

ЛЬВІВСЬКИЙ НАЦІОНАЛЬНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ ДАНИЛА ГАЛИЦЬКОГО

Кафедра організації та економіки фармації

ЗАТВЕРДЖУЮ

Перший проректор
з науково-педагогічної роботи
Людмила Галицька-Степаненко




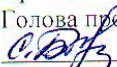
2023 р.

НАВЧАЛЬНА ПРОГРАМА ВИБІРКОВОЇ ДИСЦИПЛІНИ
ВИРОБНИЧА ПРАКТИКА З ОРГАНІЗАЦІЇ ТА ЕКОНОМІКИ ФАРМАЦІЇ

(назва навчальної дисципліни)

підготовки фахівців другого (магістерського) рівня вищої освіти
галузі знань 22 «Охорона здоров'я»
спеціальності 226 «Фармація, промислова фармація»
для студентів 5 курсу фармацевтичного факультету
ВБ 2.3

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

Затверджено
профільною методичною комісією
з хімічних і фармацевтичних дисциплін
Протокол № 3 від 27 червня 2023 р.
Голова профільної методичної комісії
 проф. Білоус С. Б.

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

Approved by:
First Vice-Rector
for Research and Teaching
assoc. prof. Solonyenko I.I. _____
“ _____ ” _____ 2023 y.

CURRICULUM OF ELECTIVE DISCIPLINE

**"MANUFACTURING PRACTICE
ON THE ORGANIZATION AND ECONOMICS IN PHARMACY"**

(name of an academic discipline)

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

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

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

Lviv 2023

DEVELOPERS OF THE PROGRAM – personnel of the Department of Organization and Economics of Pharmacy: B.P. Hromovyk, Head of the Department (a Professor, a Doctor of Pharmaceutical Sciences), O.M. Kornienko (an Associated Professor, PhD), I.Ya. Horodetska (an Associated Professor, PhD).

REVIEWER: Associate Professor of the Department of Organization and Economics of Pharmacy, Technology of Drugs and Pharmacoeconomics of Danylo Halytsky Lviv National Medical University, PhD Boyko A.I.

The program of study of the discipline "MANUFACTURING PRACTICE ON THE ORGANIZATION AND ECONOMICS IN PHARMACY"

according to the Educational and professional program "Pharmacy, industrial pharmacy" of the second (master's) level of knowledge 22 "Health" specialty 226 "Pharmacy, industrial pharmacy" of Danylo Halytsky Lviv National Medical University named after.

1. EXPLANATORY NOTE

The work program of industrial practice from organization and economics of pharmacy for students of V course of pharmaceutical faculty specialty 7.110201 "Pharmacy" (intramural study) was prepared in accordance with educational qualification characteristics (EQC), educational and professional program (EPP) and curriculum of specialists training in higher educational institutions of III-IV level accreditation in the specialty of "Pharmacy".

The program is structured in compliance with the "Regulations on the work program of discipline and guidelines for its development", approved by the Central methodical commission (protocol №2 from 04.23.2015) and "Regulations on practice at Danylo Halytsky Lviv National Medical University" adopted by decision of the Academic Council of Danylo Halytsky LNMU (Minutes № 8-AC of 09.16.2015).

According to the curriculum manufacturing practice on organization and economics of pharmacy is held in the tenth semester.

The structure of the Manufacturing Practice of Organization and Economy of Pharmacy for V course students of pharmaceutical faculty, specialty 7.110201 "Pharmacy"

Name of practice	Amount of weeks	Credits / hours	Academic year / semester	Type of control
Manufacturing Practice on OEPH	3	5 credits /150 hours	V course, X semester	<i>Differentiated test</i>

2. GOAL AND OBJECTIVES OF PRACTICE

The purpose of manufacturing practice on organization and economics of pharmacy - consolidation and deepening of theoretical knowledge and practical skills of the key aspects of organizational, industrial, administrative and financial activities of pharmacies; mastering the principles of modern pharmaceutical enterprise, pharmaceutical ethics and deontology.

Objectives of practice:

generalization of documents regulating the activities of pharmacies according to the requirements of good pharmacy practice and Licensing Conditions;

the study of supply system of pharmacies;

study of intrapharmacy preparations range and their accounting;

realization of prescriptions admission, rating, their accounting, registration of drugs to dispensing, communicating with pharmacy visitors using the principles of pharmaceutical care;

conducting all types intrapharmacy quality control of individual manufacturing of dosage forms and incoming quality control of medical products;

familiarization with the features of turnover of medicines containing controlled substances, the implementation of their goods-quantitative control;

monitoring of key economic indicators of pharmacy.

