



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

**Introduction to the Specialty**

(name of academic discipline)

**WORK PROGRAM  
of educational component**

<b>training for</b>	<u>second (master's) level</u> (Higher Educational Level Name)
<b>field of knowledge</b>	<u>22 Healthcare</u> (Code and Knowledge Field Name)
<b>in specialty</b>	<u>226 Pharmacy, Industrial pharmacy</u> (Code and Specialty Name)
<b>of educational program</b>	<u>Pharmacy</u> (Educational Program Name)
<b>Specialization</b>	<u>226.01 Pharmacy</u> (Specialization Name)


The work program of the educational component Introduction to the Specialty in specialty 226 Pharmacy, Industrial pharmacy specialization 226.01 Pharmacy of educational program Pharmacy for applicants for higher education 1-st year of study (4 years 10 months (for foreign students studying in English)).

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;  
KORZH Yuliya, Associate professor of the Social Pharmacy department, Ph.D., Associate Professor;  
TERESHCHENKO Lyubov, associate professor of the Social Pharmacy department, Ph.D., Associate Professor;  
NOZDRINA Almira, assistant professor of the Social Pharmacy department  
SURIKOVA Iryna, assistant professor of the Social Pharmacy department, Ph.D.

Work program has been considered and approved at the Social Pharmacy Department Meeting  
Record from "31" August 2023 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 «05» September 2023 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 educational component is based on the study of general history, computer science, physics and chemistry during secondary education and is integrated with such educational components of the NUPh curriculum as Latin in Pharmacy, History of World and Ukrainian Culture, General and Inorganic chemistry, Physiology and Human Anatomy;
- the educational component is the basis for studying the technology of drugs of pharmacy production, pharmaceutical law and legislation, technology of drugs of industrial production, organization and economics of pharmacy, medical and pharmaceutical commodity science, ethics and deontology in pharmacy, pharmaceutical management and marketing, social pharmacy, which involves the integration of teaching with the above educational components to develop the ability to apply knowledge in the process of further education and in professional activities;
- the educational component lays the foundation for professional culture, fosters pride and a sense of the need for a pharmaceutical specialty.

**Information content of the educational component.** 3 ECTS credit 90 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** "Introduction to the Specialty" is formation of knowledge of the historical background of the formation and development of pharmaceutical science and practice; formation of theoretical foundations and important professional knowledge of the organization of provision of the population with medicines and pharmacy products; formation of primary professional knowledge of the requirements for the activities of pharmacies and pharmaceutical workers.

**The main tasks** of the educational component "Introduction to the Specialty" are

- formation of historical thinking, scientific understanding of the relationship between natural sciences and special disciplines, knowledge of the historical origins of pharmacy in students;
- familiarization of higher education students with the peculiarities of university education, in particular in the educational program "Pharmacy";
- acquaintance with the structure of the pharmaceutical sector of the healthcare sector, its objects and subjects;
- acquaintance of students with the organization of pharmacy institutions, tasks and functions of the pharmacy, its organizational structure, general principles of providing medicines and other goods of the pharmacy assortment to the population and health care institutions;
- familiarization of students with the concepts of self-treatment and self-prevention, pharmaceutical care, pharmaceutical assistance, pharmaceutical services, pharmaceutical information;
- raising the general cultural level of a modern young specialist, fostering pride and a sense of the need for a pharmaceutical specialty.

## 3. Competence and planned educational outcomes

Educational component "Introduction to the Specialty" ensures the acquisition of applicants for higher education the following competences:

- *integral:*

the ability to solve problems of a research and/or innovative nature in the field of pharmacy

• *general :*

GC 02. Knowledge and understanding of the subject area; understanding of professional activity.

GC 08. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of pharmacy, its place in the general system of knowledge about nature and society and in the development of society, equipment and technologies, to use various types and forms of motor activities for active recreation and leading a healthy lifestyle.

