities of a leader to establish contacts with various subjects of professional activity.	Be responsible for initiatives have been demonstrated
GC6	Knowledge and understanding of the subject area and understanding of professional activity.	Know the structure and features of professional activity.	Be able to perform professional activities that require updating and integration of knowledge	To formulate a communication strategy in professional activity.	Be responsible for professional development with a high level of autonomy
GC7	The ability to adapt and act in a new situation.	Know the adaptation mechanisms and algorithms for action in a new situation	Be able to adapt to new things and act on specific situations	Establish communication in the context of a new professional situation	Be responsible for the chosen mechanism of adaptation and action in the new situation
GC8	Ability to communicate in the state language both verbally and in writing, the ability to communicate in a foreign language (mainly English) at a level that ensures effective professional activity.	Have perfect knowledge of the native language and basic knowledge of a foreign language	Be able to apply native language knowledge, both verbally and in writing, be able to communicate in a foreign language	To use in professional and business communication and in preparation of documents the native language. Use foreign language in professional activity	To be responsible for fluency in the mother tongue, for the development of professional knowledge

GC9	Use of information and communication technologies.	To know modern information and communication technologies	Be able to apply modern information and communication technologies in practice	To use information and communication technologies in professional activity	Be responsible for the choice of information or communication technologies
GC10	Ability to choose communication strategy, ability to work in team and with experts in other fields of knowledge / types of economic activity.	Know the tactics and strategies of communication , the laws and methods of communicative behavior.	Be able to choose ways and strategies of communication to ensure effective teamwork	Use communication strategies and interpersonal skills	Be responsible for the choice and tactics of the communication method
GC11	Ability to evaluate and ensure the quality of work performed.	Know the methods of evaluating the quality of work performed	Be able to ensure the quality of work performed	Make the right connections to reach the goals.	Be responsible for the quality of the work performed
PC10	Ability to develop, implement and apply management approaches in the professional activities of pharmacy, wholesale, intermediary, manufacturing and other pharmaceutical organizations, to argue the principles of HR-management and self-management, demonstrate leadership skills.	To know the basic approaches of management in professional activity of pharmaceutical organizations, principles of HR-management and self-management	Be able to apply the acquired knowledge in practical activities, demonstrate leadership skills.	Use different management approaches (classical, behavioral, management science, information and decision-making approach) in professional activity	Be responsible for the developed, implemented and applied management approaches in professional activities
PC12	Ability to use in the professional activity the knowledge of regulatory, legal acts of Ukraine and the recommendations of good pharmaceutical practices.	Know the legal and legislative framework of Ukraine, a set of good pharmaceutical practices that regulate the requirements for professional activity	Be able to apply knowledge of regulatory, legal acts of Ukraine and recommendations of good pharmaceutical practices in practice.	Form conclusions and professionally apply laws and regulations	Be responsible for the quality and timely use of regulatory documents in professional activities
PC13	Ability to demonstrate and apply in practice communicative communication skills,	Know the legal and ethical standards of professional conduct and responsibility	To be able to demonstrate communication skills in practice, to form and develop social-labor relations	Establish communication based on the possession of the basic principles of the Code of Ethics	Be responsible for the ethical standards of professional conduct and responsibility, for the quality of

	fundamental principles of pharmaceutical ethics and deontology based on moral obligations and values, ethical standards of professional conduct and responsibility in accordance with the Code of Ethics of Pharmaceutical Workers of Ukraine and WHO guidelines.			for Pharmaceutical Workers of Ukraine and WHO guidelines.	communication skills of communication
PC17	Ability to organize and carry out general and marketing management of assortment, commodity-innovation, pricing, marketing and communication policies of the subjects of pharmaceutical market based on the results of market research and taking into account market processes in the national and international markets, manage risks in the pharmaceutical supply system.	To know the basic principles of organization of general and marketing management within the framework of marketing mix of subjects of the pharmaceutical market	Be able to conduct marketing research and use their results for the overall and marketing management of pharmaceutical organizations	Form and establish communications for marketing activities of pharmaceutical market entities	Be responsible for an organized marketing management system within the marketing mix of pharmaceutical market entities

Program learning outcomes:

- Conduct professional activities in social interaction based on humanistic and ethical principles; identify future professional activity as socially significant for human health (PLO 1).
- To apply knowledge of general and professional disciplines in professional activity (PLO 2).
- Demonstrate the ability to independently search, analyze and synthesize information from a variety of sources and use these results to solve typical professional tasks (PLO 4).
- To position their professional activities and personal qualities in the pharmaceutical labor market; to formulate goals of own activity taking into account public and industrial interests (PLO 5).
- Argue information for decision making, be responsible for them in standard and non-standard professional situations; adhere to the principles of deontology and ethics in professional activity (PLO 6).

- Perform professional activities using creative methods and approaches (PLO 7).
 - Communicate in modern Ukrainian official language (PLO 8).
 - Perform professional activities using information technology, "Information Databases", navigation systems, Internet resources, software and other information and communication technologies (PLO 9).
 - Adhere to norms of communication in professional interaction with colleagues, management, consumers, work effectively in a team (PLO 10).
 - Use methods of evaluating performance indicators; identify reserves for improving labor efficiency (PLO 11).
 - Analyze information obtained from scientific research, summarize, systematize and use it in professional activities (PLO 12).
 - To carry out a set of organizational and management measures for providing the population and health care institutions with medicines and other goods of the pharmacy assortment. To carry out all kinds of accounting in pharmacy establishments, administrative record keeping, processes of commodity analysis (PLO 20).
 - Administer pharmaceuticals and determine their effectiveness using management functions. To make managerial decisions on the basis of the formed leadership and communication abilities of pharmaceutical personnel on strategic planning of activity of the enterprises (PLO 22).
 - To plan and implement professional activity on the basis of legal acts of Ukraine and recommendations of good pharmaceutical practices (PLO 24).
 - Promote health, including disease prevention, rational use and medication use. Honestly carry out their professional duties, comply with the law on the promotion and advertising of medicinal products. Have psychological communication skills to build trust and understanding with colleagues, doctors, patients, consumers (PLO 25).
 - Ensure competitive positions and effective development of pharmaceutical organizations based on research carried out on all elements of the marketing mix (PLO 29).
- Integrative program learning outcomes facilitated by the course are: the ability to solve typical and complex specialized problems in pharmaceutical management and marketing during professional pharmaceutical activity, clearly and unambiguously communicate their findings and knowledge to the professional and non-professional staff.