The management of practice from university is carried out by lecturer of the department of organization and economics of pharmacy, from pharmacy – by the general manager of the base and practice supervisor (experienced specialist pharmacist).

The student should know:

- Main provisions of legal acts regulating pharmaceutical activities;
- legislative and regulatory framework that regulates the circulation of controlled substances at the international and national level;
- work order of pharmacy with stocks and organizational principles of internal pharmaceutical drug manufacturing;
- Provisions (standards) of accounting and other laws and regulations governing the organization of accounting and reporting in pharmacies;
- reimbursement mechanisms in health care and health insurance;
- basic principles of taxation of business entities in Ukraine;
- the general methodology of the audit.

Students should be able:

- organize activities of pharmacies (pharmacies and structural units), availability of allowing documents;
- To carry out orders and receiving of goods from suppliers, to carry out quality control;
- Calculate the retail prices of medicines and health products;
- To organize the proper storage of medicines and pharmaceutical products range;
- To carry out dispensing of OTC medicines, to provide advice on the rational use and proper storage of medicines;
- take recipes from the public and carry out dispensing of medicines;
- To organize subject-quantitative account of medicines;
- conduct dispensing of drugs according to requirements for ordering of medical institutions;
- Apply cash registers in calculations with consumers;
- documentarily execute all business transactions conducted at the pharmacy;
- To carry out accounting of major business transactions;
- To fill in the documentation of accounting and wages;
- Establish financial performance of pharmacies in the reporting period;
- Analyze the financial condition on the basis of the financial statements, to calculate key financial indicators;
- organize an audit.

3. CONTENTS OF PRACTICE

1. General familiarity with the work of pharmacy.

Office hours, availability of allowing documents, the organizational structure of pharmacies (presence of departments and structural units). Production and non-production facilities pharmacies, their characteristics and equipment, pharmacy staff, pharmacy personnel liability. Compliance with sanitary regime and requirements for personal care workers.

2. The study of supply system of pharmacies.

Identifying the current need for medicines and organization of their order by pharmacy. List of suppliers of medicines, medical devices and pharmaceutical related products range. Incoming quality control of medicines by authorized person of pharmacy. Organization of storage of various groups of medicines and pharmaceutical products. Organization and documentation of goods-quantitative control of medicines containing controlled substances. Conducting and documentation of laboratory-packing works at a pharmacy.

3. The organization of work of the pharmacy with visitors.

Reception of prescriptions and dispensing of drugs. Rating of individual prescriptions. Receiving of prescriptions and dispensing of medicinal products containing controlled substances, preferential and free

prescriptions. Registration of free and preferential prescriptions. Non-prescription dispensing of drugs and related pharmaceutical products on the basis of pharmaceutical care. Intraparmacy quality control in accordance with requirements of good pharmacy practice. The documentation of the calculation of operating cash visitor in pharmacies.

4. Accounting and Reporting in pharmacy.

Accounting for cash and settlement operations. Documentation of receipt of goods. The order of the receipt of goods in pharmacies. Documentation of consumables operations in a pharmacy. Drawing monthly trade report, the calculation of the realized trade margin. Definition of inventory results. Carrying out calculations and processing of accounting and wages of workers pharmacy. Revenue, expenses and financial results. Characteristics of taxation system of pharmacies. The structure of the external financial reporting.

5. Analysis of the financial condition of the pharmacy.

Comparative analysis of major economic indicators of the pharmacy. Building and analytical study of balance sheet and income statement. Comparative analysis of growth indicators balance sheet and income statement. Analysis of the financial condition of pharmacy. Evaluation of the competitiveness the pharmacy economic indicators. Diagnostics of solvency of pharmacy. The organization and methods of the audit. Documentation of internal audit.

Plan of production practice on the organization and economics of pharmacy Table 1

