

MINISTRY OF HEALTH OF UKRAINE

ODESA NATIONAL MEDICAL UNIVERSITY

Department of *Organization and Economics of Pharmacy*



CONFIRMED by
Vice-rector for scientific and pedagogical work

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September 1st, 2023

WORKING PROGRAM IN THE DISCIPLINE

« Fundamentals of Financial Management in pharmacy »

Level of higher education: second (master's degree)

Field of knowledge: 22 «Health care»

Specialty: 226 "Pharmacy, industrial pharmacy"

Educational and professional program: Pharmacy, industrial pharmacy

2023

*Odesa national medical university, Department of Organization and economics of Pharmacy
with post diploma specialization*

The working program is compiled on the basis of the educational and professional program "Pharmacy, industrial pharmacy" for the training of specialists of the second (master's) level of higher education in the specialty 226 "Pharmacy, industrial pharmacy" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU (minutes No. 8 dated 29/06/2023).

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The working program is approved at the meeting of the department of Organization and Economics of Pharmacy
 Minutes No. 1 dated 28/08/2023.

Head of the department



Oksana BIELIAIEVA

Approved by the guarantor of
 the educational and professional program



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Approved by the subject-cycle methodological commission for pharmacy's disciplines of ONMedU
 Minutes No. 1 dated 29.08.2023

Head of the subject-cycle methodological commission for pharmacy's disciplines of ONMedU



Natalia FIZOR

Revised and approved at the meeting of the department of Organization and Economics of Pharmacy with post-diploma specialization

Minutes No. 1 dated 04.10.2023.

Head of the department



Oksana BIELIAIEVA

Revised and approved at the meeting of the department of _____

Minutes No. _____ dated _____/_____/20____.

Head of the department _____

1. Description of the discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the discipline
Total number:	Field of knowledge 22 «Health care»	<i>Full-time education</i> <i>Elective discipline</i>
Credits of ECTS: 3		
Hours: 90	Specialty 226 "Pharmacy, industrial pharmacy"	<i>Year of training: 5</i>
Content modules: 3		<i>Semester: IX</i>
		<i>Lectures (0 hours)</i>
	Level of higher education second (master's degree)	<i>Seminars (0 hours)</i>
		<i>Practical classes (30 hours)</i>
		<i>Laboratories (0 hours)</i>
		<i>Independent work (60 hours)</i>
		<i>including individual tasks (0 hours)</i>
		<i>Form of final control – test</i>

2. The Purpose and Objectives of the Discipline, Competencies, and Program Learning Outcomes

The purpose is to form in higher education applicants general management principles in the area of financial decision-making, namely in the areas of investment of funds, financing various activities, and disposal of profits. Financial management is the art of planning; organizing, directing and controlling of the procurement and utilization of the funds and safe disposal of profits to the end that individual, organizational and social objectives are accomplished.

The tasks of the discipline are the following:

- to plan and control the firm's financial resources. It deals with finding out various sources for raising funds for the firm.
- **General (GC):**
 - GC 1. Ability to think abstractly, analyze and synthesize, learn and be modernly educated.
 - GC 5. The ability to evaluate and ensure the quality of the work performed.
 - GC 9. Ability to use information and communication technologies.
 - GC 10. The ability to act socially responsibly and consciously.
 - GC 13. Ability to show initiative and entrepreneurship.
 - GC 14. Ability to adapt and act in a new situation.
 - GC 16. The ability to conduct experimental research at the appropriate level.
- **Special (SC):**
 - SC 1. Ability to integrate knowledge and solve complex pharmacy problems in broad or multidisciplinary contexts.
 - SC 2. The ability to collect, interpret and apply data necessary for professional activity, research and implementation of innovative projects in the field of pharmacy.
 - SC 3. Ability to solve pharmacy problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.
 - SC 13. The ability to organize the activities of the pharmacy to provide the population, health care institutions with medicines and other products of the pharmacy assortment and to implement appropriate reporting and accounting systems in them, to carry out product analysis, administrative record keeping taking into account the requirements of pharmaceutical legislation.

SC 14. The ability to analyze and forecast the main economic indicators of the activity of pharmacies, to calculate the main taxes and fees, to form prices for medicines and other products of the pharmacy assortment in accordance with the current legislation of Ukraine.