2. INFORMATION ABOUT THE THE COURSE

9 ECTS credits 270 hours are allocated for studying the course.

Chapter 1. Management and a pharmaceutical organization

Topic 1. The fundamentals and evolution of management.

Topic 2. Pharmaceutical organization as object of management.

Topic 3. The entities of pharmaceutical business activity and conditions of their operation.

Chapter 2. Stages of the process of management of pharmaceutical organization

Topic 4. Functions of pharmaceutical management.

Topic 5. Methods of pharmaceutical management.

Topic 6. Communication processes in pharmaceutical management.

Topic 7. Administration and leadership in pharmaceutical organizations.

Chapter 3. Human resource pharmaceutical management

Topic 8. Management of labor relations in pharmaceutical organizations.

Topic 9. Management of employment potential of the pharmaceutical industry.

Chapter 4. Managing pharmaceutical marketing

Topic 10. Management of pharmaceutical marketing

Topic 11. Functional providing of marketing activities

Chapter 5. Complex study of the pharmaceutical market

Topic 12. The principles of pharmaceutical marketing research and study of medications customers behavior

Topic 13. Modeling regularities of pharmaceutical market and study the marketing opportunities of pharmaceutical companies

Chapter 6. Complex of pharmaceutical marketing

Topic 14. Product policy of pharmaceutical companies

Topic 15. Price policy of pharmaceutical companies

Topic 16. Sales policy of pharmaceutical companies

Topic 17. Promotion of medicines on the market

Chapter 7. International marketing in pharmacy.

Topic 18. Basic principles of international pharmaceutical marketing

Topic 19. Formation of the complex of international pharmaceutical marketing

Topic 20. Representative offices of pharmaceutical companies - an important subject of international market

3. STRUCTURE OF THE COURSE

Subject	Lectures	Practical classes	Individual students work	
Chapter 1. <i>Management and a pharmaceutical organization</i>				
1. The fundamentals and evolution of management	2	6	8	-
2. Pharmaceutical organization as object of management	2	8	8	-
3. The entities of pharmaceutical business activity and conditions of their operation.	2	8	8	-
Total for Chapter 1	6	22	24	
Chapter 2. <i>Stages of the process of management of pharmaceutical organization</i>				
4. Functions of pharmaceutical management	2	8	10	-
5. Methods of pharmaceutical management	2	2	10	-
6. Communication processes in pharmaceutical management	2	6	8	-
7. Administration and leadership in pharmaceutical organizations	2	6	6	-
Total for Chapter 2	8	22	34	
Chapter 3. <i>Human resource pharmaceutical management</i>				
8. Management of labor relations in pharmaceutical organizations	1	8	8	-
9. Management of employment potential of the pharmaceutical industry	1	4	8	-
Total for Chapter 3	2	12	16	
Chapter 4. <i>Managing pharmaceutical marketing</i>				
10. Management of pharmaceutical marketing	2	6	8	-
11. Functional providing of marketing activities	2	8	8	-
Total for Chapter 4	4	14	16	
Chapter 5. <i>Complex study of the pharmaceutical market</i>				
12. The principles of pharmaceutical marketing research and study of medications customers behavior	1	4	4	-
13. Modeling regularities of pharmaceutical market and study the marketing opportunities of pharmaceutical companies	1	6	6	-
Total for Chapter 5	2	10	10	
Chapter 6.				

Complex of pharmaceutical marketing				
14. Product policy of pharmaceutical companies	2	4	6	-
15. Price policy of pharmaceutical companies	2	4	8	-
16. Sales policy of pharmaceutical companies	1	4	8	-
17. Promotion of medicines on the market	1	4	8	-
Total for Chapter 6	6	16	30	
Chapter 7				
International marketing in pharmacy				
18. Basic principles of international pharmaceutical marketing	-	2	4	-
19. Formation of the complex of international pharmaceutical marketing. Representative offices of pharmaceutical companies - an important subject of international market	-	2	8	-
Total for Chapter 7	-	4	12	-
Total hours 270 / 9.0 credits ECTS				
The final control	Exam			

4. THE PLAN OF LECTURES

№	Topic	Quantity of hours
Chapter 1. Management and a pharmaceutical organization		
1.	The fundamentals and evolution of management	2
2.	Pharmaceutical organizations as object of management	2
3.	The entities of pharmaceutical business activity and conditions of their operation	2
	Total	6
Chapter 2. Stages of the process of management of pharmaceutical organization		
4.	Functions of pharmaceutical management	2
5.	Methods of pharmaceutical management	2
6.	Communication processes in pharmaceutical management	2
7.	Administration and leadership in pharmaceutical organizations	2
	Total	8
Chapter 3. Human resource pharmaceutical management		
8.	Management of labor relations in pharmaceutical organizations	1
9.	Management of pharmaceutical personnel	1
	Total	2
Chapter 4. Managing pharmaceutical marketing		
10.	Fundamentals of pharmaceutical marketing	2
11.	Functional providing of marketing activities of pharmaceutical companies	2
	← Total	4
Chapter 5. Complex study of the pharmaceutical market		
12.	The principles of pharmaceutical marketing research and study of medications consumers behavior.	1
13.	Modeling regularities of pharmaceutical market and study the marketing opportunities of pharmaceutical companies.	1
	Total	2
Chapter 6. Complex of pharmaceutical marketing		
14.	Product policy of pharmaceutical companies	2
15.	Price policy of pharmaceutical companies	2
16.	Sales policy of pharmaceutical companies	1
17.	Pharmaceutical logistics	1
18.	Promotion of medicines on the market	6
	Total	28