№	Topic	Amount of days / hours
1.	General familiarity with the work of the pharmacy, operation, availability of permits, the organizational structure of pharmacies (presence of departments and structural units), production and non-production facilities the pharmacy, their characteristics and equipment.	1 / 6
2.	Staff of pharmacy, financial liability of pharmacy employees, compliance with sanitary regime and requirements for personal care workers.	1 / 6
3.	The study of supply system of pharmacies. Replenishment of goods stocks. Incoming quality control of medicines by authorized person pharmacy.	1 / 6
4.	Organization of storage of various groups of medicinal products and medical devices.	1 / 6
5.	The organization of work the pharmacy with visitors. Reception of prescription and delivery of drugs.	1 / 6
6.	Receiving of prescriptions and dispensing of medicinal products containing controlled substances, preferential and free prescriptions.	1 / 6
7.	Non-prescription dispensing of drugs and related pharmaceutical products on the basis of pharmaceutical care.	1 / 6
8.	Intraparmacy quality control in accordance with requirements of good pharmacy practice.	1 / 6
9.	The documentation of the calculation of operating cash visitor in pharmacies.	1 / 6
10.	Accounting and Reporting in pharmacy. Accounting for cash and settlement operations.	1 / 6
11.	Carrying out calculations and processing of accounting and wages of workers pharmacy.	1 / 6
12.	Accounting of income, expenses and financial results of the pharmacy.	1 / 6
13.	Analysis of the financial condition of the pharmacy. Comparative analysis of major economic indicators of the pharmacy.	1 / 6
14.	Analysis of solvency and credit terms of pharmacies.	1 / 6
15.	Making the results of practice. Differentiated test.	1 / 6
TOTAL		15 days / 90 hours

Thematic plan of lectures - not planned in the working curriculum for the academic year.

**A list of practical skills which a student should be able during practice
and their evaluation in points**

№	Name of ability, practical skills	Assessment in points
1.	Prepare copies of allowing documents and process information about the facilities, equipment, staff, liability and medical treatment of employees at the pharmacy.	«5» - 5 points «4» - 4 points «3» - 3 points «2» - 0 points
2.	Add inventories of the product in the pharmacy. To make an order for goods.	-« « -
3.	Register income of commodity - material values to the pharmacy.	-« « -
4.	Organize storage of drugs at the pharmacy.	-« « -
5.	Set retail prices for pharmaceutical products.	-« « -
6.	Register movement of drugs under subject-quantitative control	-« « -
7.	Make a record of laboratory and packing works in relevant journals.	-« « -
8.	Make receiving of outpatient prescriptions. Dispense an individual dosage form.	-« « -
9.	Register internal pharmacy quality control results in relevant journals.	-« « -
10.	Check documents for payment of drugs dispensed in conditions of free.	-« « -
11.	To develop an algorithm of pharmaceutical care when dispensing from the pharmacy OTC medicines, medical devices, pharmaceutical related products	-« « -
12.	Make record of the retail sale of goods in the primary accounting documents.	-« « -
13.	Make record of tariffs for the manufacture and packaging of medicines.	-« « -
14.	To make the product report and calculate the amount of realized trading margins.	-« « -
15.	Organize and control cash transactions and work with registrars settlement operations, accounting operations in the book of payment transactions	-« « -
16.	Based on primary documents fill in cash book of pharmacy.	-« « -
17.	Simulate cashless transactions and conduct control of their implementation in the back of information and bank documents.	-« « -
18.	Take inventory of goods and formalize documents, calculate natural loss.	-« « -
19.	To make the the balance and financial results report of pharmacy	-« « -
20.	To calculate basic and additional wages of employees of pharmacies.	-« « -
21.	To count amount for the temporary disability, help with pregnancy and childbirth, payment for holidays, for work on public holidays.	-« « -
22.	To conduct calculations of tax on personal income and other mandatory deductions from wages to employees of pharmacies.	-« « -
23.	To calculate payments for employee business trips.	-« « -
24.	To conduct rapid analysis of key economic indicators of the pharmacy.	-« « -

4. CONTROL METHODS.

Score from practice is the sum of scores for performance of student practical skills that are tested supervisor of base of practice (maximum 120 points - minimum 72 points) and points for the final control, offered during a differentiated scoring (maximum of 80 - at least 50 points).

Current control is monitored daily, according to the specific goals of each topic, by supervisor of base of practice, who approves the performance of practical skills in the student diary of practice. In the process of monitoring practical skills the students are recommended to use diagnostic tools of training: practical tasks, simulations, research, explanation and evaluation of their results.

Criteria of evaluation of mastering practical skills and abilities

<i>Mark</i>	<i>Performance</i>
«5» (5 points)	All tasks in the program are fulfilled completely, filled with all accompanying forms (documents), made all the necessary calculations, carried out registration in the relevant logbooks, done documenting of business transactions conducted at the pharmacy.
«4» (4 points)	Tasks are made fully, committed minor errors in calculations or the design of results
«3» (3 points)	Tasks are fulfilled not completely, errors in the calculations and presentation of results, applied the wrong algorithm for solving
«2» (0 points)	Task is not performed