GC 10. The ability to act socially responsibly and civically.

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

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

PLO 10. To carry out professional activities in social interaction based on humanistic and ethical principles; to identify future professional activity as socially significant for human health.

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

*know:*

- concepts and terms in the system of modern university pharmaceutical education;
- features of professional activity;
- peculiarities of directions, principles, approaches to the formation of pharmacy and drug science at different stages of historical development;
- current trends in the development of the pharmaceutical sector of the healthcare sector;
- basic principles of pharmaceutical provision of the population;
- main tasks, functions and organizational structure of pharmacies;
- basic issues related to ensuring the sanitary and anti-epidemic regime of pharmacies; basic principles of prescription and over-the-counter dispensing of medicines;
- structure and sources of pharmaceutical information, basic principles of sanitary and educational work;

*be able to:*

- to identify the place of pharmacy in the general system of knowledge about nature and society and in the development of society, technology and technology;
- identify future professional activities as socially significant for human health;

*have:*

- basic knowledge for further study of professional educational components;
- methods and techniques of analysis to determine the general trends in the development of pharmacy, methods of historical, comparative, documentary analysis, inductive and deductive methods, reproductive methods, methods of descriptive and abstract modeling and generalization (formulation of conclusions, recommendations and proposals), methods of self-control in learning;
- theoretical knowledge of the basic principles of organization of pharmaceutical provision of the population.

#### 4. The educational component structure

Names of content modules and topics	The amount of hours				
	full time study				
	the whole amount	including			self-study
l		p.l.	sem.		
<b>Content module 1. Historical aspects of the development of medicine and pharmacy</b>					
Topic 1. Features of university education. Academic integrity in the educational process	6	1	2	-	3
Topic 2. History of medical and pharmaceutical education. History of the formation and development of the National University of Pharmacy.	6	1	2	-	3

Topic 3. Formation and development of medicine and pharmacy in Ancient Times.	7	1	-	3	3
Topic 4. Pharmacy of the Middle Ages and the Renaissance.	7	1	-	3	3
Topic 5. Pharmacy of Modern times. Development of pharmacy in Ukraine and outstanding Ukrainian scientists.	7	2	-	2	3
Control of CM 1	6		-	1	5
<b>The whole amount of hours for the content module 1</b>	<b>39</b>	<b>6</b>	<b>4</b>	<b>9</b>	<b>20</b>
<b>Content module 2. Organization of pharmaceutical supply to the population</b>					
Topic 6. Organization of pharmaceutical provision of the population and state regulation of pharmaceutical activities. Areas of professional realization of the Master of Pharmacy.	8	2	-	3	3
Topic 7. Organization of pharmacies as health care institutions. Organization of sanitary and anti-epidemic regime of pharmacies.	8	2	-	3	3
Topic 8. Pharmacy assortment. Basics of dispensing medicines from a pharmacy. The concept of self-medication and self-prevention.	10	2	-	6	2
Topic 9. Control and quality assurance of pharmacy assortment goods during wholesale and retail sales.	7	1	-	3	3
Topic 10. The role of information in pharmaceutical activities. Pharmaceutical information. Innovative technologies in providing the population with medicines.	7	1	-	3	3
Topic 11. Pharmacy in the countries of the world. National peculiarities of pharmaceutical practice	6	2	-	1	3
Control of CM 2	6	-	-	1	3
<b>The whole amount of hours for the content module 2</b>	<b>50</b>	<b>10</b>	<b>-</b>	<b>20</b>	<b>20</b>
<b>Semester credit</b>	<b>1</b>			<b>1</b>	
<b>The whole amount of hours for the course</b>	<b>90</b>	<b>16</b>	<b>4</b>	<b>30</b>	<b>40</b>

## 5. Contents of the educational component

### *Content module 1. Historical aspects of the development of medicine and pharmacy*

#### **Topic 1. Features of university education. Academic integrity in the educational process.**

University education as a mechanism of personality formation. Concepts and terms in the system of modern higher education. Academic integrity: principles and fundamental values. The main forms of academic dishonesty in the educational process and responsibility for them. Academic integrity policy at NUPh. Ways to prevent academic dishonesty.