5. THE PLAN OF PRACTICAL CLASSES

№	Subject	Quantity of hours
	<i>Chapter 1. Management and a pharmaceutical organization</i>	
1	The fundamentals and evolution of management. The essence of modern management theories	2
2	The fundamentals and evolution of management. Description of the stages of management development	2
3	The fundamentals and evolution of management. Subjects and levels of management	2
4	Pharmaceutical organization as object of management. Description and classification of organizations	2
5	Pharmaceutical organization as object of management. Groups of employees in the organization.	2
6	Pharmaceutical organization as object of management. Factors of influence on the organization	2
7	Pharmaceutical organization as object of management. The process of management the organization	2
8	The entities of pharmaceutical business activity and conditions of their operation. Business activities and enterprises in pharmacy	2
9	The entities of pharmaceutical business activity and conditions of their operation. Registration and licensing of business in pharmacy	2
10	The entities of pharmaceutical business activity and conditions of their operation. Business risks	2
11	The entities of pharmaceutical business activity and conditions of their operation. Bankruptcy and suspension of activity	2
	Total	22
	<i>Chapter 2. Stages of the process of management of pharmaceutical organization</i>	
12	Functions of pharmaceutical management. Planning as a general management function	2
13	Functions of pharmaceutical management. Organizing as a general management function	2
14	Functions of pharmaceutical management. Motivating as a general management function	2
15	Functions of pharmaceutical management. Controlling and regulation as general management functions	2
16	Methods of pharmaceutical management.	2
17	Communication processes in pharmaceutical management. Managerial decisions	2
18	Communication processes in pharmaceutical management. Communications and information in management	2
19	Communication processes in pharmaceutical management. Paperwork at pharmaceutical companies	2
20	Administration and leadership in pharmaceutical organizations. The essence and the basic principles of administration and leadership	2
21	Administration and leadership in pharmaceutical organizations. Styles of leadership	2
22	Administration and leadership in pharmaceutical organizations. Conflicts and stresses as objects of management	2
	Total	22
	<i>Chapter 3. Human resource pharmaceutical management</i>	
23	Management of labor relations in pharmaceutical organizations. Legal maintenance of labor relations	2
24	Management of labor relations in pharmaceutical organizations. Working hours and rest time	2

25	Management of labor relations in pharmaceutical organizations. Motivation of labor, guarantees and compensation for employees	2
26	Management of labor relations in pharmaceutical organizations. Legal regulation of labor, labor discipline and labor disputes	2
27	Management of employment potential of the pharmaceutical industry. Pharmaceutical education in Ukraine Postgraduate education. Preparation of the teaching staff.	2
28	Management of employment potential of the pharmaceutical industry. Human resource management	2
	Total	12
	<i>Chapter 4. Managing pharmaceutical marketing</i>	
29	Management of pharmaceutical marketing. Description of pharmaceutical market	2
30	Management of pharmaceutical marketing. The essence and development of marketings conceptions	2
31	Management of pharmaceutical marketing. Components of marketing activities of pharmaceutical companies	2
32	Functional providing of marketing activities. Working out the strategy and tactics of pharmaceutical marketing	2
33	Functional providing of marketing activities. Principles of marketing control	2
34	Functional providing of marketing activities. Marketing environment of the pharmaceutical company	2
35	Functional providing of marketing activities. The concept of marketing information system	2
	Total	14
	<i>Chapter 5. Complex study of the pharmaceutical market</i>	
36	The principles of pharmaceutical marketing research and study of medications consumers behavior. Organization of marketing research	2
37	Technology of marketing research of medications consumers behavior.	2
38	Modeling regularities of pharmaceutical market and study the marketing opportunities of pharmaceutical companies. Research the pharmaceutical market conditions	2
39	Pharmaceutical market segmentation and positioning of medicine.	2
40	Evaluation and modeling regularities of pharmaceutical market and study the marketing opportunities of pharmaceutical companies. Benchmarking in the activity of pharmaceutical companies	2
	Total	10
	<i>Chapter 6. Complex of pharmaceutical marketing</i>	
41	Assortment policy of pharmaceutical companies.	2
42	Product policy of pharmaceutical companies. The life cycle of medicine. Quality and competitiveness of medicine.	2
43	Factors of pricing and the elasticity of demand for medicines. Basic pricing strategies on drugs.	2
44	Models and methods of pricing of medicines. The procedure of state registration of prices of basic medicines.	2
45	Sales policy of pharmaceutical companies. Variants of the distribution (sales methods) of medicines.	2
46	Sales policy of pharmaceutical companies. Strategies of distribution of medicines.	2
47	Promotion of medicines on the market. The system of marketing communications of pharmaceutical companies	2

48	Key elements of marketing communications	2
	Total	16
	Chapter 7. International marketing in pharmacy	
49	Basic principles of international pharmaceutical marketing. Characteristics of the global pharmaceutical market and international marketing environment. Methods and forms of entering the foreign pharmaceutical market.	2
50	Formation of the complex of international pharmaceutical marketing. Representative offices of pharmaceutical companies - an important subject of international market.	2
	Total	4
	TOTAL Practical classes for the course	100

