



MINISTRY OF HEALTH OF UKRAINE
NATIONAL UNIVERSITY OF PHARMACY
Faculty of Pharmacy
Department of Social Pharmacy

ORGANIZATION AND ECONOMICS OF PHARMACY

(name of academic discipline)

**WORK PROGRAM
of educational component**

training for _____ second (master's) level _____
(Higher Educational Level Name)
field of knowledge _____ 22 Health care _____
(Code and Knowledge Field Name)
in specialty _____ 226 Pharmacy, industrial pharmacy _____
(Code and Specialty Name)
of educational program _____ Pharmacy _____
(Educational Program Name)
specialization _____ _____
(Specialization Name)

Work program of the educational component "Organization and economics of pharmacy" specialty 226 Pharmacy, industrial pharmacy of the educational and professional program 226 Pharmacy for students of higher education of the 4th year.

Educational course team:

KOTVITSKA Alla, professor of the Social Pharmacy department, Doctor of Pharmacy, Professor;

VOLKOVA Alina, head of the Social Pharmacy department, Ph.D., Associate Professor;

TERESHCHENKO Lyubov, associate professor of the Social Pharmacy department, Ph.D., Associate Professor;

SURIKOVA Iryna, assistant professor of the Social Pharmacy department, Ph.D;

KORZH Yuliya, Associate professor of the Social Pharmacy department, Ph.D., Associate Professor.

Work program has been considered and approved at the Social Pharmacy Department Meeting
Record from "29" August 2022 year №1


Head of the Department


(Signature)

assoc.prof. Alina VOLKOVA
(name and surname)

The working program was approved at the meeting of the profile Methodical Commission on economic and managerial disciplines
Record from «30» August 2022 year № 1

Head of Specialized Committee


(Signature)

prof. Alla NEMCHENKO

1. Description of the educational component

The language of the study: English

Status of the educational component: mandatory

Prerequisites for studying the educational component:

- the course is based on the study of general rules of pharmaceutical branch is closely related to disciplines: pharmaceutical marketing and management, pharmacy technology of medications, pharmaceutical commodity, pharmaceutical law, quality control, ethics and deontology in pharmacy, pharmacoeconomic organization and regulation of the industry which involves integrating the teaching of the above mentioned disciplines on formation of skills to apply knowledge in further education and careers upper secondary training and integrates such disciplines in the NUPh curriculum as general;
- discipline is the basis for the study of pharmacy technology of medicines, pharmaceutical law and legislation, industrial technology of medicines, good practices in pharmacy, social pharmacy, pharmaceutical marketing and management, bookkeeping accounting, standardization of medicines, which involves the integration of teaching with the above-mentioned disciplines for the formation of skills to apply knowledge in the process of further education and professional activities;
- discipline brings pride and a sense of the necessity of a pharmaceutical specialty and lays the foundation of professional skills and knowledge to work in the pharmaceutical field.

Subject matter is study of the educational component "Organization and economics of pharmacy" is the organizational and economic aspects of the pharmaceutical institutions, the organization of the work of the pharmacy as a health care and trade institution, the process of pharmaceutical provision of the population and health care institutions; the structure and functions of the pharmacy, the main issues of ensuring the sanitary-anti-epidemic regime of pharmacies, taro-packing material, general requirements for the manufacture of sterile and non-sterile medicines in pharmacies, trends in the pharmaceutical industry in the countries of the world and in Ukraine

Information content of the educational component. 8 ECTS credit 240 hours are assigned to the study of the educational component.

2. Objectives and tasks of the educational component

The purpose of teaching the educational component « Organization and economics of pharmacy» is to develop in students the system of knowledge about organizational and economic aspects of the pharmaceutical activity in the modern world as well as to form important skills for the organization of drug providing to the population

The **main tasks** of the course " Organization and economics of pharmacy " are:

- To promote professional knowledge and skills according to the educational qualification characteristics;
- To provide a theoretical basis for further study of other pharmaceutical and economic subjects of the curriculum;
- To make a framework that defines the overall professional competence and erudition pharmacists;
- To raise the general cultural level of a modern young specialist;
- To cultivating pride and feeling the need for a pharmaceutical specialty.

3. Competence and planned educational outcomes

Educational component « Organization and economics of pharmacy» ensures the acquisition of applicants for higher education the following competences:

- *integral:*

Ability to solve typical and complex specialized tasks and critically comprehend and solve the practical problems in the professional pharmaceutical and/or research and innovation activity using provisions, theories and methods of the fundamental, chemical, technological, biomedical, socio-economic science; integrate knowledge and solve complex issues, formulate judgments in the presence of incomplete or limited information, clearly and unambiguously to convey their conclusions and use their knowledge, reasonably substantiating them, to professional and non-professional audience.

- *general:*

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

- *special (professional, subject):*

PC 8. Ability to organize the activities of pharmacies to provide the population, health care institutions with medications and other products of the pharmacy range and implement appropriate reporting and accounting systems (management, statistical, accounting and financial) in accordance with the requirements of the National Medical Policy, Appropriate Pharmacy Practice (GPP) and to carry out commodity analysis, administrative record keeping while taking into account the organizational and legal norms of the pharmaceutical legislation.

PC 9. Ability to analyze and forecast the main economic indicators of pharmacies, to calculate basic taxes and fees, to form prices for medicines and medical devices in accordance with current legislation of Ukraine.

PC 12. Ability to use in professional activities the knowledge of regulations, legislation of Ukraine and recommendations of good pharmaceutical practices.

Integrative final program learning outcomes (PLO), the formation of which is facilitated by the educational component:

PLO 4. To demonstrate the ability to independently search, analyze and synthesize information from various sources and use these results to solve typical and complex specialized tasks of professional activity.

PLO 5. To position your professional activities and personal qualities in the pharmaceutical labor market; to formulate the purposes of own activity taking into account public and industrial interests.

PLO 7. To perform professional activities using creative methods and approaches.

PLO 11. To use methods for assessing performance indicators; to identify reserves to increase labor efficiency.

PLO 20. To carry out a set of organizational and managerial measures to provide the population and health care facilities with medicines and other products of the pharmaceutical range. To carry out all types of accounting in pharmacies, administrative records, processes of commodity analysis.

PLO 21. To calculate the main economic performance of pharmacies, as well as taxes and fees. To form all types of prices (wholesale, purchase and retail) for medicines and other products of the pharmaceutical range.

PLO 23. To take into account the data on socio-economic processes in society for the pharmaceutical provision of the population, determine the effectiveness and availability of pharmaceutical care in terms of health insurance and reimbursement of the cost of medicines.

PLO 24. To plan and implement professional activities on the basis of regulations of Ukraine and recommendations of good pharmaceutical practices.

As a result of studying the course, the applicant for higher education will be able to *know:*

- basic aspects of the government regulations of the pharmaceutical activities;
- basic principles of national drug policies;
- organizational structure of pharmaceutical industry;
- classification tasks and functions of the pharmacies;
- procedure for opening pharmacies, farm. firm;
- order of non-prescription medicines in Ukraine and abroad;

- rules for receiving prescriptions and order delivery of drugs;
- the accounting of the recipes;
- reception, accounting and storage of controlled drugs;
- organizational structure of the state system of quality drugs;
- the rights and obligations of the authorized person;
- procedure for quality control of drugs;
- classification of economic resources;
- the structure and content of accounts, balance sheet;
- economic importance and structure of turnover;
- the accounting of commodity and other assets;
- responsibilities and duties of cashier;
- the procedure of payments from customers and non-cash payments;
- financial statements, the order of their preparation and presentation;
- basic economic parameters of pharmacy (turnover, formulation, inventory, trade overlay, costs, revenue, profitability);
- basic principles of taxation in Ukraine;
- classification of taxes;
- methods of calculating corporate income tax and tax on income of individuals;
- classification of loans;
- basic principles of lending pharmacies;
- functions and principles of health insurance;
- types of models of health care and health insurance in the international practice.

be able to:

- carry out the delivering of OTC medications;
- accept recipes from the public; analyze errors, to deliver the medicines;
- price various medical and cosmetic forms,
- perform outpatient recipes records and subject-quantitative accounting of the drugs;
- perform the quality control of medicines;
- documented the receipts and the sale of goods;
- fill in the documentation the accounting of work and wages;
- determine the days of inventory, make an order;
- organize inventory and account its results;
- develop the balance sheet of the pharmacy;
- analyze the compounding and the pharmacy turnover (sales);
- calculate the ratio of inventories;
- analyze and plan distribution expenses;
- calculate income and profitability of the enterprise;
- form retail price of medicines and medical products;
- plan of the pharmacy activities and its departments.