SC 15. The ability to conduct an analysis of socio-economic processes in pharmacy, forms, methods and functions of the system of pharmaceutical provision of the population and its components in global practice, indicators of the need, effectiveness and availability of pharmaceutical care in terms of medical insurance and reimbursement of the cost of medicines.

SC 18. The ability to organize and carry out general and marketing management of assortment, product and innovation, price, sales and communication policies of pharmaceutical market subjects based on the results of marketing research and taking into account market processes at the national and international levels, manage risks in the pharmaceutical supply system.

Program learning outcomes (PLO) are:

PLO 1. Have and apply specialized conceptual knowledge in the field of pharmacy and related fields, taking into account modern scientific achievements.

PLO 3. To have specialized knowledge and skills for solving professional problems and tasks, including for the purpose of further development of knowledge and procedures in the field of pharmacy.

PLO 5. To evaluate and ensure the quality and efficiency of activities in the field of pharmacy.

PLO 17. Calculate the main economic indicators of pharmacy establishments, as well as taxes and fees. Form all types of prices (wholesale, purchase and retail) for medicinal products and other products of the pharmacy assortment

PLO 18. To use data from the analysis of socio-economic processes in society for the pharmaceutical supply of the population, to determine the effectiveness and availability of pharmaceutical care in terms of medical insurance and reimbursement of the cost of medicines.

PLO 21. To ensure competitive positions and effective development of pharmaceutical organizations, including taking into account the results of marketing research and market processes at the national and international levels.

PLO 27. Perform professional activities using creative methods and approaches.

PLO 29. To carry out professional activities using information technologies, "Information databases", navigation systems, Internet resources, software and other information and communication technologies.

PLO 31. Use methods of evaluating indicators of the quality of activity; identify reserves for increasing labor efficiency.

PLO 32. Analyze information obtained as a result of scientific research, summarize, systematize and use it in professional activities.

As a result of studying the academic discipline, the student of higher education must:

Know:

- the goal and task, strategy and tactics of financial management; functions and principles of financial management;
- the need and importance of accounting for time factors when forecasting financial flows;
- basic approaches to profit management;
- capital structure of the enterprise; indicators characterizing the state of capital;
- essence and main directions of financial management of investment activities;
- basic methods of financial forecasting and planning;
- concepts and main approaches to financial rehabilitation from the standpoint of effective financial management

Be able to:

- make strategic and tactical decisions in the field of financial management, taking into account the time value of money;
- manage assets and liabilities of the enterprise, manage profit from various types of financial and economic activity; estimate the cost of capital from various sources;
- manage placement of working capital, receivables; manage cash flows, real and financial investments;
- evaluate the financial results of the enterprise; carry out anti-crisis management of enterprise finances

3. Content of the Discipline

Content module 1.

FINANCIAL MANAGEMENT AS A FINANCIAL MANAGEMENT SYSTEM

Topic 1. General basics of financial management in the pharmaceutical industry.

The essence of the concept of "financial management", its characteristics and components, the history of development and evolution of approaches to financial management. Objects of financial management. Subjects of financial management. Financial methods. Financial leverage. Legal, regulatory and information support of the financial mechanism. Peculiarities of financial management at enterprises with different organizational and legal forms. Organizational model of financial infrastructure. Organization of financial services at the enterprise. Field of activity of the financial manager. Job description of the financial manager of the enterprise.

Topic 2. Basics of financial planning

The essence, meaning, role and principles of financial planning at the enterprise. Types of financial plans and methods of planning financial indicators. Types of plans: strategic and production plan. Types of strategic planning goals: market, production, financial and economic, social. Financial plan of the enterprise. Operational financial planning. Development and execution of the payment calendar.

Topic 3. Financial management toolkit

Reporting as a basis for justifying managerial financial decisions. Features of financial information. The essence and principles of financial reporting and requirements for its preparation. Content of financial statements.

Content module 2.

FINANCIAL DIAGNOSTICS OF PHARMACEUTICAL ENTERPRISES

Topic 4. Price and capital structure. The procedure for carrying out a business assessment

Basic concept of cost of capital. The cost of capital as a measure of profitability. Use of internal and external sources of capital. The price of the main sources of capital. The need for an objective assessment of the value of the enterprise in market conditions. Principles of business valuation. Types of enterprise value.