#### **Topic 2. History of medical and pharmaceutical education. History of the formation and development of the National University of Pharmacy.**

The main stages of formation and development of medical and pharmaceutical education. History of the formation and development of the National University of Pharmacy. Characteristics of the organizational structure of the NUPh.

#### **Topic 3. Pharmacy of the Ancient East and Antiquity.**

Sources of studying the history of medicine and pharmacy. Medicine in primitive society. Development of medicine and pharmacy in the Ancient world: Mesopotamia, Egypt, India, China, Greece, Rome. Outstanding doctors of antiquity. Symbols of medicine and pharmacy.

#### **Topic 4. Pharmacy of the Middle Ages and the Renaissance.**

Medicine and pharmacy of the Middle Ages. Pharmacy of the Medieval East. The first regulated pharmacy. Development of alchemy and iatrochemistry. Pharmacy of the Renaissance. Outstanding scientists and doctors.

#### **Topic 5. Pharmacy of Modern times. Development of pharmacy in Ukraine and outstanding Ukrainian scientists.**

Pharmacy of Modern times. Outstanding scientists and doctors. Development of world pharmaceutical science in the XVIII - XX centuries. Contribution of foreign scientists to the development of chemistry, medicine and pharmacy. History of the formation of pharmacopoeias.

Historical sources of Ukrainian pharmacy. Historical stages of pharmacy development in Ukraine. The role of outstanding scientists of Ukraine and their contribution to the development of medicine and pharmacy.

**Content module 2. Organization of pharmaceutical supply to the population**

**Topic 6. Organization of pharmaceutical provision of the population and state regulation of pharmaceutical activities. Areas of professional realization of the Master of Pharmacy.**

General characteristics of the pharmaceutical provision system. Enterprises, organizations, institutions and establishments belonging to the pharmaceutical sector of the healthcare sector. Organization of activities related to the production and wholesale trade of medicines.

**Topic 7. Organization of pharmacies as health care institutions. Organization of sanitary and anti-epidemic regime of pharmacies.**

Pharmacy, its functions and classification. Organizational structure of the pharmacy. Nomenclature of pharmacy staff positions. Composition and purpose of pharmacy premises. Requirements for the premises of pharmacies. Exterior design of pharmacies.

Sanitary regime and pharmaceutical order. Basic sanitary and hygienic requirements for cleaning of premises and care of equipment of pharmacies. General requirements for personal hygiene of pharmacy staff and pharmacy premises

**Topic 8. Pharmacy assortment. Basics of dispensing medicines from a pharmacy. The concept of self-medication and self-prevention.**

The concept of active substance, medicinal product, dosage form. List of goods that pharmacies are authorized to purchase and sell.

Over-the-counter and prescription medicines: concepts, criteria for classification. Peculiarities of dispensing medicinal products from pharmacies and their structural subdivisions. Prescription - definition, types.

Concepts of self-treatment, self-prevention, pharmaceutical care, pharmaceutical assistance, pharmaceutical services.

**Topic 9. Control and quality assurance of pharmacy assortment goods during wholesale and retail sales.**

Peculiarities of storage of medicinal products and other goods of pharmacy assortment in pharmacies. Quality control of medicinal products and other pharmacy products in pharmacies. Features of quality control of medicines produced in a pharmacy.

**Topic 10. The role of information in pharmaceutical activities. Pharmaceutical information. Innovative technologies in providing the population with medicines.**

The concept of medical and pharmaceutical information as components of the scientific and technical information system. Sources of information about medicines. Reliability and timeliness of pharmaceutical information.

Innovative technologies in providing the population with medicines. The importance of automatic systems in pharmacy practice.