4. The educational component structure

Thematic Modules and Topics	Hours					
	Intramural Program					
	Total	including				
Lect.		Sem.	Pract.	Lab.	Ind. work	
<i>I</i>	2	3	4	5	6	7
Content module 1. Organization of pharmaceutical providing to the population. Organization of the pharmacy activity as a healthcare institution.						
Theme 1. Introduction into pharmacy practice. Role of a pharmacist in health care system.						

Historical aspects and new paradigm for pharmacy practice. Pharmacy: tasks, function, classifications.	6	1		3		2
Theme 2. Organization structure of pharmacy as a trading-production enterprise, nomenclature of staff positions in pharmacy.	5			3		2
Theme 3. Basic principles of organization of pharmaceutical aid for population. Main International Standards of GPP.	5			3		2
Theme 4. State management and regulation of pharmaceutical activity. Government control of pharmaceutical activity. Licensing in pharmaceutical industry.	7	1		3		3
Theme 5. A national drug policy as a common framework to solve problems in pharmaceuticals.	6	1		3		2
Theme 6. Pharmaceutical providing of population in the conditions of medical insurance.	6	1		3		2
Theme 7. Organization of pharmaceutical care. Conception of responsible self-medication. The medicine classifications in pharmaceutical practice. Organization of the OTC-medicines realization.	7	1		3		3
Control of CM 1	3			3		
The whole amount of hours for the content module 1	45	5		24		16
Content module 2. Pharmaceutical quality assurance system. Delivery of goods to pharmacies. Stock department.						
Theme 8. The Organization of prescription department in pharmacy. Rules of exception and reception of recipes.	7	1		3		3
Theme 9. Rules of pricing for different recipe forms. Determination of taxa Laborum for the extemporal medications.	7	1		3		3
Theme 10. The order of the turnover of the narcotic, psychotropic drugs and precursors. Accounting of the semedicines.	7	1		3		3
Theme 11. Organization of the quality control system of pharmaceutical products. The order of carrying out of the entrance control, a task and kinds of intrachemist's quality control; duties of the pharmacist on quality control.	7	1		3		3
Theme 12. Supply organization of pharmacy enterprises. Organization of work with commodity supplies. International rules INCOTERMS.	7	1		3		3
Theme 13. The organization of the automatization and information work in pharmacy.	6			3		3

Control of CM 2	4			3		1
The whole amount of hours for the content module 2	45	5		21		19
The whole amount of hours for the 7 semester	90	10		45		35
Content module 3. The system of the accounting in the pharmacy.						
Theme1.Organization of the system of accounting and accounting in pharmacies (pharmaceutical firms)	8	2		3		3
Theme 2. Accounting as an informative system of enterprises in pharmacy	6			3		3
Theme 3. Kinds of account and their interrelations.	6			3		3
Theme 4. The financial statements of the pharmacy.	8	2		3		3
Theme 5. The financial statements of the pharmacy (second part).	5			3		2
Theme 6. The accounting cycle. Accounting of cash flow in pharmacies (pharmaceutical firms)	5			3		2
Theme 7. Bookkeeping transactions, their purpose and classification.	7	2		3		2
Theme 8. The general ledger and trial balance of pharmacy. Adjusted trial balance. Worksheet. Closing entries.	4			3		1
Theme 9. Forms and systems of a payment and the account of work and wages in pharmacies (pharmaceutical firms).	6	2		3		1
Theme 10. Organization of inventory of commodities in pharmacies (pharmaceutical firms). Reporting of pharmacy establishments.	6	2		3		1
Theme 11. Basic principles and methods of forming of the system of prices on medications	3			3		
Control of CM 3	3			3		
The whole amount of hours for the content module 3	67	10		36		21
Content module 4. Modern methods of analysis and planning of trading-financial activity of pharmacies and pharmaceutical firms						
Theme 12. Bases of pharmaeconomics: principles, calculations and methods.	9	2		3		4
Theme 13. Description of economic trading-financial indicators of pharmacies and pharmaceutical firms. Economic analysis of sales and compounding.	9	2		3		4
Theme 14. Planning of activity of pharmacies (pharmaceutical firms). Economic analysis of expenses of pharmacy	9	2		3		4
Theme 15. Economic analysis of trading	7			3		4

imposing, profit, profitability					
Theme 16. Analysis of financial results of activity of enterprise on the basis of data of the financial reporting. Taxation of pharmacies (pharmaceutical firms). Audit of the financial reporting.	9	2		3	4
Theme 17. Financial-credit system in the conditions of market economy. Crediting of pharmacies.	7			3	4
Control of CM 4	7,5			3	4,5
Semester credit	3				
The whole amount of hours for the content module 4	60,5	8		24	28,5
The whole amount of hours for the 8 semester	127,5	18		60	49,5
Examination	22,5				22,5
The whole amount of hours for the course	240	28		105	107

5. Contents of the educational component

Content module 1. Organization of pharmaceutical providing to the population.

Organization of the pharmacy activity as a healthcare institution.

Theme 1. Introduction into pharmacy practice. Role of a pharmacist in health care system. Historical aspects and new paradigm for pharmacy practice.

Modern approaches to the pharmacy practice. Role of a Pharmacist in Health Care System. The main aspects and new paradigm of the pharmacy practice.

Theme 2. Organization structure of pharmacy as a trading-production enterprise, nomenclature of staff positions in pharmacy.

Main tasks and functions of pharmacy, classification, organizational structure, nomenclature of staff positions in pharmacy, structure and appointment of pharmacy rooms. Tasks and functions of departments. Equipment of pharmacies. The external design of pharmacies.

Theme 3. Basic principles of organization of pharmaceutical aid for population. Main International Standards. GPP.

Basic principles and tasks of the organization of the pharmaceutical providing of population at macro- and microeconomical levels. Levels of management and organizational structure of pharmaceutical industry in Ukraine. International standards, regulative pharmaceutical activity (GLP, GCP, GMP, GDP, GPP). The proper pharmacy practice (GPP) – definition, targets, elements.

Theme 4. State regulation of pharmaceutical activity. Government control and regulation of pharmaceutical activity. Licensing in pharmaceutical industry.

World Health organization (WHO), International Pharmaceutical Federation (IPF) as organs, regulated pharmaceutical activity in the conditions of globalization of economics. Regulation as function of state management. Levels of management and organizational structure and controls the pharmaceutical activity. Basic definitions of licensing concept of the pharmaceutical industry (production of medicines, wholesale, retail sales of medicines): licensee; organs of licensing; licensed terms. Legal and socio- economic value of licensing of pharmaceutical activity. System of licensing of pharmaceutical activity in Ukraine

(legislative base, organizational structure, problems and prospects of development). Contents of the licensed rules of pharmaceutical activity. General organizational requirements.

Theme 5. A national drug policy as a common framework to solve problems in pharmaceuticals. Organizational structure of pharmacy industry management.

A national drug policy as a common framework to solve problems in pharmaceuticals. Basic principles of forming of the National Drug policy (NDP). Key components of the National Drug policy. Legislation and regulations of NDP.