Topic 5. Analysis of the financial condition of the pharmaceutical enterprise.

Content, goals and objectives of the analysis of the financial state of the enterprise. The place of analysis in financial control systems. Analysis of the financial results of the enterprise. Algorithm for carrying out financial diagnostics at the enterprise. Express and fundamental financial diagnostics.

Topic 6. Management of current assets and financial forecasting.

Current assets management policy. The essence and main directions of the current asset management policy. Types of financing strategies for current assets. Content and tasks of financial forecasts. Construction of forecast reporting.

Content module 3.
FINANCIAL RISKS IN PHARMACY

Topic 7. Financial risk management.

The essence of financial risks, their main types. Analysis of factors influencing the level of financial risks. Methods of assessing financial risks.

Topic 8. Methods of anti-crisis financial management on pharmaceutical enterprise.

The essence of bankruptcy. Characterization of the factors causing the crisis state of the enterprise. Methods of diagnosing financial insolvency of an enterprise. Strategy and tactics of anti-crisis financial management of the enterprise.

4. The Structure of the Discipline

Names of topics	Number of hours					
	Total	including				
		lectures	seminars	practical classes	Lab classes	ISW
Content module 1.						
FINANCIAL MANAGEMENT AS A FINANCIAL MANAGEMENT SYSTEM						
Topic 1. General basics of financial management in the pharmaceutical industry.	12	-	-	4	-	8
Topic 2. Basics of financial planning	12	-	-	4	-	8
Topic 3. Financial management toolkit	12	-	-	4	-	8
Total by content module 1	36	-	-	12	-	24
Content module 2.						
FINANCIAL DIAGNOSTICS OF PHARMACEUTICAL ENTERPRISES						
Topic 4. Price and capital structure. The procedure for carrying out a business assessment	12	-	-	4	-	8
Topic 5. Analysis of the financial condition of the pharmaceutical enterprise.	12	-	-	4	-	8
Topic 6. Management of current assets and financial forecasting.	10	-	-	4	-	6
Total by content module 2	34	-	-	12	-	22
Content module 3.						
FINANCIAL RISKS IN PHARMACY						
Topic 7. Financial risk management	10	-	-	2	-	8
Topic 8. Methods of anti-crisis financial management on pharmaceutical enterprise.	10	-	-	4	-	6
Total by content module 3	20	-	-	6	-	14
Total hours	90	-	-	30	-	60

5. Topics of Lectures / Seminars / Practical classes / Laboratory Classes

5.1. Themes of lectures

lectures are not provided.

5.2. Themes of seminar classes

Seminars are not provided.

5.3. Topics of practical classes

No.	Topic name	Hours
1.	Topic 1. Practical class 1. The essence of the concept of "financial management", its characteristics and components, the history of development and evolution of approaches to financial management. Objects of financial management. Subjects of financial management. Financial methods. Financial leverage.	2
2.	Topic 1. Practical class 2. Legal, regulatory and information support of the financial mechanism. Peculiarities of financial management at enterprises with different organizational and legal forms. Organizational model of financial infrastructure. Organization of financial services at the enterprise. Field of activity of the financial manager. Job description of the financial manager of the enterprise.	2
3.	Topic 2. Practical class 3. The essence, meaning, role and principles of financial planning at the enterprise. Types of financial plans and methods of planning financial indicators. Types of plans: strategic and production plan.	2
4.	Topic 2. Practical class 4. Types of strategic planning goals: market, production, financial and economic, social. Financial plan of the enterprise. Operational financial planning. Development and execution of the payment calendar.	2
5.	Topic 3. Practical class 5 Reporting as a basis for justifying managerial financial decisions. Features of financial information.	2
6.	Topic 3. Practical class 6 The essence and principles of financial reporting and requirements for its preparation. Content of financial statements.	2
7.	Topic 4. Practical class 7 Basic concept of cost of capital. The cost of capital as a measure of profitability. Use of internal and external sources of capital. The price of the main sources of capital.	2
8.	Topic 4. Practical class 8. The need for an objective assessment of the value of the enterprise in market conditions. Principles of business valuation. Types of enterprise value.	2
9.	Topic 5. Practical class 9 Content, goals and objectives of the analysis of the financial state of the enterprise. The place of analysis in financial control systems.	2
10.	Topic 5. Practical class 10 Analysis of the financial results of the enterprise. Algorithm for carrying out financial diagnostics at the enterprise. Express and fundamental financial diagnostics.	2
11.	Topic 6. Practical class 11. Current assets management policy. The essence and main directions of the	2