**Topic 11. Pharmacy in the countries of the world. National peculiarities of pharmaceutical practice**

Features of the health care system and pharmaceutical provision in the countries of the world. Characterization of modern trends in the development of health care in the world.

**6. Topics of lectures**

№	Name of topic	The amount of hours
1	Topic 1. Features of university education. Academic integrity in the educational process.	1
2	Topic 2. History of medical and pharmaceutical education. History of the formation and development of the National University of Pharmacy	1
3	Topic 3. Formation and development of medicine and pharmacy in Ancient Times.	1
4	Topic 4. Pharmacy of the Middle Ages and the Renaissance.	1
5	Topic 5. Pharmacy of Modern times. Development of pharmacy in Ukraine and outstanding Ukrainian scientists	2

6	Topic 6. Organization of pharmaceutical provision of the population and state regulation of pharmaceutical activities. Areas of professional realization of the Master of Pharmacy	2
7	Topic 7. Organization of pharmacies as health care institutions. Organization of sanitary and anti-epidemic regime of pharmacies	2
8	Topic 8. Pharmacy assortment. Basics of dispensing medicines from a pharmacy. The concept of self-medication and self-prevention	2
9	Topic 9. Control and quality assurance of pharmacy assortment goods during wholesale and retail sales.	1
10	Topic 10. The role of information in pharmaceutical activities. Pharmaceutical information. Innovative technologies in providing the population with medicines	1
11	Topic 11. Pharmacy in the countries of the world. National peculiarities of pharmaceutical practice.	2
<b>The whole amount of hours</b>		<b>16</b>

### 7. Topics of seminars

№	Name of topic	The amount of hours
1	Topic 1. Features of university education. Academic integrity in the educational process.	2
2	Topic 2. History of medical and pharmaceutical education. History of the formation and development of the National University of Pharmacy	2
<b>The whole amount of hours</b>		<b>4</b>

### 8. Topics of practical lessons

№	Name of topic	The amount of hours
1	Topic 3. Formation and development of medicine and pharmacy in Ancient Times.	3
2	Topic 4. Pharmacy of the Middle Ages and the Renaissance.	3
3	Topic 5. Pharmacy of Modern times. Development of pharmacy in Ukraine and outstanding Ukrainian scientists	2
4	Control of CM1	1
5	Topic 6. Organization of pharmaceutical provision of the population and state regulation of pharmaceutical activities. Areas of professional realization of the Master of Pharmacy	3
6	Topic 7. Organization of pharmacies as health care institutions. Organization of sanitary and anti-epidemic regime of pharmacies	3
7	Topic 8. Pharmacy assortment. Basics of dispensing medicines from a pharmacy. The concept of self-medication and self-prevention	6
8	Topic 9. Control and quality assurance of pharmacy assortment goods during wholesale and retail sales.	3
9	Topic 10. The role of information in pharmaceutical activities. Pharmaceutical information. Innovative technologies in providing the population with medicines	3
10	Topic 11. Pharmacy in the countries of the world. National peculiarities of pharmaceutical practice.	1
11	Control of CM2	1
	<b>Semester credit</b>	<b>1</b>
<b>The whole amount of hours</b>		<b>30</b>

### 9. Topics of laboratorial lessons

Not provided for in the working curriculum

### 10. Self-study work

№	Name of topic	The amount of hours
1	Topic 1. Features of university education. Academic integrity in the educational process.	3