Theme 6. Pharmaceutical providing of population in the conditions of medical insurance.

Basic tasks and functions of medical insurance in the modern market conditions. The general principles of health and pharmaceutical care system functioning: the Beveridge Model; the Bismarck Model; the National Health Insurance Model; the Out-of-Pocket Model. Basic advantages of each model. Obligatory and voluntarily medical insurance in the system of socio-economic and market relations. Legislative base, which regulates the obligatory and voluntarily medical insurance in Ukraine. Features of the pharmaceutical providing and reimbursement in the world and in the conditions of introduction of obligatory medical insurance in Ukraine.

Theme 7. Organization of pharmaceutical care. Conception of responsible self-medication. The Medicine Classifications in pharmaceutical practice. Organization of the OTC-medicines realization.

The conception of self-medication and OTC-drugs. Pharmaceutical aid as modern notion, its structure. Principles of Practice for Pharmaceutical Care. Requirements to the pharmacies and organization of pharmaceutical care. Non-prescription and OTC drugs. Criteria for OTC medicines. Responsible self-treatment.

Content module 2. Pharmaceutical quality assurance system. Delivery of goods to pharmacies. Stock department.

Theme 8. The Organization of prescription department in pharmacy. Rules of excerption and reception of recipes.

Criteria of taking of preparations to prescription and non-prescription list in the countries of EU and in Ukraine. Recipe – determination, functions, classification. Common rules of excerption of recipes. Organization of work of pharmacist on the reception of recipes (for the independent study). Rules of excerption of medications and registration of recipes: 1. the form № 1 (F №1); 2. the form № 3 (F №3). Tasks and functions of the department. Staff of the department. Duties of the pharmacist for receiving of prescriptions and dispensing of extemporal drugs. Equipment of the department.

Theme 9. Rules of pricing for different recipe forms. Determination of taxa laborum for the extemporal medications.

Common rules of pricing of extemporal medicines. Taxa laborum – determination, economic essence, structure. Order of pricing of different extemporal medical forms.

Theme 10. The order of the turnover of the narcotic, psychotropic drugs and precursors. Accounting of these medicines. Organization of the prescribed ready-made drugs department activity.

Adjusting of turn of narcotic, psychotropic matters and precursors at the international and state level. Classification of narcotic, psychotropic matters and precursors. Features of licensing of the activity, related to the turnover of narcotic, psychotropic matters and precursors. Normative-legal adjusting of separate stages of turnover of narcotic tools, psychotropic matters and precursors.

Theme 11. Organization of the quality control system of pharmaceutical products. The order of carrying out of the entrance control.

Providing of medicine quality as an international problem. System of providing of medicine quality in

Ukraine. State registration and certification of medicine as a mechanism of state control of quality of medicines. Pharmacy in the structure of System of medicine quality control. Organization of entrance control. Conducting of intrachemists types of medicine quality control that made in the conditions of pharmacy.

Theme 12. Supply organization of pharmacy enterprises. Organization of work with commodity supplies. International rules INCOTERMS.

Organization of work of wholesale link (pharmacy firm). Organizational structure of wholesale firm. Requirements of GDP. Contents of contracts on the purchase-sale of commodities, their basic parts.

The good pharmacy practice Purchase and inventory control. International standards, which regulate work with the commodity supplies in pharmacies (farm. firms): «Good Procurement Purchases Practice» (GPPP) and «Good Storage practice» (GSP). Basic terms «INKOTERMS». Tasks and functions of storage department. Duties of the pharmacists in the storage department.

Theme 13. The organization of the automatization and information work in pharmacy.

Role of the pharmaceutical information and automatization in the organization and carrying out of pharmacy work. The characteristic of documentary sources of the pharmaceutical information.

Content module 3. The system of the accounting in the pharmacy.

Theme 1. Organization of the system of accounting and accounting in pharmacies (pharmaceutical firms).

The theoretical bases of organization of the system of accounting. The accounting and its meaning in the economics of the chemist shop. Registration measuring instruments.

Theme 2. Accounting as an informative system of enterprises in pharmacy.

The Purpose and the Objectives of Accounting. The main principles of the accounting in drugstore. Generally accepted accounting principles (GAAP).

Theme 3. Kinds of account and their interrelations.

Kinds of the accounting and the reporting, their characteristic and regulation. Users of the accounting information.

Theme 4. The financial statements of the pharmacy.

The classification of the resources of chemist shop. Structure of economic means and sources of their formation.

Theme 5. The financial statements of the pharmacy (second part).

The annual financial statements of the chemists: Balance sheet; Income statement; Owner's equity statement; Cash flow.

Theme 6. The accounting cycle. Accounting of cash flow in pharmacies (pharmaceutical firms).

Bookkeeping accounts, its structure. The method of double record, its contents. Classification of bookkeeping accounts. Computing depreciation.

Theme 7. Bookkeeping transactions, their purpose and classification.

Bookkeeping transactions, their purpose and classification. Rules for entering transactions. The general ledger and trial balance of pharmacy.

Theme 8. The general ledger and trial balance of pharmacy. Adjusted trial balance. Worksheet. Closing entries.

The purpose of preparing the Adjusted Trial Balance. Preparing of adjustments. The closing entry process. Cash and Cash equivalents. Cash flow cycle. Cash flow statement (cash inflows and outflows).

Theme 9. Forms and systems of a payment and the account of work and wages in pharmacies (pharmaceutical firms).

Organization of labour payment in enterprises and establishments. Raises and additional charges to posts salaries. Forms of payment of labour, their description. Order of calculation of extra charges to salary.

Theme 10. Organization of inventory of commodities in pharmacies (pharmaceutical firms). Reporting of pharmacy establishments.

The organization of work with commodities. Kinds and purpose of the inventory. The essence and meaning

of primary intra-economic reporting. Centralized accounting system. Procedure for drawing up and approving reports. Characteristics and structure of the "Product report" and "Report on the economic activity of the pharmacy".

Theme 11. Basic principles and methods of forming of the system of prices on medications.

Pricing of medicinal products as a national and international problem. The concept of cost and price of medicines. Types of prices, their functions. Basic principles of drug pricing. Mechanisms of state price regulation. Structure of prices for medicinal products of industrial production. Methodology for calculating trade mark-ups and forming retail prices for ready-made medicines and pharmacy products. Reference pricing.

Content module 4. Modern methods of analysis and planning of trading-financial activity of pharmacies and pharmaceutical firms.

Theme 12. Bases of pharmaeconomics: principles, calculations and methods. Analysis and planning of the main performance indicators of pharmacies.

Essence and significance of economic analysis. Subject, objects, methods of the pharmacoeconomics. Characteristics of the basic methods and indicators of the pharmacoeconomics. Characteristics and socio-economic importance of the pharmacoeconomics. Classification of analysis methods. Stages of complex analysis of economic activity. Planning methodology: planning principles and methods, planned indicators. Financial planning.

Theme 13. Description of economic trading-financial indicators of pharmacies and pharmaceutical firms. Economic analysis of sales and compounding.

The value of planning and forecasting in management. Planning methodology: principles and methods of planning, planning indicators. Normative and balance planning methods. Methods of planning trade turnover. Planning the inventory standard. Method of planning the receipt of goods.

Theme 14. Planning of activity of pharmacies (pharmaceutical firms). Economic analysis of expenses of pharmacy.

The value of planning and forecasting in management. Planning methodology: principles and methods of planning, planning indicators. Normative and balance planning methods. Methods of planning trade turnover. Planning the inventory standard. Method of planning the receipt of goods. Characteristics of economic indicators of trade and financial activity of pharmacy establishments. Characteristics and classification of expenses. Factors affecting the amount and level of costs.