6. THE PLAN OF INDIVIDUAL STUDENTS WORK

№	Subject of individual students work	Quantity of hours	Control type
	Chapter 1. Management and a pharmaceutical organization		
1	The essence of modern management theories	4	Ongoing control at practical classes
2	Characteristics of the stages of development management	2	“_”
3	Subjects and levels of management	2	“_”
4	Description and classification organizations	2	“_”
5	Collective (group) of employees in the organization	2	“_”
6	Pressure on the organization	2	“_”
7	The process of organization management	2	“_”
8	Business and enterprise in pharmacy	2	“_”
9	Registration and licensing business in the pharmacy	2	“_”
10	Business risks	2	“_”
11	Bankruptcy and suspension of	2	“_”
	Total	24	
	Chapter 2. Stages of the process of management of pharmaceutical organization		
12	Planning as a general management function	2	“_”
13	Organizing as a general management function	2	“_”
14	Motivation as a general management function	4	“_”
15	Control and regulation of both general management functions	2	“_”
16	Nature and classification methods for pharmaceutical management	10	“_”
17	Management decisions	3	“_”
18	Communications and information management in	3	“_”
19	Paperwork for pharmaceutical companies	2	“_”
20	The essence and the basic principles of management and leadership	2	“_”
21	Styles of leadership	2	“_”
22	Conflict and stress as facilities management	2	“_”
	Total	34	
	Chapter 3. Human resource pharmaceutical management		
23	Legal regulation of the employment relationship	2	“_”
24	Working hours and rest periods	2	“_”
25	Motivation labor guarantees and compensation for employees	2	“_”
26	Rights of labor, labor discipline and labor disputes	2	“_”
27	Pharmaceutical Education in Ukraine. Continuing Education. Preparation of the teaching staff.	2	“_”
28	Human Resource Management	6	“_”

	Total	16	
	Chapter 4. Managing pharmaceutical marketing		
29	Characteristics of the Pharmaceutical Market	2	“_”
30	Nature and development of marketing concepts	2	“_”
31	Components of marketing activities of pharmaceutical companies	4	“_”
32	Working out the strategy and tactics of pharmaceutical marketing	2	“_”
33	Principles of marketing control	2	“_”
34	Marketing environment of the pharmaceutical company	2	“_”
35	The concept of marketing information system	2	“_”
	Total	16	
	Chapter 5. Complex study of the pharmaceutical market		
37	Organization of marketing research	1	“_”
38	Technology market research consumer behavior of drugs	1	“_”
39	Study of behavior of customers in the consumer segment of the pharmaceutical market	2	“_”
40	Research conjuncture of the pharmaceutical market	2	“_”
41	Pharmaceutical Market Segmentation and Positioning drug	2	“_”
42	Assessment and modeling of market opportunities pharmaceutical companies. Benchmarking in the activities of pharmaceutical companies	2	“_”
	Total	10	
	Chapter 6. Complex of pharmaceutical marketing		
43	Assortment Policy of pharmaceutical companies	2	“_”
44	The life cycle of a medicinal product. Quality and competitiveness drug	2	“_”
45	Designated trademarks, brands and packaging of medicines	2	“_”
46	Factors of pricing and the elasticity of demand for drugs. Basic pricing strategies on drugs.	2	“_”
47	Models and methods of pricing for drugs. The procedure for state registration of prices of basic drugs.	2	“_”
48	Variations Breakdown Structure (methods of marketing) drugs. Strategy for distribution of drugs	2	“_”
49	Pharmaceutical logistics in sales policy of pharmaceutical companies	2	“_”
50	The system of marketing communications pharmaceutical company	2	“_”
51	Key elements of marketing communications	2	“_”
	Total	18	
	Chapter 7. International marketing in pharmacy		
52	Characteristics of the global pharmaceutical market and international marketing environment. Methods and forms of access to foreign pharmaceutical market	12	“_”
53	Formation of the complex of international pharmaceutical marketing. Representations of pharmaceutical companies - an important international market	12	“_”
	Total	24	
	TOTAL Individual students work for the course	142	

7. INDIVIDUAL PROJECT TASKS.

Not planned for the curriculum.

8. METHODS OF TRAINING

The following teaching methods are used in the process of studying the course "Pharmaceutical Management and Marketing":

– *by type of cognitive activity*: explanatory and illustrative; analytical, synthetic, inductive, deductive;

- *by the main stages of the process*: formation of knowledge; application of knowledge; generalization; fixing; audit;
- *by systematic approach*: stimulation and motivation; control and self-control.
- *by sources of knowledge*: verbal - story, conversation; visual - demonstration, illustration.
- *by the level of individual mental activity*: problematic; partially searchable; research.

9. FORMS OF CONTROL

- Types of control (current and final).

Current knowledge control is conducted in order to identify the quality of the educational process and its results in the intersession period and is carried out during the seminars provided by the curriculum of the course.

Current control of students' knowledge is evaluated according to the following scheme:

№	Type of work	max. points	Mark in points	Content of work
1	Work in the classroom	5	A) 2,3,4,5 B) 2,3,4,5	A) active participation in practical classes: discussion of particular topics of the course; presentation of creative works, primary sources, etc. ; B) express control.
2	Individual work	5	2,3,4,5	Doing one of the types of work: 1) working out and solving of individual situational tasks submitted for independent work; 2) presentation preparation and public speaking.

Assessment of work in *practical classes* is carried out on the basis of the performance of students in the classes, which takes into account not only the level of problem solving, but also their activity in discussion, ability to oppose, asking questions, express their vision of the problem.

Individual work. It involves working out and solving individual situational tasks, as well as preparing a presentation and public speaking. When preparing a presentation, it must be borne in mind that the plan, the precise objectives, the basic idea of the presentation, the conclusions and the list of sources used to prepare it are obligatory. However, the student should not only prepare, but also briefly (within 5-7 minutes) reveal to the audience the main problems considered in the work. The main criteria for evaluating a presentation are:

- 1) relevance of the content of the presentation to the selected topic;
- 2) level of knowledge on the topic;
- 3) independence of presentation of the main content;
- 4) the ability to briefly and at the same time informatively disclose the content of the topic;
- 5) the ability to answer the questions.