2	Topic 2. History of medical and pharmaceutical education. History of the formation and development of the National University of Pharmacy	3
3	Topic 3. Formation and development of medicine and pharmacy in Ancient Times.	3
4	Topic 4. Pharmacy of the Middle Ages and the Renaissance.	3
5	Topic 5. Pharmacy of Modern times. Development of pharmacy in Ukraine and outstanding Ukrainian scientists	3
6	Control of CM1	5
7	Topic 6. Organization of pharmaceutical provision of the population and state regulation of pharmaceutical activities. Areas of professional realization of the Master of Pharmacy	3
8	Topic 7. Organization of pharmacies as health care institutions. Organization of sanitary and anti-epidemic regime of pharmacies	3
9	Topic 8. Pharmacy assortment. Basics of dispensing medicines from a pharmacy. The concept of self-medication and self-prevention	2
10	Topic 9. Control and quality assurance of pharmacy assortment goods during wholesale and retail sales.	3
11	Topic 10. The role of information in pharmaceutical activities. Pharmaceutical information. Innovative technologies in providing the population with medicines	3
12	Topic 11. Pharmacy in the countries of the world. National peculiarities of pharmaceutical practice.	3
13	Control of CM2	3
<b>The whole amount of hours</b>		<b>40</b>

### Tasks for self-study work

1. Give definitions of basic pharmaceutical terms and concepts.
2. Describe the periods of development of medicine and pharmacy.
3. Give the main contribution of prominent doctors of antiquity and the Middle Ages to the development of medicine and pharmacy.
4. Identify the contribution of domestic scientists to the development of medicine and pharmacy.
5. Give the characteristics of the development of medicine and pharmacy in Ukraine in the XXth century.
6. Describe the main discoveries in medicine and pharmacy in the twentieth century.
7. To get acquainted with the basic information about the subjects of the pharmaceutical market (websites of companies) and to form basic information about them according to the proposed algorithm.
8. Provide the main features of a pharmacy according to the proposed algorithm.
9. Describe the types of intra-pharmacy quality control of medicinal products.
10. Describe the features of the health care system in different countries of the world.

## 11. Criteria and evaluation order of educational outcomes

During the study of the educational component, all types of student activities are subject to control: current (at each lesson and when performing tasks for independent work of students), intermediate (checking the mastery of content modules). Current control is carried out at each practical lesson in accordance with the specific objectives of the topic, during the individual work of the teacher with the applicant for higher education for those topics that the applicant develops mainly independently.

Module control is a diagnosis of the mastery of the module material (credit) by the higher education student. In module 1 (educational component), there are two current controls for mastering the content modules. The semester ends with a semester credit.

### Rating system for assessing students' knowledge

Ongoing assessment and independent work												
CM 1						CM2						
T1	T2	T3	T4	T5	CM1	T6	T7	T8	T9	T10	T11	CM 2
4-7	4-7	4-7	4-7	4-7	7-10	4-7	4-7	8-14	4-7	4-7	4-7	9-13



23-38	37-62
60-100	

Encouraging (additional) points: participation in student scientific conferences, active participation in lectures, etc. up to 10 points.

The total rating for the module (educational component) does not exceed 100 points.

A module is considered passed if a higher education student has scored from 60 to 100 points.

Evaluation of current learning activities (conducted at each seminar and practical lesson): control of theoretical knowledge, practical skills and abilities.

When mastering each topic of the content module, higher education students are assigned points for all types of activities for current learning activities, which are summed up at the end of the content module. Depending on the number of points scored, a higher education student can receive a maximum of 100 points or a minimum of 60 points for studying a content module.

The control of mastering content modules (CM) is carried out at the last seminar / practical classes on the topics of content modules. Only those applicants for higher education who have completed all types of work provided by the curriculum (worked out missed seminars / practical classes, lectures, etc.) are allowed to control the CM. Ticket structure: 20 test tasks. The number of points for the study of the content module is the sum of points received by the higher education applicant during the study of all topics of the content module.