Theme 15. Economic analysis of trading imposing, profit, profitability

Characteristics, economic calculations of trade surplus. Characteristics, economic calculations of trade overlays. Factors affecting the amount and level of trade overlays. The results of trading and financial activities of pharmacy establishments - profit and profitability.

Theme 16. Analysis of financial results of activity of enterprise on the basis of data of the financial reporting. Taxation of pharmacies (pharmaceutical firms). Audit of the financial reporting. Audit of calculations with budget.

Characteristics of taxes as a socio-economic category. Simplified taxation, accounting and reporting system. Financial reporting as the source of information for basic parameters of audit. Audit of the financial reporting. Audit of calculations with budget.

Theme 17. Financial-credit system in the conditions of market economy. Crediting of pharmacies.

Financial and credit system in market conditions. Economic feasibility of lending. Optimal capital structure of the enterprise. Discounting. Basic principles of lending to pharmacies. Types of loans and their characteristics. Sources of financing of working capital.

6. Topics of lectures

№	Theme	The amount of hours

Content module 1. Organization of pharmaceutical providing to the population. Organization of the pharmacy activity as a healthcare institution.		
1.	Introduction into pharmacy practice: modern approaches. Basic principles of organization of pharmaceutical aid for population. Regulation of pharmaceutical activity.	1
2.	Government regulation and control of pharmaceutical activity. Licensing in pharmaceutical industry.	1
3.	A national drug policy as a common framework to solve problems in pharmaceuticals.	1
4.	Pharmaceutical providing of population in the conditions of medical insurance.	1
5.	Organization of Pharmaceutical care and pharmaceutical aid to the population. Concept of responsible self-treatment.	1
Content module 2. Pharmaceutical quality assurance system. Delivery of goods to pharmacies. Stock department.		
1.	Organization of prescription and over-the-counter drug dispensing in Ukraine and the world . The Organization of prescription department in pharmacy.	1
2.	Rules of pricing for different recipe forms. Determination of taxa Laborum for the extemporal medications.	1
3.	The order of the turnover of the narcotic, psychotropic drugs and precursors. Accounting of these medicines. Organization of the prescribed ready-made drugs department activity.	1
4.	Organization of the quality control system of pharmaceutical products. The order of carrying out of the entrance control, a task and kinds of intrachemist's quality control; duties of the pharmacist on quality control.	1
5.	Supply organization of pharmacy enterprises. Organization of work with commodity supplies. International rules INCOTERMS.	1
The whole amount of hours for the 7 semester		10
Content module 3. The system of the accounting in the pharmacy.		
1.	Organization of the system of accounting and accounting in pharmacies (pharmaceutical firms). Accounting as an informative system of enterprises in pharmacy.	2
2.	The financial statements of the pharmacy. The accounting cycle. Bookkeeping transactions, their purpose and classification.	2
3.	Adjusted trial balance. Worksheet. Closing entries. Accounting of cash flow in pharmacies (pharmaceutical firms).	2
4.	Forms and systems of a payment and the account of work and wages in pharmacies (pharmaceutical firms)	2
5.	Organization of inventory of commodities in pharmacies (pharmaceutical firms)	2
Content module 4. Modern methods of analysis and planning of trading-financial activity of pharmacies and pharmaceutical firms.		
1.	Basic principles and methods of forming of the system of prices on medications. Bases of pharmaeconomics: principles, calculations and methods.	2

2.	Description of economic trading-financial indicators of pharmacies and pharmaceutical firms. Economic analysis of sales and compounding.	2
3.	Economic analysis of expenses of pharmacy. Economic analysis of trading imposing, profit, profitability	2
4.	Taxation of pharmacies (pharmaceutical firms). Audit of the financial reporting. Audit of calculations with budget. Analysis of financial state of enterprise on the base of data of the financial reporting. Financial-credit system in the conditions of marketeconomy.	2
The whole amount of hours for the 8 semester		18
Total hours for course		28

7. Topics of seminars

Not provided for in the working curriculum

8. Topics of practical lessons

Topic	Hours
Content module 1. Organization of pharmaceutical providing to the population. Organization of the pharmacy activity as a healthcare institution.	
Theme 1. Introduction into pharmacy practice. Role of a pharmacist in health care system. Historical aspects and new paradigm for pharmacy practice. Pharmacy: tasks, function, classifications.	3
Theme 2. Organization structure of pharmacy as a trading-production enterprise, nomenclature of staff positions in pharmacy.	3
Theme 3. Basic principles of organization of pharmaceutical aid for population. Regulation of pharmaceutical activity. Main International Standards. GPP.	3
Theme 4. State management and regulation of pharmaceutical activity. Government control of pharmaceutical activity. Licensing in pharmaceutical industry.	3
Theme 5. A national drug policy as a common framework to solve problems in pharmaceuticals. Organizational structure of pharmacy industry management.	3
Theme 6. Pharmaceutical providing of population in the conditions of medical insurance.	3
Theme 7. Organization of pharmaceutical care. Conception of responsible self-medication. The Medicine Classifications in pharmaceutical practice. Organization of the OTC-medicines realization.	3
Control of CM 1	3
Content module 2. Pharmaceutical quality assurance system. Delivery of goods to pharmacies. Stock department.	
Theme 8. The Organization of prescription department in pharmacy. Rules of excerption and reception of recipes.	3
Theme 9. Rules of pricing for different recipe forms. Determination of taxa laborum for the extemporal medications.	3

Theme 10. The order of the turnover of the narcotic, psychotropic drugs and precursors. Accounting of these medicines.	3
Theme 11. Organization of the quality control system of pharmaceutical products. The order of carrying out of the entrance control, a task and kinds of intrachemist's quality control; duties of the pharmacist on quality control	3
Theme 12. Supply organization of pharmacy enterprises. Organization of work with commodity supplies. Transactions on the purchase of commodities. International rules INCOTERMS.	3
Theme 13. The organization of the automatization and information work in pharmacy.	3
Control of CM 2	3
In total hours for 7 semesters	45
Content module 3. The system of the accounting in the pharmacy.	
Theme 1. Organization of the system of accounting and accounting in pharmacies (pharmaceutical firms)	3
Theme 2. Accounting as an informative system of enterprises in pharmacy	3
Theme 3. Kinds of account and their interrelations.	3
Theme 4. The financial statements of the pharmacy.	3
Theme 5. The financial statements of the pharmacy (second part).	3
Theme 6. The accounting cycle. Accounting of cash flow in pharmacies (pharmaceutical firms)	3
Theme 7. Bookkeeping transactions, their purpose and classification.	3
Theme 8. The general ledger and trial balance of pharmacy. Adjusted trial balance. Worksheet. Closing entries. Organization of inventory of commodities in pharmacies (pharmaceutical firms)	3
Theme 9. Forms and systems of a payment and the account of work and wages in pharmacies (pharmaceutical firms).	3
Theme 10. Organization of inventory of commodities in pharmacies (pharmaceutical firms)	3
Theme 11. Basic principles and methods of forming of the system of prices on medications	3
Control of CM 3	3
Content module 4. Modern methods of analysis and planning of trading-financial activity of pharmacies and pharmaceutical firms	
Theme 12. Bases of pharmaeconomics: principles, calculations and methods.	3
Theme 13. Description of economic trading-financial indicators of pharmacies and pharmaceutical firms. Economic analysis of sales and compounding.	3
Theme 14. Planning of activity of pharmacies (pharmaceutical firms). Economic analysis of expenses of pharmacy.	3
Theme 15. Economic analysis of trading imposing, profit, profitability	3
Theme 16. Analysis of financial results of activity of enterprise on the basis of data of the financial reporting. Taxation of pharmacies (pharmaceutical firms). Audit of the financial reporting.	3
Theme 17. Financial-credit system in the conditions of market economy.	3

Crediting of pharmacies.	
Control of CM 4	3
In total hours for for 8 semesters	60
Total hours	105