The preparation, design and presentation are evaluated at the seminar.

- Form the final control according to the curriculum – final test control and exam.
- Evaluation criteria

Criteria for evaluating practical classes

Assessment of student's knowledge during practical classes is carried out according to the following criteria:

- understanding the theory and methodology of the problems under consideration;
- the degree of mastering the actual material of the discipline;
- knowledge of basic (required) and supplementary literature, as well as current domestic and foreign literature on the issues under consideration;
- logic, structure, style of presentation of the material during the performances in the audience, the ability to defend their position and to generalize the information obtained from reports of others.

The level of knowledge of students in the laboratory is assessed by a four-point system.

The "*excellent*" grade is deserved by the student who gave a reasoned and complete answer to all questions posed in the tasks; freely owns the program material, correctly reveals the essence of the concepts of the training course, analyzes and comments on cause and effect relationships, is able to formulate opinions logically, adhere to the consistency and accuracy of presentation of the material, make reasoned conclusions in accordance with the acquired knowledge and work.

The "*good*" grade is deserved by the student who correctly answered all the questions, the answers to the problem found educational material possessions, but made a specific statement of deficiencies in sequence, complete analysis or comment on specific issues or findings and suggested minor factual errors.

The grade "*satisfactory*" is deserved by the student, who has mostly mastered the questions of the course, gave in general the correct answers to at least two questions, but made mistakes in the wording, made fuzzy conclusions, presented the material insufficiently and consistently.

The grade "*unsatisfactory*" is deserved by the student who has shown ignorance of the basic program material, has presented it inconsistently and indistinctly, has not answered any of the control questions offered in the assignment, has made gross mistakes in definition of concepts and analysis of facts, could not apply the gained knowledge in a specific situation.

Criteria for evaluating individual work

The grade "*excellent*" deserves a student whose work is done correctly and independently, reflects the appropriate level of knowledge, framed according to the requirements for this type of tasks.

The grade of "*good*" deserves a student whose work is done independently, contains insignificant mistakes, reflects the appropriate level of knowledge; designed to meet the requirements for this type of task.

The grade "*satisfactory*" is deserved by a student whose work has been completed but contains errors and reflects a lack of knowledge; the design of the work does not fully meet the requirements for this type of task.

A student who has completed the work does not meet the requirements outlined above as a criterion for passing a positive grade is given a "*unsatisfactory*" grade.

10. Current control is carried out during practice classes and is aimed at checking students' mastering of educational material. Current ongoing control involves testing theoretical knowledge and practical skills.

During assessment of mastering of each topic for the current educational activity of the student marks on a 4-point (national) scale are given. This takes into account all types of work provided by the course program. The student must receive a grade on each topic to further convert the grades into scores on a multi-scale (200-point) scale.

11. Forms of final control of learning success:

Semester final control - a form of final control, which consists in assessing the student's learning of the study material solely on the basis of the results of the performance of certain types of work at seminars and during independent work. The semester credit is spent on the last lesson in the discipline. The credit from the course is set according to the results of the current control and is expressed on a two-point scale: "passed" or "not passed". Final control is allowed for students who have attended all the classes provided in the curriculum, completed all types of work required by the program, and received scores sufficient to convert to the minimum number of points.

The exam as a kind of final control of students' academic achievements is carried out at the stage of completing the study of the course as a whole. It is conducted in the amount of educational material defined by the course study program and within the terms set by the working curriculum or the students' individual curriculum.

A student is considered to be admitted to the exam if he has attended all the course practice classes, completed all types of work provided by the work program and in its study scored at least a minimum (72 points).

The examination is conducted in writing during the exam session according to the schedule. The exam form is standardized and includes control of theoretical and practical training.

The maximum number of points that a student can score in the examination is 80. The minimum number of points to pass the examination - 50.

Examination regulations

Stage I - 40 multiple choice test questions of format A (1 point for the correct answer).

Stage II - solving 2 situational tasks (typical tasks) with the evaluation of practical skills.

Evaluation criteria for situational task solving

20 points	Task is done completely, algorithm is applied, all supporting documents are filled, all necessary calculations are conducted, all results are properly documented
10 points	Task is done completely, minor errors are committed in the calculation or presentation of results
5 points	Task is done incompletely, mistakes are made in the calculation and presentation of results, wrong algorithm is applied the for solving the task
0 points	Task is not done

Overall assessment for the course is calculated as the sum of points for current educational activity (not less than 72) and marks for examination (not less than 50).

11. The scheme of calculation and distribution of points received by students:

For courses, which have exam as a form of final control:

The maximum number of points that a student can earn for his / her current study activities for admission to the examination (differential test) is 120 points.

The minimum number of points that a student must earn for his / her current study activities for admission to the examination (differential test) is 72 points.

The calculation of the number of points is made on the basis of the student's scores on the 4-point (national) scale during the study of the discipline, by calculating the arithmetic mean (AVG), rounded to two decimal places. The resulting value is converted to scores on a multipoint scale as follows:

$$X = (\text{AVG} \times 120) / 5$$

For convenience, the table is calculated on a 200-point scale:

Calculation of the average for the current activity in the multi-point scale for the courses that are finished with an exam

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	120	4.45	107	3.91	94	3.37	81
4.95	119	4.41	106	3.87	93	3.33	80
4.91	118	4.37	105	3.83	92	3.29	79
4.87	117	4.33	104	3.79	91	3.25	78
4.83	116	4.29	103	3.74	90	3.2	77
4.79	115	4.25	102	3.7	89	3.16	76
4.75	114	4.2	101	3.66	88	3.12	75
4.7	113	4.16	100	3.62	87	3.08	74
4.66	112	4.12	99	3.58	86	3.04	73
4.62	111	4.08	98	3.54	85	3	72
4.58	110	4.04	97	3.49	84	Less than 3	Not enough
4.54	109	3.99	96	3.45	83		
4.5	108	3.95	95	3.41	82		

Independent work of students is assessed during the current control of the topic at the practical class. Learning level of those topics that are imposed only on independent work is controlled at the final lesson.