5. LIST OF QUESTIONS SUBMITTED TO FINAL CONTROL

1. The opening and organization of pharmacies.
2. Application of the principles of the pharmaceutical care in pharmacy.
3. Material liability in pharmacies.
4. Summary of sanitary-epidemiological regime at pharmacies.
5. Organization of order of goods by pharmacy.
6. Terms of acceptance of goods in pharmacies. The organization of the income quality control.
7. The basic principles of storage of medicines and pharmaceutical products range.
8. The procedure of obtaining of narcotic drugs, psychotropic substances and precursors from pharmaceutical warehouse and organization of storage at a pharmacy.
9. Determination of the retail prices of drugs. Features of state and market approaches in medicine pricing.
10. General rules for writing prescriptions.
11. The organization of subject-quantitatively account at pharmacies.
12. The procedure of prescribing and dispensing drugs on the basis of free and preferential.
13. Organization of the pharmacy work for receiving prescriptions for medications of individual manufacturing.
14. The procedure of dispensing medicines of pharmaceutical manufacturing. Drug delivery services home.
15. Making of requirements - orders for drugs and medical products.
16. Method of determining the cost of serially manufactured dosage forms in pharmacies.
17. The organization and documentation of laboratory - packing works.
18. Organization of quality control of drugs made in pharmacies.
19. The procedure of storage, recording and disposal of prescription forms and requirements in healthcare facilities.
20. The documentation of the movement of material assets of pharmacy.
21. The calculation of the limit of the balance of money in the pharmacy till.
22. Documentation of cash and settlement operations in the pharmacy.
23. Determination results of inventory of material assets.
24. Features of the inventory of controlled drugs.
25. The procedure for establishing salaries in pharmacies.
26. The procedure of granting leave and their registration.
27. Payment of temporary disability of pharmacy workers.
28. Types of deductions from wages and the procedure for calculating.
29. The tax credit in the calculation of taxable personal income.
30. Revenue from sale of goods.
31. Accounting for costs of pharmacy for items and activities.
32. Display of financial results in accounting.
33. Tax systems in Ukraine. Characterization of taxation of legal entities.
34. Features of the income taxation of entrepreneurs at different tax systems.
35. Comparative analysis of growth rates of indicators of balance sheet and statement of income.

36. Diagnostics of financial stability of pharmacies.
37. Diagnostics of liquidity, solvency, profitability, dynamism of pharmacies.
38. Assessment of potential competitiveness of pharmacy.

6. METHODOICAL PROVISION

1. Korniyenko O.M, Gorodetska I.Ya. Guidelines for production practice on the organization and economics of pharmacy for students of the Faculty of Pharmacy V course specialty 7.110201 "Pharmacy". - Lviv, 2015. - 18 p.
2. Hrom O.L, Tereshchuk S.I, Dacko A.I etc. Guidelines for individual preparation of students of Faculty of Pharmacy to the integrated licensing examination "Krok 2. Pharmacy". Organization and Economics of Pharmacy. - Lviv, 2012. - 97 p.

THE EXAMPLE OF DIARY FROM MANUFACTURING PRACTICE

Making of title page

<p>DIARY MANUFACTURING PRACTICE ON THE ORGANIZATION AND ECONOMICS OF PHARMACY STUDENT _____ GROUP ____ COURSE OF FACULTY OF PHARMACY</p> <hr/> <p style="text-align: center;">(name of pharmacy)</p> <p>Surname, name _____</p> <p>Time of practice: from « ____ » _____ 201__ to « ____ » _____ 201__</p> <p>Practice supervisor from the University _____</p> <p>Practice supervisor from the pharmacy _____</p>
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Records of performance

Date	The content of the work performed	Comments and signature of the head
	General characteristics of pharmacy. The organizational structure of pharmacy (presence of departments and structural units). The staff of pharmacy. List of allowing documents. Types of liability. Description of premises and equipment.	

№	List of practical skills	Points	Signature of supervisor of practice base
1.	Prepare copies of allowing documents and process information about the facilities, equipment, staff, liability and medical treatment of employees at the pharmacy.		
2.	Add inventories of the product in the pharmacy. To make an order for goods.		
3.	Register income of commodity - material values to the pharmacy.		
4.	Organize storage of drugs at the pharmacy.		
5.	Set retail prices for pharmaceutical products.		
6.	Register movement of drugs under subject-quantitative control		