9. Topics of laboratorial lessons

Not provided for in the working curriculum

10. Self-study work

№	Theme	The amount in hours
		full-time
Content module 1. Organization of pharmaceutical providing to the population. Organization of the pharmacy activity as a healthcare institution.		
1	Theme 1. Introduction into pharmacy practice. Role of a pharmacist in health care system. Historical aspects and new paradigm for pharmacy practice.	2
2	Theme 2. Pharmacy: tasks, function, classifications.	2
3	Theme 3. Basic principles of organization of pharmaceutical aid for population. Regulation of pharmaceutical activity. Main International Standards. GPP.	2
4	Theme 4. State management and regulation of pharmaceutical activity. Government control of pharmaceutical activity. Licensing in pharmaceutical industry.	3
5	Theme 5. A national drug policy as a common framework to solve problems in pharmaceuticals. Organizational structure of pharmacy industry management.	2
6	Theme 6. Pharmaceutical providing of population in the conditions of medical insurance.	2
7	Theme 7. Organization of pharmaceutical care. Conception of responsible self-medication. The Medicine Classifications in pharmaceutical practice. Organization of the OTC-medicines realization.	3
Content module 2. Pharmaceutical quality assurance system. Delivery of goods to pharmacies. Stock department.		
7	Theme 8. The Organization of prescription department in pharmacy. Rules of excerpption and reception of recipes.	3
8	Theme 9. Rules of pricing for different recipe forms. Determination of taxa laborum for the extemporal medications.	3
9	Theme 10. The order of the turnover of the narcotic, psychotropic drugs and precursors. Accounting of these medicines.	3
10	Theme 11. Organization of the quality control system of pharmaceutical products. The order of carrying out of the entrance control, a task and kinds of intrachemist's quality control; duties of the pharmacist on quality control	3
11	Theme 12. Supply organization of pharmacy enterprises. Organization of work with commodity supplies. Transactions on the purchase of commodities. International rules INCOTERMS.	3

12	Theme 13. The organization of the automatization and information work in pharmacy.	3
13	Control of CM 2	1
Total hours		35
Content module 3. The system of the accounting in the pharmacy.		
1.	Organization of the system of accounting and accounting in pharmacies (pharmaceutical firms)	3
2.	Accounting as an informative system of enterprises in pharmacy	3
3.	Kinds of account and their interrelations.	3
4.	The financial statements of the pharmacy.	3
5.	The financial statements of the pharmacy.	2
6.	The accounting cycle. Accounting of cash flow in pharmacies (pharmaceutical firms)	2
7.	Bookkeeping accounts, their purpose and classification.	2
8.	The general ledger and trial balance of pharmacy. Adjusted trial balance. Worksheet. Closing entries.	1
9.	Forms and systems of a payment and the account of work and wages in pharmacies (pharmaceutical firms).	1
10.	Organization of inventory of commodities in pharmacies (pharmaceutical firms).	1
Total hours		21
Content module 4. Modern methods of analysis and planning of trading-financial activity of pharmacies and pharmaceutical firms		
1.	Bases of pharmaeconomics: principles, calculations and Methods.	4
2.	Description of economic trading-financial indicators of pharmacies and pharmaceutical firms. Economic analysis of sales and compounding.	4
3.	Planning of activity of pharmacies (pharmaceutical firms).Economic analysis of expenses of pharmacy.	4
4.	Economic analysis of trading imposing, profit, profitability	4
5.	Analysis of financial state of enterprise on the base of data of the financial reporting. Taxation of pharmacies (pharmaceutical firms).	4
6.	Financial-credit system in the conditions of market economy. Crediting of pharmacies.	4
7.	Content module control	4.5
Total hours		28.5
8.	Examination	22.5
The whole amount of hours for the course		107

Tasks for self-study work

Content module 1. Organization of pharmaceutical providing to the population. Organization of the pharmacy activity as a healthcare institution.

Class 1-2. Introduction into pharmacy practice: modern approaches. Pharmacy as a healthcare facility.

Aim of class: to master the main principles and the organization of the pharmacy and it's structure Plan.

1. Modern approaches to the pharmacy practice.
2. The concept of pharmacy facilities and pharmacy network.
3. Organizational structure of pharmacy.

4. Nomenclature, basic tasks and functions of pharmacy.
5. Classification of pharmacies.
6. Organizational structure and staff of the pharmacy.

Class 3. Basic principles of organization of pharmaceutical aid for population. Regulation of pharmaceutical activity. Main International Standards. GPP.

Aim of class: to master the basic principles of pharmacy's activity, requirements for facilities and personnel of the pharmacy, international standards that regulated the pharmaceutical activity.

Plan.

1. Basic principles of development and distribution of pharmacy network;
2. World Health organization, International Pharmaceutical Federation as International pharmaceutical organizations that regulated the pharmaceutical activity at the macroeconomic level in the conditions of globalization of economics.

3. The concept of a set of good practices as standards regulating the pharm. activity (GLP, GCP, GMP, GDP, GPP). The proper pharmacy practice (GPP) – definition, targets, elements.

4. Basic rules of the location of pharmacy.

Class 4. Government control of pharmaceutical activity. Licensing in pharmaceutical industry.

Aim of class: the basic principles and organization of the regulation of pharmaceutical activity in the international practice; system of licensing of pharmaceutical activity.

Plan.

1. Regulation as function of state management.

2. Basic definitions of licensing concept of the pharmaceutical industry (production of medicines, wholesale, retail sales of medicines): licensee; organs of licensing; licensed terms.

3. Legal and socio-economic value of licensing of pharmaceutical activity.

Class 5. A national drug policy as a common framework to solve problems in pharmaceuticals.

Organizational structure of pharmacy industry management.

Plan.

Aim of class: to learn the basic principles and tasks of the National Drug policy, peculiarity of the NDP implementation in different countries.

1. A national drug policy as a common framework to solve problems in pharmaceuticals

2. Basic principles of forming of the National Drug policy (NDP).

3. Key components of the National Drug policy.

4. Legislation and regulations of NDP.

Class 6. Organization of pharmaceutical care. Conception of responsible self-medication.

Aim of class: to study the basic economic and social pre-conditions of origin of the pharmaceutical care conception, get the main habit on pharmacist action in providing the population with drugs.

Plan.

1. Pharmaceutical care – definition, terms of conducting and essence.

2. Value of pharmaceutical care as a pharmaceutical, medical and social category.

3. Order of non-prescription sales in Ukraine and international pharmaceutical practice.

4. Legislative and normative base regulated non-prescription sales of medications in Ukraine.

Content module 2. Pharmaceutical quality assurance system. Delivery of goods to pharmacies. Stock department.

Class 7-8. The Organization of prescription department in pharmacy. Rules of excerption and reception of recipes.

Aim of class: to study the organizational principles of prescription department work; rules of excerption and accepting of recipes; order of medicines sales; get habits on acceptance the prescription.

Plan.

1. Organization and tasks of prescription drugs sales in Ukraine and abroad. Prescription department, its tasks and functions.
2. Rights and duties of pharmacist who carry out the accepting of recipes and sell prescription drugs.
3. A recipe: definition, type, basic functions.
4. Common rules of excerpption of recipes.
5. Features of registration and order of reception of recipes, containing the poisonous matters, drugs and matters equated to them, psychotropic preparations, including tranquilizers.
6. Realization order of poisonous, narcotic and other control drugs to the out-patients from the pharmacies.
7. Registration of free of charge and on favorable (50 %) terms recipes and rule of medicationrealization from the pharmacies. Registration of recipes on free and favorable vacation of medications.
8. Errors meeting at excerpption and registration of recipes. Description of measures on their prevention.

Class 9. Rules of pricing for different recipe forms. Determination of taxa laborum for extemporalmedications.