The maximum number of points that a student can earn when taking the exam is **80**.
The minimum score for the exam is at least **50**.

Assessment for the course that completes with the exam is defined as the sum of points for current educational activities (at least 72) and points for the exam (at least 50).

The points from the course are independently converted to both the ECTS scale and the 4-point (national) scale. ECTS points are not converted to the 4-point scale and vice versa.

12. Methodological support:

1. Management and marketing in pharmacy. Part I. Management in Pharmacy : Textbook for practical classes / Compiled by Artem Horilyk, Natalia Khanyk, Oksana Levytska, Sofia Shunkina, Danylo Halytsky Lviv National Medical University, 2018 - 88 p.
2. Hromovyk B.P. Pharmaceutical marketing: theoretical and applied principles / Bohdan Hromovyk, Hanna Gasyuk, Oksana Levytska. - Vinnytsya: New book. - 2004.- 464 p.
3. Herbolka-Khanyk N. Instruction for tutorials in pharmaceutical marketing for the 4-th year students of the Pharmaceutical Faculty. / N. Herbolka-Khanyk. – Lviv, Danylo Halytsky Lviv National Medical University, 2011. – 45 p.
4. Khanyk N. Instructions for lectures in pharmaceutical management and marketing for the 4-th and 5-th year students of the Pharmaceutical Faculty / N. Khanyk. – Danylo Halytsky Lviv National Medical University, 2012. – 95 p.
5. Levytska OR, Datsko AY, Hasyuk HD, Hanyk NL, Chukhray IL Methodical recommendations for independent preparation of students of the Pharmaceutical Faculty for the licensed integrated examination "Krok 2. Pharmacy". Pharmaceutical management and marketing. - Lviv, 2012.-100 p.

Extended plan of practical classes and individual work

CHAPTER 1. Management and a pharmaceutical organization

Topic 1. The fundamentals and evolution of management.

The essence of modern management theories. Stages of development of the world economy. The essence of management, marketing and logistics as a management theories. Stages of Management Development. Classical (administrative) School of Management. School of human relations and behavioral sciences. and market-oriented school. School of Management Science. Formation of integrated approaches to management. Computerization of administrative processes. Evolutionary management. Features of management theories in the domestic pharmaceutical industry. Comparative characteristics of Japanese and American management models. Basic principles of modern management. Subjects and levels of management. Character traits manager and entrepreneur. Roles specific to the manager in accordance with the classification H.Mintsberha. The social and ethical aspects of management. The division of labor at the level of management.

Topic 2. Pharmaceutical organization as object of management.

The organization as an open system. Classification of organizations. General features and conditions of success. Characteristics of the stages of the life cycle. The process of organization. Causes and main types of formal groups. Nature and characteristics of informal groups. Factors that influence the effectiveness of the group did not. Nature and classification of factors influencing the organization. Reactions of the changes in the environment and regulation of terms. The characteristic factors of the internal environment, external environment of direct and indirect actions.

Topic 3. The entities of pharmaceutical business activity and conditions of their operation.

The essence of the principles and basic features of entrepreneurship. Classification of enterprises. Organizational forms of entrepreneurial activity. Constituent documents of a business partnership. Business Combinations. The order of business registration. Licensing and patenting of business activities. Business risks and losses. Termination of the pharmaceutical company. Bankruptcy and general procedure for the liquidation of the pharmaceutical company.

CHAPTER 2. Stages of the process of management of pharmaceutical organization

Topic 4. Functions of pharmaceutical management.

The essence, the classification and relationship management functions. Planning as a general management function. Strategic and tactical planning. The essence of the function and organization of the main types of organizational governance structures. Characteristics of combined organizational governance structures. The essence of motivation. Characteristics of main content procession and motivation theories. Nature and classification of control. Regulation as a general management function.

Topic 5. Methods of pharmaceutical management.

Nature and classification methods for pharmaceutical management. Economic, technological, social, psychological and administrative methods of management. Complex appropriate pharmaceutical practices. The principles of total quality management. Standards of the International Organization for Standardization ISO. Corporate integrated system.

Topic 6. Communication processes in pharmaceutical management.

Nature and classification of administrative decisions. Factors influencing the decision making process. Terms and models of successful decision-making. Stages of the process of developing rational management decisions. The delegation of organizational authority and responsibility. Nature and classification of communications. Characteristics of the communication process. Information support the communication process. Forms of collective exchange of management information. The concept of interference in binding processes, ways to overcome them. Paperwork for pharmaceutical companies. Classification of management information. Document workflow for pharmaceutical companies. Automation of administrative activity. Information management systems, automatic control systems or automated information retrieval systems in pharmacy.

Topic 7. Administration and leadership in pharmaceutical organizations.

The essence of management, leadership and power. Forms of power. Current approaches to leadership. Types of leadership styles. The essence of the causes and types of conflict. Conflict management. Styles of behavior in conflict situations. Characteristics of stress. Directions to overcome stress.

CHAPTER 3. Human resource pharmaceutical management

Topic 8. Management of labor relations in pharmaceutical organizations.

Terms of the Labour Code of Ukraine. Characteristics of the collective agreement. Essence, guarantees, terms and conditions of an employment contract. Legal regulation of the employment relationship. Working hours and rest periods. Motivation labor guarantees and compensation in the workplace. Rights of labor, labor discipline and labor disputes.

Topic 9. Management of employment potential of the pharmaceutical industry.

Pharmaceutical Education in Ukraine. Multi continuing pharmaceutical education. Types and forms of postgraduate training. Pharmaceutical management personnel. Characteristics and features of the stages of pharmaceutical management personnel.