<b>Assessment of practical skills - applicants for higher education are given from 0 to 4 points:</b>			
<b>The type of task being assessed</b>	<b>System evaluation knowledge, points</b>		<b>Evaluation criteria</b>
Practical (situational) task	<b>from 0 to 4.0</b>	4,0-3,0	The practical task (situational task) is performed by the student independently without errors.
		2,0-1,0	The practical task was performed independently, however, mistakes were made in the use of legal acts, interpretation of terms, principles of preparation of multimedia materials, etc.
		0	The student could not perform practical and situational tasks, and did not draw up a working journal.
<b>Assessment of theoretical knowledge- applicants for higher education are given from 0 to 3 points:</b>			
Assessment of theoretical knowledge, practical skills and abilities (written or oral answer)	<b>from 0 to 3,0</b>	3.0	is given to a student who the oral or written answer to a question has revealed comprehensive, systematized, deep knowledge of program material, is able to interpret the received results competently; demonstrate knowledge of basic and additional literature provided at the level of creative use
		2.0	is given to the student, if during the oral or written answer to the question the applicant for higher education revealed complete knowledge of the program material, provided at the level of similar reproduction, but made some insignificant errors
		1.0	is given, if during the oral or written answer to the question the student found insufficient knowledge of the main program material, in the amount necessary for further study and work provided by the program at the level of reproductive reproduction.
		0	is given, if at the oral or written answer to a question the student has found serious gaps in knowledge of the basic material, and has made fundamental mistakes.

Grade A, B, C, D, E is given only to students who have enrolled in all modules of the educational component. The number of points that the student scored in the discipline is defined as the arithmetic mean of the number of points from the modules of the course.

**COURSE EVALUATION SCALE**

The sum of points for all types of educational activities	Score ECTS	Score on a national scale
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90 – 100	A	Excellent
82-89	B	Good
74-81	C	
64-73	D	Satisfactory
60-63	E	
35-59	FX	Unsatisfactory with the possibility of reassembly
0-34	F	Unsatisfactory with compulsory re-study of the discipline

## 12. Forms of progress and semester supervision of academic achievements

Semester control is carried out in the form of a semester credit.

## 13. Teaching course materials

1. Lecture material (multimedia presentations).
2. Syllabi for practical, seminar classes.
3. Tasks for practical classes
4. Tasks for independent work of students.
5. Questions for current knowledge control
6. Training manual of the educational component.
7. Packages of control papers for content modules with standards of answers
8. Interactive teaching methods (information transfer, discussions)
9. Interactive non-game simulation teaching methods

## 14. Recommended literature

### Basic

1. Introduction to the specialty with introductory training: training manual for students of higher school / A.A. Kotvitska, A.V. Volkova, L.V. Tereschenko, et al. – Kharkiv: NUPh, 2021. – 84 p.
2. Introduction to Pharmacy: History of Medicine and Pharmacy: methodological recommendations for seminars and individual work for students specialty "Pharmacy" of the faculty of foreign citizens education / A. A. Kotvitska, I. V. Kubarieva, A. V. Volkova, A. V. Cherkashyna, I. O. Lobova. - Kharkiv : NUPh, 2018. – 68 p.
3. Organization of pharmaceutical providing of the population : textbook for university students / A.S. Nemchenko, I. V. Zhirova, V. N. Nazarkina et al. – Kh. : NPhaU, 2014. – 268 p.
4. Pharmaceutical Law and Legislation : the textbook for applicants for higher education / A. A. Kotvitskaya, I. V. Kubarieva, A. V. Volkova, A. V. Cherkashyna, I. V. Zhirova, A. A. Surikov, I.A. Surikova. – Kharkiv : NUPh : Golden Pages, 2019. – 204 p