Aim of class: to study the rules of pricing of different prescription forms; functions of pharmacist at determination of cost of the prepared medications and medicinal forms of the individual making and to get practice on pricing of medicines.

Plan.

1. Basic principles of the extemporal medicines pricing.
2. Rules of pricing of different prescription.
3. Description and method of determination of tariffs for the different extemporal medicinal forms.

Class 10. The order of the turnover of the narcotic, psychotropic drugs and precursors. Accountingof these medicines.

Aim of class: organizational principles of work and accounting of control drugs; rules of excerpption and accepting of recipes with control drugs

Plan.

1. The basic aspects of regulation of narcotic drugs, psychotropic substances and precursors turnover in the international practice.
2. The rules of prescribing of recipes, containing the control drugs.

Class 11-12. Organization of the quality control system of pharmaceutical goods.

Aim of class: to learn the organizational structure of the state quality control system of medicines in Ukraine; the order of carrying out of the entrance control, a task and kinds of intrachemist's quality control; duties of the pharmacist on quality control; the account of results of the control.

Plan.

1. The state quality control system of medicines in Ukraine – organizational structure.
2. The international quality standards in pharmaceutical branch. Certification of medicines and the goods ofchemist's assortment.
3. The organization of entrance quality control of the pharmaceutical goods in the organizations of wholesale trade, drugstores. Duties of the authorized person on quality control of the medicines acting in a drugstore.
4. The organization of intrachemist's quality control of medicines. Duties of the pharmacist on intrachemist's quality control of medicines. The characteristic of obligatory kinds of intrachemist's quality control of medicines.

Class 13. The organization of work of a pharmacy with commodity supplies. Transactions on thepurchase of commodities. International rules INKOTERMS.

Aim of class: to study the order of pharmacy work with commodity supplies; duties of pharmacists of storage department; rules of storage of medicines and commodities of pharmacy assortment.

Plan.

1. International standards, which regulate work with the commodity supplies in pharmacies (farm.firms): «Good Procurement Purchases Practice» (GPPP) and «Good Storage practice» (GSP).
2. Tasks and functions of storage department. Duties of the pharmacists in the storage department.
3. Basic rules of storage of medicinal preparations and commodities of pharmacy assortment.
4. Rules of reception of commodity in a pharmacy and order of providing other departments with medicines.

Class 14. The organization of the automatization and information work in pharmacy.

Aim of class: organizational principles of the pharmaceutical information. Plan.

1. The state register of medical products, its structure and value.
2. The characteristic of documentary sources of the pharmaceutical information.
3. Forms and methods of informing on medical products.

Content module 3. The system of the accounting in the pharmacy.

Class 1-2. Organization of the system of accounting and accounting in pharmacies (pharmaceutical firms)

Aim of class: to study the theoretical bases of organization of the system of accounting, kinds of the accounting and the reporting and their interrelations. Plan.

1. The account and its meaning in the economics of the pharmacy.
2. The registration measuring instruments.
3. Kinds of the accounting and the reporting, their characteristic and regulation of a basis.

Class 3. Accounting as an informative system of enterprises in pharmacy

Aim of class: to learn the users of the accounting information and their requirements. Plan.

1. Accounting as an informative system.
2. Kinds of the accounting information users.
3. Availability of information to various users.

Class 4-5. The financial statements of the pharmacy

Aim of class: to master the main financial statements of the pharmacy. Plan.

1. The classification of the resources of chemist shop.
2. The accounting equation.
3. The annual financial statements of the chemists:
 - 3.1. Balance sheet;
 - 3.2. Income statement;
 - 3.3. Owner's equity statement;
 - 3.4. Statement of Cash Flows

Class 6. The accounting cycle. Bookkeeping transactions, their purpose and classification.

Aim of class: to understand the steps of accounting cycle; classification and structure of bookkeeping accounts; to get a habit in process of posting and journalizing. Plan.

1. The accounting cycle.

2. Bookkeeping accounts, its structure.
3. The method of double record, its contents.
4. Classification of bookkeeping accounts.
5. Bookkeeping journal, its purpose.
6. Journalizing of the transaction in chemists shop.

Class 7. Bookkeeping accounts, their purpose and classification. The general ledger and trial balance of pharmacy.

Aim of class: to identify the theoretical principles and steps of preparing an adjusted trial balance; process of the closing entry and content of the last step in accounting cycle

Plan.

1. The general ledger, its purpose. Order of registration of the general ledger in pharmacies.
2. Interrelation of book-keeping journal and general ledger.
3. Trial balance, aim of its purpose. Method of preparing of trial balance.

Class 8. Adjusted trial balance. Worksheet. Closing entries. Accounting of cash flow in pharmacies(pharmaceutical firms).

Aim of class: to catch the idea of and get habits on preparing the cash flow statement

Plan.

1. Principles of preparing an adjusted trial balance.
2. The worksheet and its usage. The adjustments and adjusted Trial Balance and their purpose.
3. Steps of the closing entry process.
4. Cash and Cash equivalents.
5. Cash flow cycle.
6. Cash flow statement (cash inflows and outflows).

Class 9. Forms and systems of a payment and the account of work and wages in pharmacies(pharmaceutical firms).

Aim of class: to study the theoretical bases of organization of the salary payment system; to get the habit to complete the documents on salary payment accounting.

Plan.

1. Forms of a payment, kinds of wages.
2. The account of work and other kinds of use working hours.
3. The order of charge of various kinds of payments (the basic salary, for work in holidays, temporary disability payment, bonus, overtime, etc.).
4. Deduction from wages.
5. The order and the size of deductions from a wage fund in system of social insurance.

Class 10. Organization of inventory of commodities in pharmacies (pharmaceutical firms)

Aim of class: to study tasks and organizational principles, summing up the results of the inventory and rules for cancellation off natural loss in pharmacies.

Plan.

1. The definition of inventory of pharmacy.
2. The main tasks, types and dates of inventory of medical products.
3. The general procedure for carrying out an inventory. Rights and duties of the inventory commission.
4. Inventory of medicines that are the subject-quantitative basis.
5. Summing up the inventory and rules for writing off the natural loss.

Content module 4. Modern methods of analysis and planning of trading-financial activity of pharmacies and pharmaceutical firms.

Class 1. Description of economic trading-financial indicators of pharmacies and pharmaceutical firms.

Aim of class: to learn the object and subject of economic analysis

Plan

1. Essence and significance of economic analysis. The object and subject of economic analysis. Sources.
2. Meaning of sales as one of basic economical parameters.
3. Analyses of the factors that influence on the results of the activity.

Class 2. Description of economic trading-financial indicators of pharmacies and pharmaceutical

Aim of class: to learn the object and subject of economic analysis

Plan

1. Essence and significance of economic analysis. The object and subject of economic analysis. Sources.
2. Meaning of sales as one of basic economical parameters.
3. Analyses of the factors that influence on the results of the activity.

Class 3. Economic analysis of sales and compounding. Planning of activity of pharmacies (pharmaceutical firms).

Aim of class: to study the methodic of the sales planning and plan the days of stock for pharmacy

Plan

1. The methodic of the sales planning.
2. Planning of the wholesale and retail sales.
3. The analyses of the sales using the price index.
4. Commodity stocks of a drugstore, their classification, the analysis and calculations

Class 4. Economic analysis of expenses of pharmacy.

Aim of class: to get knowledge on analysing of the expenses at pharmacy

Plan

1. Characteristics of economic indicators of trade and financial activity of pharmacy establishments.
2. Characteristics and classification of expenses.
3. Basic approaches to analysis and planning expenses.

Class 5. Economic analysis of trading imposing, profit, profitability.

Aim of class: to understand and can interpretate the interrelation between the basic economical parameters

Plan

1. Trading imposing as the sources of profit. Interrelation between the main economical parameters.
2. Economic analysis of trading imposing, profit, profitability
3. Kinds of profits: operation, balance, pure, their calculations.
4. Calculation and analyses of profitability.