	current asset management policy.	
12.	Topic 6. Practical class 12. Types of financing strategies for current assets. Content and tasks of financial forecasts. Construction of forecast reporting.	2
13.	Topic 7. Practical class 13. The essence of financial risks, their main types. Analysis of factors influencing the level of financial risks. Methods of assessing financial risks.	2
14.	Topic 8. Practical class 14. Methods of anti-crisis financial management on pharmaceutical enterprise. The essence of bankruptcy. Characterization of the factors causing the crisis state of the enterprise.	2
15.	Topic 8. Practical class 15. Methods of diagnosing financial insolvency of an enterprise. Strategy and tactics of anti-crisis financial management of the enterprise.	2
	Total	30

5.4. Topics of laboratory classes

Laboratory classes are not provided.

6. Independent Student Work

No.	Title of the topic / types of assignments	Hours
1.	Topic 1. Preparation for practical classes 1-2	8
2.	Topic 2. Preparation for practical class 3-4	8
3.	Topic 3. Preparation for practical classes 5-6	8
4.	Topic 4. Preparation for practical lesson 7-8	8
5.	Topic 5. Preparation for practical classes 9-10	8
6.	Topic 6. Preparation for practical classes 11-12	6
7.	Topic 7. Preparation for practical classes 13	8
8.	Topic 8. Preparation for practical class 14-15	6
	Total	60

7. Teaching methods

Practical classes: conversation, role-playing games, solving situational problems, cases, solving calculation problems, practicing the skills of analyzing the pharmaceutical market, practicing the skills of calculating the market situation, practicing the skills of pricing drugs and medical products, training exercises on the design and development of various types of promotion of medicines and medical products.

Independent work: independent work with the recommended basic and additional literature, with electronic information resources.

8. Forms of Control and Assessment Methods (including criteria for evaluating learning outcomes)

Current control: oral survey, control written works, evaluation of reports, evaluation of activity in the class, testing (pen-and-paper or computerized), evaluation of required skills

Final control: test.

Evaluation of the current educational activity in a practical class:

1. Evaluation of theoretical knowledge on the topic of the class:

- methods: survey, solving a situational clinical problem;
 - the highest grade available is 5, the lowest passing grade is 3, the failing (unsatisfying) grade is 2.
2. Evaluation of practical skills on the subject of the lesson:
- methods: standardized and include control of vocabulary, grammar, and communication skills;
 - the highest grade available is 5, the lowest passing grade is 3, and the failing (unsatisfying) grade is 2

Criteria of Evaluation Criteria at Practical Classes

Score	Assessment criterion
Excellent «5»	The higher education student is fluent in the material required, demonstrates versatile and deep knowledge of the program material, can perform the tasks provided for in the program successfully; has mastered the content of the required and additional literature, and has realized the interrelationship of individual sections of the discipline and their importance for the future profession; has demonstrated creative abilities in understanding and using educational program material and the ability to update and replenish knowledge independently; level of competence - high (creative);
Good «4»	The HE student has demonstrated complete knowledge of the educational program material, successfully performs the tasks provided by the program, has mastered the basic literature recommended by the program, and is capable of independent updating and renewal in the course of further education and professional activities, but makes minor mistakes, which are eliminated by the student him/herself when the examiner points them out; the level of competence is sufficient (constructive and variable);
Satisfactory «3»	The HE student does not have sufficient knowledge but knows the fundamental curriculum material to the extent necessary for further education and subsequent work in the profession; copes with the tasks provided by the program, makes some mistakes in the answers at the exam and when completing the exam tasks, but has the necessary knowledge to overcome the mistakes made under the guidance of a scientific and pedagogical worker; level of competence - average (reproductive);
Unsatisfactory «2»	The HE student does not acquire knowledge of program material, makes fundamental mistakes in the assignments provided by the program, cannot use the knowledge in further studies on their own, did not manage to master the skills of independent work; the level of competence is low (receptive-productive)

Credit is given to the applicant who completed all tasks of the work program of the academic discipline, took an active part in practical classes, completed and defended an individual assignment and has an average current grade of at least 3.0 and has no academic debt. Assessment is carried out: at the last lesson before the beginning of the examination session. The credit score is the arithmetic mean of all components according to the traditional four-point scale and has a value that is rounded according to the statistics method with two decimal places after the decimal point.