### Supporting literature

1. Anderson, S. Making Medicines: A Brief History of Pharmacy and Pharmaceuticals / S. Anderson. – London : Pharmaceutical Press, 2005. – 318 p.
2. Directive 2004/24/EC of the European Parliament and the Council of 31 March 2004 amending, as regards traditional herbal medicinal products, Directive 2001/83/EC on the Community code relating to medicinal products for human use.
3. Directive 2004/27/EC of the European Parliament and the Council of 31 March 2004 amending Directive 2001/83/EC on the Community code relating to medicinal products for human use.
4. Duffin, J. History of medicine: a scandalously short introduction / J. Duffin. – Toronto : University of Toronto Press, 2016. – 480 p.
5. Higby, G. J. A Cornerstone of Modern Institutional Pharmacy Practice: Mirror to Hospital Pharmacy / G. J. A. Higby // Pharm. Hist. – 2014. – Vol. 56, № 3-4. – P. 59–65.
6. Magner, L. N. A History of Medicine / L. N. Magner, O. J. Kim. – 3rd ed. – Boca Raton : CRC Press, 2017. – 446 p.

7. Making Medicines: A History of Pharmacy and Pharmaceuticals / ed. by S. Anderson. – London ; Chicago : Pharmaceutical Press, 2013. – 336 p.
8. Medicines, Ethics and Practice. The professional guide for pharmacists, 2015. – London, 2015. – 172 p.
9. Medicines use review. A toolkit for pharmacists / International Pharmaceutical Federation. – The Hague, 2020. – 20 p.
10. Parascandola, J. Pharmacology and Folklore: The Arsenic Eaters of Styria / J. Parascandola // Pharmacy in History. – 2015. – Vol. 57, № 1-2. – P. 3–14.

### 16. Electronic resources

1. FIP Statement of Professional Standards – Code of ethics for pharmacists. – The Hague : FIP, 2014. [Electronic resource]. – Access mode: <http://www.fip.org/statements>
2. Good Pharmacy practice in developing countries. Recommendations for step-wise implementation [Electronic resource] / FIP. – The Hague, 1998. – Access mode: <https://www.fip.org/files/fip/Statements/latest/Dossier%20003%20total.PDF>
3. Guide to good manufacturing practice for medicinal products. Pt. I. PIC/S July 2018 [Electronic resource]. – Access mode: <https://www.tga.gov.au/sites/default/files/pe009-14-gmp-guide-part1-basic-requirements-medicinal.pdf>
4. Guidelines of 7 March 2013 on Good Distribution Practice of medicinal products for human use [Electronic resource] // Official Journal of the European Union. – 2013. – P. 1. – Access mode: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:343:0001:0014:EN:PDF>
5. Integrated Addendum to ICH E6(R1): Guideline for Good Clinical Practice. Current Step 4 version dated – 9 November 2016 [Electronic resource]. – Access mode: [https://database.ich.org/sites/default/files/E6\\_R2\\_Addendum.pdf](https://database.ich.org/sites/default/files/E6_R2_Addendum.pdf)
6. Patient safety. WHO global patient safety challenge: medication without harm [Electronic resource]. – Geneva : World Health Organization, 2017. – Access mode: <http://www.who.int/patientsafety/medication-safety/en/>
7. Pharmaceutical Care – the PCNE definition 2013 [Electronic resource] / S. S. Allemann [et al.] // International Journal of Clinical Pharmacy. – Access mode: <http://dx.doi.org/10.1007/s11096-014-9933-x>
8. Pharmacy practice and the FIP sections [Electronic resource]. – Access mode: <https://www.fip.org/pharmacy-practice>
9. World Health Organization. Official website. [Electronic resource]. – Access mode: <https://www.who.int/home>
10. World Health Organization. Guidelines for developing national drug policies [Electronic resource]/ World Health Organization. – Geneva, 1988. – Access mode: <https://apps.who.int/iris/handle/10665/40427>
11. WHO. Glossary medicines areas coordination [Electronic resource]. – Access mode: [https://www.who.int/medicines/areas/coordination/English\\_Glossary.pdf](https://www.who.int/medicines/areas/coordination/English_Glossary.pdf)
12. State Regulation of Compounding Pharmacies [Electronic resource]. – Access mode: <https://www.ncsl.org/research/health/regulating-compounding-pharmacies.aspx>