CHAPTER 4. Managing pharmaceutical marketing

Topic 10. Management of pharmaceutical marketing

Characterization and classification of the pharmaceutical market. Infrastructure pharmaceutical market. The essence of development and marketing concepts. The components of the marketing activities of pharmaceutical companies.

Topic 11. Functional providing of marketing activities

Elaboration of strategy and tactics of pharmaceutical marketing. Modeling business plan pharmaceutical company. Principles of marketing control. Types of marketing control. The concept of marketing information system. Marketing environment of the pharmaceutical company. The essence of marketing information system. Characteristics of internal and external reporting and current information. Characteristics of market research and marketing analysis system.

CHAPTER 5. Complex study of the pharmaceutical market

Topic 12. The principles of pharmaceutical marketing research and study of medications customers behavior

Organization of marketing research. Stages of marketing research process. Technology market research consumer behavior of drugs. Description of methods for collecting primary data. The study of consumer behavior in the pharmaceutical market. The process of making the decision to purchase the drug. Modeling consumer behavior consumer organizations in the pharmaceutical market.

Topic 13. Modeling regularities of pharmaceutical market and study the marketing opportunities of pharmaceutical companies

Research conjuncture of the pharmaceutical market. Determining the need for medications. Pharmaceutical market segmentation and positioning of drugs. The choice of target market segments. Assessment and modeling of market opportunities pharmaceutical companies. Benchmarking in the activities of pharmaceutical companies. The essence of benchmarking and its species. Principles and stages of the process of benchmarking.

CHAPTER 6. Complex of pharmaceutical marketing

Topic 14. Product policy of pharmaceutical companies

Assortment policy of pharmaceutical company. Classification of medicines and medical devices. Office range of pharmaceutical products. Analysis of the range of drugs. The development of new drugs. Characteristics of the stages of the life cycle of drugs. Quality and competitiveness of the drug. Description of methods for determining competitiveness. Designated trademarks, brands and packaging of medicines. Strategies for the use of trade marks.

Topic 15. Price policy of pharmaceutical companies

Factors of pricing and the elasticity of demand for drugs. Basic pricing strategies for drugs. Models and methods of medicine pricing. The procedure for state registration of prices of basic medicines. Analysis of price conjuncture of the pharmaceutical market.

Topic 16. Sales policy of pharmaceutical companies

Options structure of distribution channels (methods of marketing) drugs. Length and width of traditional channels of distribution of drugs. Pharmaceutical Marketing system. Strategy for distribution of drugs: straight, layered and flexible. Pharmaceutical logistics policy in the sale of pharmaceutical firms. Concept and types of pharmaceutical logistics.

Topic 17. Promotion of medicines on the market

The system of marketing communications pharmaceutical company. Factors of that determine the structure of the system of marketing communications. Advertising of medicinal products. "Public relations" pharmaceutical companies, personal selling and sales promotion of drugs. Merchandising in pharmacies and specialized medical exhibition.

CHAPTER 7. International marketing in pharmacy

Topic 18. Basic principles of international pharmaceutical marketing

The essence and purpose of international pharmaceutical marketing. Motives and output stages of pharmaceutical companies to foreign markets. Characteristics of the environment of international marketing. Certification of quality medicines. Methods, forms and concepts of entering foreign pharmaceutical market. Method of implementation of international marketing. Concept of international pharmaceutical marketing. Management of international pharmaceutical marketing. Organizing of marketing international pharmaceutical company.

Topic 19. Formation of the complex of international pharmaceutical marketing

Decisions regarding international marketing of drugs. Pricing in the international pharmaceutical marketing. The process of developing international pricing policies. The role of public administration in the regulation of prices in foreign markets. Distribution of drugs on the international market. Promotion of drugs on the international market.

Topic 20. Representative offices of pharmaceutical companies - an important subject of international market

Features of the offices of pharmaceutical companies. The principles of representative pharmaceutical firms. The principles of personal selling drugs. Organization of the representatives of the pharmaceutical companies.

12. Recommended resources:

Basic

1. Economic Code of Ukraine [Electronic resource]: Law of Ukraine of January 16, 2003, No. 436-IV. - Access mode: <http://zakon3.rada.gov.ua/laws/show/436-15>.
2. Fundamentals of the legislation of Ukraine on health care [Electronic resource]: Law of Ukraine of November 19, 1992 No. 2801-XII. - Access mode: <http://zakon0.rada.gov.ua/laws/show/2801-12>
3. On State Registration of Legal Entities, Individual Entrepreneurs and Public Formations [Electronic resource]: Law of Ukraine of November 26, 2015 No. 835-VIII. - Access mode: <http://zakon5.rada.gov.ua/laws/show/835-19>
4. On medicinal products [Electronic resource]: Law of Ukraine of 04.04.1996 № 123/96-BP. - Access mode: <http://zakon3.rada.gov.ua/laws/show/123/96-%D0%B2%D1%80>
5. About advertising [Electronic resource]: Law of Ukraine dated 03.07.1996 № 270/96-BP - Access mode: <http://zakon3.rada.gov.ua/laws/show/270/96-%D0%B2%D1%80>
6. On licensing of economic activities [electronic resource]: law of ukraine dated 02.03.2015 № 222-viii - access mode: <http://zakon3.rada.gov.ua/laws/show/222-19>
7. Hromovyk B.P. Management and marketing in pharmacy: textbook / BP Hromovyk, HD Hasyuk, OR Levytska. - K.: Medicine, 2008. - 752 p.
8. Hromovyk B.P. Pharmaceutical Marketing: Theoretical and Applied Principles / B.P. Hromovyk, H.D. Hasyuk, OR Levytska OR - Vinnytsya: The New Book, 2004.- 464 p.
9. Management in Pharmacy / O. E. Kuzmin, B. P. Hromovik, H. D. Hasyuk, O. R. Levytska, O. G. Melnyk. - Vinnitsa: The New Book, 2005. - 448 p.
10. Pharmaceutical marketing: a textbook / B. Hromovyk, H. Hasyuk, L. Moroz, N. Chukhray. - Lviv: Nautilus, 2000 - 320 p.
11. Mnushko ZN, Musienko NM, Olkhovska AB Workshop on management and marketing in pharmacy. ChI Management in Pharmacy: Educ. tool. for students. higher. teach. closed - X.: View of NFaU; Golden Pages, 2002. - 144 p.
12. Workshop on management and marketing in pharmacy. C. II. Pharmacy Marketing: A manual for students of universities / Z. N. Mnushko, N.M. Musienko, I.V. Pestun, O.Yu. Rogulya. - Kharkov: Publishing House of NFaU: Golden Pages, 2004. - 140p.