Class 6. Analysis of financial state of enterprise on the base of data of the financial reporting.

Taxation of pharmacies (pharmaceutical firms)

Aim of class: to practice the technics and instruments of the financial analyses

Plan

1. The financial state of enterprise as economical category.
2. Actuality of the financial analyses: its sense, aims and tasks.
3. The technics and instruments of the financial analyses conducting.

4. Basic financial ratios: purpose, characteristics.
5. Characteristics of taxes as a socio-economic category.
6. Classification of taxes and fees. Elements of taxes (subject and object, source of tax, tax rate).
Taxation of legal entities and individuals.

11. Criteria and evaluation order of educational outcomes

In the course of teaching "Organization and economics of pharmacy", the following methods such as explanatory, illustrated (multimedia lectures with elements of communication discussion with students), reproductive, research, partly retrieval (independent work of search character) have to be used as well as the following training methods: verbal - telling, explanation, conversation; visual - demonstration of films showing the work of pharmacies; practices - inductive methods (synthesis of observations). Training methodic: used within the aforementioned methods. Learning technologies: training problem; credit-module; differentiated learning.

Evaluation of current educational activities is carried out during each lesson (practical, seminar) and involves the control of theoretical knowledge, practical skills and abilities. When mastering each topic for the current educational activity, students are awarded points for all types of activities, which are added up at the end of studying the content module. The level of theoretical knowledge, abilities and skills is assessed by the completeness and correctness of answers to control questions, test tasks, as well as the independence and correctness of tasks.

Means of diagnosing the level of training of higher education applicants:

- theoretical survey (oral or written)
- solving practical (situational, calculation) tasks
- answer to test questions.

The current control of the mastering of each topic is in **total maximum of 100 points, at least 60 points.**

Assessment of practical training

For each practical lesson, a student can score min - 2.5 max - 6 points, which include the evaluation of the following types of work: theoretical survey (oral or written), performance of a practical task (situational task, calculation task, preparation of accounting documents) in a work journal, checking independent work, solving test tasks on the subject of the lesson.

Such a system of ball assessments is used for each practical / seminary lesson:

0-4 points for classes

Evaluation knowledge, marks	Evaluation Criteria
0-2,5	The applicant for higher education has not mastered the educational material of the educational component, does not know scientific facts, definitions, is not sufficiently oriented in primary sources and recommended literature, practical skills are almost not formed, the applicant has a haphazard selection of random signs of the studied, does not know how to perform the simplest operations of analysis and synthesis, generalization and conclusions.
2,5	the student of higher education has generally mastered the theoretical knowledge of the educational component, orients himself in primary sources and recommended literature, but without a deep comprehensive analysis, justification and argumentation, makes significant inaccuracies and mistakes, the student has problems when highlighting the essential features of what he has learned, when identifying cause-and-effect relationships and forming conclusions;
2,5-4	the student of higher education has mastered the theoretical material well, possesses the main aspects from primary sources and recommended literature, and

	presents it in a reasoned manner; demonstrates practical skills, but when explaining some issues, there is not enough depth and argumentation, some insignificant inaccuracies and minor mistakes are allowed. The acquirer is able to distinguish the essential features of the studied subject by means of operations of synthesis and analysis, to identify cause-and-effect relationships, in which there may be separate non-essential mistakes, form conclusions and generalizations;
4	The applicant for higher education has firmly mastered the theoretical material, deeply and comprehensively owns the content of the educational component, the main provisions of scientific primary sources and recommended literature, thinks logically and builds an answer, freely uses the acquired theoretical knowledge in the analysis of practical material, is able to highlight essential signs studied with the help of operations of synthesis, analysis, identify cause-effect relationships, form conclusions and generalizations, demonstrates a high level of assimilation of practical skills;

Type of task that is evaluated	Evaluation knowledge, marks	Evaluation Criteria
Solving the practical (situational) problem	6,0	Practical (situational) task is accomplished by the student of higher education independently without errors.
	4,0-2,5	The practical (situational) task was accomplished independently, however, errors were made in the calculations, the principles of preparing multimedia materials, etc.
	0	The student of higher education was unable to fulfill practical and situational tasks, did not issue a working journal.
Assessment of theoretical knowledge (written or oral answer)	4,0	Exposed to a higher education student who, during an oral or written answer to a question, has shown comprehensive, systematized, deep knowledge of the program material, is able to demonstrate the knowledge of the main and additional literature, provided at the level of creative use.
	1,0-2,5	Exposed to a higher education student, if the oral or written answer to the question of a higher education student revealed a complete knowledge of the software material provided at the level of similar reproduction, but suggested some minor failures.
	1	Exhibit if, in the oral or written answer to a question, a higher education student revealed insufficient knowledge of the main software material, to the extent necessary for further study and work provided by the program at the reproductive level.
	0	Exhibit if, in the oral or written answer to a question, the applicant of higher education revealed serious gaps in knowledge of the main material, making fundamental mistakes.

Content modular control includes control of practical abilities and skills, control of theoretical knowledge and independent work of students of higher education. According to Control of CM 1, 2, 3, 4 the applicant can get from 7 to 12 points.

STUDENTS' KNOWLEDGE AND SKILLS ASSESSMENT CRITERIA FOR THE CONTENT MODULE

Activity type	Criterion	min	max
Control of CM	1. Total of answers to theoretical questions	2	5
	1.1. theoretical question	1	2.5
	1.2. theoretical question	1	2.5
	2. Total of answers to practical questions	5	7
	1.1. practical question	2.5	3.5
	1.2. practical question	2.5	3.5
	Total:	7	12

12. Forms of progress and semester supervision of academic achievements

The final grade for the educational component, which is taught over two semesters and ends with the semester exam, is issued based on the result of the semester exam. Semester control is carried out in the form of a semester credit and semester exam.

13. Teaching course materials

1. Textbook
2. Study guide (workshop)
 1. Multimedia presentations of lectures
 2. Plans of lectures, practical (seminar) classes.
 3. Tasks for practical works, questions, problems,
 4. Tasks and cases for current and semester control
 5. Tasks for the comprehensive control work on the educational component
 6. Methodical instructions for independent work of students
 7. Test tasks.

14. Reading suggestions

Main reading suggestions

1. Analysis of financial-economic activity of pharmacies, pharmaceutical firms. Training manual for applicants of higher education on specialty "Pharmacy" on discipline «Organization and economics of pharmacy» / Kotvitska A. A., Volkova A.V., Kalaycheva S.G., Tereschenko L.V., Zaytseva Yu. L., Korzh Yu.V. – Kharkiv: NUPh, 2020. – 78 p.
2. Organization of pharmaceutical providing of the population / Under ed. prof. Nemchenko A.S., Zhironova I.V. - Kharkov, 2014.- 268 p.
3. Organization of pharmaceutical aid to the population (part I) / Under ed. prof. Nemchenko A.S. - Kharkov, 2012.- Unit 1, 116 p.
4. Organization and economics of pharmacy. Part 1. Organization of pharmaceutical provision of population: national. under the arm. for studio higher tutor shut up / AS Nemchenko, VM Nazarkin, G.L. Panfilov and others; Ed. AS Nemchenko - Kharkiv: NFaU: Golden Pages, 2015. - 360 p.
5. The system of the accounting in the pharmacy. Training manual for applicants of higher education on specialty Pharmacy on discipline «Organization and economics of pharmacy» / Kotvitska A. A., Volkova A.V., Kalaycheva S.G., Tereschenko L.V., Zaytseva Yu. L., Korzh Yu.V. Kharkiv: NUPh, 2020. 78 p.
6. Fundamentals of law and legislation in pharmacy: national. under the arm. for students of higher education. tutor shut up / A. Kotvitskaya, I. V. Kubareva, O. O. Surikov, etc.; for ed. AA Kotvitskaya. - X.: NFaU: Золотые страницы, 2016. - 528 с.
7. Workbook with methodical recommendations in organization and economics of pharmacy. Part 2 / Kubarieva I.V., Volkova A.V., Kalaycheva S.G., Tereschenko L.V., Zaytseva Yu. L., Korzh Yu.V.