7.	Make a record of laboratory and packing works in relevant journals.		
8.	Make receiving of outpatient prescriptions. Dispense an individual dosage form.		
9.	Register internal pharmacy quality control results in relevant journals.		
10.	Check documents for payment of drugs dispensed in conditions of free.		
11.	To develop an algorithm of pharmaceutical care when dispensing from the pharmacy OTC medicines, medical devices, pharmaceutical related products		
12.	Make record of the retail sale of goods in the primary accounting documents.		
13.	Make record of tariffs for the manufacture and packaging of medicines.		
14.	To make the product report and calculate the amount of realized trading margins.		
15.	Organize and control cash transactions and work with registrars settlement operations, accounting operations in the book of payment transactions		
16.	Based on primary documents fill in cash book of pharmacy.		
17.	Simulate cashless transactions and conduct control of their implementation in the back of information and bank documents.		
18.	Take inventory of goods and formalize documents, calculate natural loss.		
19.	To make the the balance and financial results report of pharmacy		
20.	To calculate basic and additional wages of employees of pharmacies.		
21.	To count amount for the temporary disability, help with pregnancy and childbirth, payment for holidays, for work on public holidays.		
22.	To conduct calculations of tax on personal income and other mandatory deductions from wages to employees of pharmacies.		
23.	To calculate payments for employee business trips.		
24.	To conduct rapid analysis of key economic indicators of the pharmacy.		
	Total points for mastering of practical skills		
	Final control of practical skills		Signature of university supervisor of practice

Score by differentiated credit	Points	Mark	Signature of university supervisor of practice

8. REQUIREMENTS FOR PRACTICE REPORT

To obtain the test from the practice the student must submit a report on the practical training in the form:

- 1) diary, stamped and signed by the general Head from the base of practices (head of pharmacy), which includes a table evaluating practical skills of the student, completed and signed by the supervisor of base practices (Table 2);
- 2) completed and stitched documents according to the list of documents (tab. 4).
- 3) characteristic of supervisor practices certified by general director of base practices.

A documentary report on manufacturing practice on organization and economics of pharmacy

№	Name of document	Availability
1	The list of existing structural units of pharmacies.	
2	The license to engage in pharmaceutical activities (copy)	
3	Trade patent (copy)	
4	Details of compliance of premises, equipment and staff pharmacies with requirements of License Conditions (copy)	
5	Financial responsibility of the pharmacy.	
6	Register of medicines received in pharmacy (extract)	
7	Order of the goods in the public service hall	
8	Accounting journal of toxic and potent drugs which are under subject-quantitative control in health care institutions (extract)	
9	Book accounting of laboratory and packing operations (excerpt)	
10	5 prescriptions for different dosage forms	
11	Prescription journal or receipt book sheet (excerpt)	
12	Journal of registration of full chemical control of dosage forms (excerpt)	
13	Block information to provide pharmaceutical care in dispensing OTC drug	
14	Book accounting of payment transactions (extract), samples of cash checks, X-report	
15	Monthly (trade) report (copy)	
16	Cash book (excerpt)	
17	Cash and payroll (copy)	
18	The act of inventory results (copy)	
19	Balance (p. 1) (copy)	
20	Statement of Financial Performance (p. 2) (copy)	
21	Calculation of taxation of pharmacy	

9. CONCLUSIONS OF PRACTICE

Results of manufacturing practice in organization and economics of pharmacy are heard and discussed at meetings of the department methodological, practice reports are considered at meetings of profile methodological commissions pharmaceutical disciplines, academic councils of the Faculty of Pharmacy and the University.

7. RECOMMENDED LITERATURE

General Literature

1. Hromovyk B.P., Tereshchuk S.I., Chukhrai I.L. Organisation and economics of pharmacy / Ed. prof. B.P.Hromovyk and Assoc.prof S.I.Tereschuk. - Vinnytsya, New Book, 2009. - 816 p.
2. Nemchenko AS Organization of pharmaceutical providing of population / A.S.Nemchenko, AA Kotvitska, GL Panfilov, etc .; Ed. A.S.Nemchenko.- Kharkov: Avista-VLT, 2007.-488 pp.
3. A.S. Nemchenko. Fundamentals of economics and accounting systems in pharmacy, teach. guidances. for the stud. of Higher educ.inst./ A.S. Nemchenko, G.L. Panfilov, V.N. Chernukha etc .; Ed. A.S. Nemchenko.- Kharkov: Golden Pages, 2005. - 504 p.

Additional literature

4. Practical work on organization and economics of pharmacy. Teach. guide for students /B.P.Hromovyk, S.I.Tereschuk, O.L.Hrom, A.M.Novikevych, I.L.Chuhray. - Vinnytsya: New Book, 2004. - 448 p.
5. The legislation of Ukraine (government portal) Codes and Laws of Ukraine, Decrees of the President of Ukraine, resolutions and decrees of the Cabinet of Ministers of Ukraine // [http:// zakon.rada.gov.ua/](http://zakon.rada.gov.ua/)
6. Regulations of the Ministry of Health of Ukraine //[http:// mozdocs.kiev.ua](http://mozdocs.kiev.ua)