9. Distribution of points, obtained by the student

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of traditional to multi-point

National score for the discipline	The sum of scores for the discipline
Excellent («5»)	185 – 200
Good («4»)	151 – 184
Satisfactory («3»)	120 – 150
Unsatisfactory («2»)	Less than 120

A multi-point scale (200-point scale) characterizes the actual success of each applicant in learning the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of the applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received.

The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is given to students who have attended all classes in the discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination.

Applicants who study in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional evaluation and and ECTS scores

Score on the ECTS scale	Statistical indicator
A	The best 10% students
B	Next 25% students
C	Next 30% students
D	Next 25% students
E	Next 10% students

10. Methodological support

- Working program in the discipline
 - Syllabus
 - Methodological recommendations for the practical classes in the discipline
 - Methodological recommendations for the individual work of students
- Educational and methodical literature:

11. Recommended literature

Basic

1. Eugene F. Brigham, Joel F. Houston. Fundamentals of Financial Management, 15th Edition, published by Cengage Learning, Inc., 2018. 866 p.
2. Principles of Microeconomics: an Open Text by Douglas Curtis and Ian Irvine Base. Text Revision History. Current Revision: Version 2020 - Revision A. URL: https://laecon1.lyryx.com/textbooks/CURTIS_PRIN_MIC_1/marketing/CI-Principles-of-Microeconomics-2020A.pdf
3. Principles of Macroeconomics: an Open Text by Douglas Curtis and Ian Irvine Base. Text Revision History. Current Revision: Version 2020 - Revision A. URL: https://laecon1.lyryx.com/textbooks/CURTIS_PRIN_MAC_1/marketing/CI-Principles-of-Macroeconomics-2020A.pdf

Additional

1. Borshch VI Health economics: methodological recommendations for the students. Odessa national medical university. Odessa: printing South, 2018. 128 p.
2. Keith N Herist, Brent L Rollins, Matthew Perri III. Financial Analysis in Pharmacy Practice / Pharmaceutical Press, 2011. 225 p.
3. DG Justice and Consumers. Financial Management Financial Reporting: JUST/2015/RDAP/AG/CORP and JUST/2015/RDAP/AG/SEXV. 2016. 52 p.
4. Van Horne, James C. Fundamentals of financial management / James C. Van Horne, John M. Wachowicz. 13th ed., 2018. 719 p.
5. Jeff Madura. International Financial Management, 11th Edition, 2012. 708 p.
6. Mustofi Fellowship. Public Financial Management/ UNITAR, Hiroshima, Japan, 18 – 22 February 2012. 15 p.

13. Electronic information resources

1. Financial management, 2020. URL: www.sscadda.com
2. Abubakar Mustapha Danraka. Financial Management for Pharmacist Entrepreneurs: Lecture, 2023. DOI:10.13140/RG.2.2.35287.75685 . URL: https://www.researchgate.net/publication/368138104_Financial_Management_for_Pharmacist_Entrepreneurs_Lecture_February_2023
3. Legislation of Ukraine: website. URL: <http://zakon.rada.gov.ua/laws>
4. State Employment Service: website. URL: <http://www.dcz.gov.ua/>
5. State Statistics Service of Ukraine: website. URL: <http://www.ukrstat.gov.ua/>
6. Economy of Ukraine: website. URL: <http://www.economukraine.com.ua/>
7. Economy of Ukraine (political and economic journal): website. URL: https://journals.ua/business/ekonomka_ukraini/
8. Electronic journal "Effective Economy" URL: <http://www.economy.nayka.com.ua>
9. Ministry of Economic Development and Trade of Ukraine: website. URL: <http://www.me.gov.ua/>
10. Normative-directive documents of the Ministry of Health of Ukraine: website. URL: <http://mozdocs.kiev.ua>
11. Pharmacy weekly: website. URL: <https://www.apteka.ua/>
12. Health economics. URL: <https://www.healtheconomics.com/>
13. Journal of Health Economics. URL: <https://www.journals.elsevier.com/journal-of-health-economics>