Kharkiv: NUPh, 2020. 66 p.

8. *Організація та економіка фармації*. Ч. 1. Організація фармацевтичного забезпечення населення : нац. підруч. для студ. вищ. навч. закл. / А. С. Немченко, В. М. Назаркіна, Г. Л. Панфілова та ін.; за ред. А. С. Немченко. – Харків : НФаУ : Золоті сторінки, 2015. – 360 с. – (Національний підручник)

9. *Організація та економіка фармації*. Ч. 2. Системи обліку в фармації : нац. підруч. для студ. вищ. навч. закл. / А. С. Немченко, В. М. Назаркіна, О. П. Гудзенко та ін.; за ред. А. С. Немченко. – Харків : НФаУ : Золоті сторінки, 2016. – 416 с. – (Національний підручник)

10. *Організація та економіка фармації*. Ч. 3. Основи економіки фармації : нац. підруч. для студ. вищ. навч. закл. / А. С. Немченко, Л. Панфілова, В. М. Назаркіна та ін.; за ред. А. С. Немченко. – Харків : НФаУ : Золоті сторінки, 2016. – 272 с. – (Національний підручник)

Supplementary reading suggestions

1. Benyukh N.F. History of Pharmacy of Galicia (XII-XXI centuries) // *Prosazor*. - 2000. - No. 8. - P. 28-29.
2. Blavatsky O. B. The Experience of European Pharmacy Insurance - Legislative and Organizational Aspects of Pharmaceutical Activities in Austria // *Pharmac. journ* - 2003. - No. 4 - P. 39-46.
3. Borody M.K. To the history of the pharmacy business in Ukraine in the first half of the XVIII century // *Pharmac. journ* - 1980. - № 1. - P. 77-79.
4. Borodiy M.K. To the history of the pharmacy business in Ukraine in the first half of the XVIII century // *Pharmac. journ* - 1980. - № 2. - P. 76-79.
5. Directive 2001/83/EU of the European Parliament and the Council of the EU dated 06.11.2001 "On the consolidation of Community legislation on medicinal products for humans".
6. Introduction to pharmacy. History of medicine and pharmacy: method. rivers for auditorium and independent work of students of correspondence form of studies / A.A. Kotvitskaya, V.V. Gorbanov, O.O. Surikov and others. - X.: View of the NFUU, 2016. - 65 p.
7. Introduction to pharmacy. History of medicine and pharmacy: working journal for classroom and independent work for students of the 1st year of full-time study / AA. Kotvitskaya, V.V. Gorbanov, O.O. Surikov and others. - X.: View of the NFUU, 2016. - 62 p.
8. History of medicine / O.M. Golyachenko - Ternopil: Lyleya, 2004. - 248s.
9. History of medicine / S.A. Verhratskiy S.A., P.Yu. Zabludovsky - K.: High school, 1991. - 431 c.
10. History of Pharmacy of Ukraine / R.V. Bogatyreva, Yu.P. Spizhenko, VP Black and others. - X.: The Flag, the View of UkrFa, 1999. - 799s.
11. Mason P. Pharmacy in Great Britain // *Pharmac. journ* - 2002. - No. 1. - P. 32-35.
12. Meshkovsky AP Good practice of medicine storage // *Provisor*. - 2001. - No. 1. - P. 6-8.
13. Otamanovsky V.D. The development of the pharmaceutical business in Ukraine from the middle of the XVII to the beginning of the XIX century. // *Farmats journ* - 1963. - No. 5. - P. 48-57.
14. Otamanovsky V.D. The development of the pharmaceutical business in Ukraine from the middle of the XVII to the beginning of the XIX century. // *Farmats journ* - 1963. - No. 6. - P. 56-57.
15. Pizhelauri T.Z. Claudius Galen is a classic of ancient medicine. health care - 1980. - № 4. - C.70-71.
16. Robert J. Cipolle, Linda M. Strand, Peter C. Morley (1998) *Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services*. New York: McGraw Hill.
17. Resolution of the Cabinet of Ministers of Ukraine as of 06.05.2000 № 770 «On Approval of the List of Narcotic Drugs, Psychotropic Substances and Precursors»
18. Resolution of the Cabinet of Ministers of Ukraine as of 14.09.2005 № 902 “On Approval of the Procedure for Carrying out Quality State Control of Medicines Imported into Ukraine”
19. Resolution of the Cabinet of Ministers of Ukraine as of 31.10.2007 № 1280 “On Approval of the Procedure for Product Sampling and Defining Indicators and Forms for Products Sampling”
20. Resolution of the Cabinet of Ministers of Ukraine as of 26.05.2005 № 376 “On Approval of the Procedure for State Registration (Re-Registration) of Medicines and Amount of Money for their State

- Registration (Re-Registration)”
21. Resolution of the Cabinet of Ministers of Ukraine as of 03.02.2010 № 260 «Certain Issues on State Quality Control of Medicines”
 22. Semenchenko V.F. The history of pharmacy. - M .: Alpha, 2010. - 592p.
 23. State Pharmacopoeia of Ukraine / State Enterprise "Ukrainian Scientific Pharmacopoeial Center for Quality of Medicines" - 2nd form. - Kharkiv: State Enterprise "Ukrainian Scientific Pharmacopoeial Center for Quality of Medicinal Products", 2015. - Vol. 1. -1128 p.
 24. State Pharmacopoeia of Ukraine / State Enterprise "Ukrainian Scientific Pharmacopoeial Center for Quality of Medicines" - 2nd form. - Kharkiv: State Enterprise "Ukrainian Scientific Pharmacopoeial Center for Quality of Medicinal Products", 2014 - T. 2. -724 p.
 25. State Pharmacopoeia of Ukraine / State Enterprise "Ukrainian Scientific Pharmacopoeial Center for the Quality of Medicines" - 2 nd type. - Kharkiv: State Enterprise "Ukrainian Scientific Pharmacopoeial Center for Quality of Medicines", 2015 - T. 3. - 732 p.
 26. State Pharmacopoeia of Ukraine / State-owned enterprise "Scientific Expert Pharmacopoeia Center" - 1st Class. - X .: RIREG, 2001. - 556 pp.
 27. Thomas R. Ittelson. Financial Statements: A Step-by-Step Guide to Understanding and Creating Financial Reports / – August 15, 2009. - P.284.
 28. The legal and regulatory framework for community pharmacies in the European Region//report WHO//accesses WHO <https://apps.who.int/iris/bitstream/handle/10665/326394/9789289054249-eng.pdf>.
 29. The WHO Model Lists of Essential Medicines (current and previous) are available on the WHO EMP website at: <http://www.who.int/medicines/publications/essentialmedicines/en/>.
 30. The Constitution of Ukraine.
 31. Code of Ukraine on Administrative Offenses.
 32. Law of Ukraine as of 04.04.1996 № 123/96-BP “On Medicinal Products”.
 33. Law of Ukraine as of 02.03.2015 № 222-VIII “On Licensing of Certain Types of Economic Activity”
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 37. Law of Ukraine as of 08.09.2011 № 3718-VI “On Amendments to Certain Legislative Acts of Ukraine Regarding Preventing Falsification of Medicines”
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4. Science library of NUPh: <http://dspace.ukrfa.kharkov.ua>; <http://lib.nuph.edu.ua>.
5. State Expert Center of the Ministry of Health of Ukraine: <https://en.moz.gov.ua/article/news/the-state-expert-center-of-the-ministry-of-health-of-ukraine-has-received-the-official-status-of-ich-observer>
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