Auxiliary materials

1. Bailey, M., and K. Ferro. 199S. Innovative drug formulary management through computer-assisted protocols. *J. Managed Care Pharm.* 4: 246.
2. Burrow James L., Kleindl Brad, Everard Kenneth E. *Business Principles and Management*, 12 ed. 2006
3. Chow, S.-C., and A. Pong. 1998. An overview of the regulatory approval process in drug development. *Drug Information Journal* 32: 1175S—1185S.
4. Dogramatzis D. *Pharmaceutical Marketing: A Practical Guide* / Dimitris Dogramatzis. – 2002. – 282 p.
5. DuBrin Andrew J.. *Essentials Of Management*. Ninth Edition. – Cengage Learning, 11.
6. Henderson B. *The Product Portfolio*. 1970. - <https://www.bcg.com/publications/1970/strategy-the-product-portfolio.aspx>
7. Kerin R.A. *Marketing* 11th ed. / Roger A. Kerin, Steven W. Hartley, William Rudelius. — 2013. – 745 p.
8. *Key Marketing Metrics. The 50+ metrics every manager needs to know*/ Paul W. Farris, Neil T. Bendle, Phillip E. Pfeifer & David J. Reibstein. – Pearson UK. – 2017. – 440 p.

9. Kotler P. Principles of marketing. Global edition / Philip Kotler, Gary Armstrong. – 15th ed. – 2014. – 715 p.
10. Kralewski, J., A. Wertheimer, and E. Ratner. 1994. Prescription drug utilization review in the private sector. *Health Care Manag. Review* 19: 62-71.
11. Lamb CW. Marketing, 11e. / CW Lamb, JF Hair, C McDaniel. South-Western Cengage Learning, 2011
12. Lancaster G. Marketing Made Simple / Geoff Lancaster, Paul Reynolds. Elsevier Science, 2002. – 280 p.
13. Lash, S., and J. Harding. 1995- “Abandoned prescriptions”: A quantitative assessment of their cause. / *Managed Care Pharm.* 1(3): 193-199.
14. Mushlin, A. I., and F. A. Appel. 1977. Diagnosing potential noncompliance. *Arch. Intern. Med.* 137: 318-321.
15. Palladino, J. 1991. Is noncompliance with outpatient Rx therapy common? *Drug Topics* 23: 33—34.
16. Perreault W.D. Essentials of marketing: a marketing strategy planning approach / William D. Perreault, Jr., Joseph P. Cannon, E. Jerome McCarthy. – 13th ed. – 2012. – 640 p.
17. Pharmaceutical executive briefing. 1997. London: PricewaterhouseCoopers.
18. Porter, M. E. 1979. Forces affecting competitive intensity. In *How competitive forces shape strategy.* *Harvard Business Review* 57: 137—145.
19. Prahalad, C. K., and G. Hamel. 1990. The core competence of the corporation. *Harvard Business Review.* May-June: 79-91.
20. Pursche, W. R. 1996. Pharmaceuticals—the consolidation isn’t over. *The McKinsey Quarterly* 2: 110-119.
21. Redefining the future role of the pharmaceutical industry. 1998. Pfizer Inc. Journal.
22. Ricky W. Griffin. *Fundamentals of Management.* Sixth Edition. – Cengage Learning, 2010. – 544 p.
23. Robbins, Stephen P. *Fundamentals of management: essential concepts and applications /*
24. Rollins B.L. *Pharmaceutical Marketing /* Brent L. Rollins, Matthew Perri. Jones & Bartlett Publishers, 2014 - 281 p.
25. Shane P. Desselle, David P. Zgarrick. *Pharmacy management. Essentials for all practice settings.* – McGraw Hill. – 2009
26. Smith M.C. *Pharmaceutical Marketing: Strategy and Cases /* Mickey C. Smith. CRC Press. - 1991 – 424 p.
27. Stephen Robbins, Mary Coulter. *Management.* Eleventh Edition. – 2012. - 643 p.
28. Wheeten David A., Cameron Kim S. *Developing Management Skills.* Eighth edition. – 2011.
29. 29. *Pharmacy management: Sub-study. for students higher education institutions /* V. M. Tolochko, I. V. Mishchenko, D. L. Velikiy, etc.; under the editorship V. M. Tolochka. Kh.: NFAU Publishing House: Golden Pages, 2004. 388 p.
30. 30. Shkilnyak M. M., Ovsyanyuk-Berdadina O. F., Krysko Zh. L., Demkiv I. O. *Management: Training manual.* Ternopil: Krok, 2017. 252 p.
31. 31. Stal T.V., Astakhova I.E., Kozub V.O. *International marketing: a study guide.* Kharkiv: HNEU named after S. Kuznetsia, 2019. 275 p.

15. Information resources

1. The legislation of Ukrain: <http://zakon3.rada.gov.ua/laws>
2. Regulatory documents of the Ministry of Health of Ukraine: [http:// mozdocs.kiev.ua](http://mozdocs.kiev.ua)