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## TUITION THE DISCIPLINE “ORGANIZATION AND ECONOMICS OF PHARMACY” IN IVANO-FRANKIVSK NATIONAL MEDICAL UNIVERSITY

In the conditions of reforming the healthcare system and the pharmaceutical sector in Ukraine, the teaching of the disciplines of the organizational and economic direction is becoming very important.

The understanding of the economic processes that are taking part in Ukraine today, as well as the knowledge of basic economic concepts, regulations, which should be guided by pharmaceutical chemists (pharmacists) in their daily professional activities, as a necessary condition for a graduating student of Pharmaceutical Faculty of Ivano-Frankivsk National Medical University could put into practice his/her professional duties at an appropriate level. Therefore, in order to form the necessary knowledge and skills, students are invited to study the subject “Organization and Economics of Pharmacy”. The students of the university study the Organization and Economics of Pharmacy to prepare a competent pharmaceutical worker who owns a professional knowledge.

Some aspects of teaching the discipline “Organization and Economics of Pharmacy” in Ivano-Frankivsk National Medical University are determined in this article. The relevance of students’ studying of this discipline is described. The important questions where the teachers’ attention is emphasized during the studying of “Organization and Economics of Pharmacy” are established.

**Key words:** a discipline of organizational and economic direction; an organization and economics of pharmacy; higher pharmaceutical education; a specialist in pharmacy; practical and oriented exam.

**The problem is presented in general terms and its connection with important scientific or practical tasks.** The professional training of specialists in pharmacy is a system which is aimed at preparing a future pharmacy specialist for innovative activity, for the life in a modern, dynamic and market society [8, p. 104].

The understanding of the economic processes that are taking part in Ukraine today, as well as the knowledge of basic economic concepts, the regulations, which should be guided by a pharmaceutical chemists (pharmacists) in their daily professional activities, as a necessary condition for a graduating student of Pharmaceutical Faculty of Ivano-Frankivsk National Medical University (IFNMU) could put into practice his/her professional duties at an appropriate level. Therefore, in order to form the necessary knowledge and skills, the students are invited to study the subject «Organization and Economics of Pharmacy».

The discipline “Organization and Economics of Pharmacy” is one of the main courses in the training of specialists in the field of “Pharmacy”. The relevance of the studying of a given discipline is also due to the intensification of economic, entrepreneurial activity of pharmaceutical organizations in the context of market relations.

In the process of studying of a given discipline the student receives the necessary minimum about the economic processes which are taking part in the state and in the pharmaceutical sector, in particular. Therefore, the chosen research topic is relevant.

**The analysis of recent researches and publications.** At the theoretical and methodological levels the problem and the role of teaching the disciplines of the organizational and economic direction in the preparation of specialists in pharmacy are considered by the scientists V.P. Chernyh, O.M. Zaliska, A.S. Nemchenko, G.L. Panfilova, A.A. Kotvitska [7], D.S. Volokh [2], B.P. Gromovik [3], L.G. Kaydalova, [5], V.P. Bobruk [1], I.O. Fediak [9], I.Ye. Bulakh, I.S. Vitenko, T.G. Kalyniuk [6] etc.

Despite a number of scientists’ researches on a given issue, it seems important to show the teaching methodology, the role and conditions for the implementation of certain scientific developments from the “Organization and Economics of Pharmacy” at the Pharmaceutical Faculty of IFNMU.

**Formulating the goals of the article.** The purpose of our work is to present the peculiarities of the tuition the disciplines of organizational and economic direction, in particular, “Organizations and Economics of Pharmacy” in IFNMU. The role of studying of a given discipline in the training of future specialists in pharmacy.

**Presentation of the main research material.** At the department of Organization and Economics of Pharmacy and Technology of Medicine (OEP and TM) of the IFNMU a large number of disciplines in the organizational and economic field are taught: an organization and economics of pharmacy (OEP), management and marketing of pharmacy (MMP), medical and pharmaceutical commodity, in pharmacy law-study, pharmacoconomics, elective course and specialization in the field of economics: “The peculiarities of foreign and economic activity of enterprises of the pharmaceutical industry”, “Entrepreneurship in pharmacy”, “Organization and regulation of the activity in the pharmaceutical companies”, production practices with the OEP, MMP and specialization “Entrepreneurship in Pharmacy” and “Organization and regulation of Pharmaceutical activity “. A special place among professional-oriented pharmaceutical disciplines the knowledge and skills which are basic for students of the specialty “Pharmacy” the discipline of the OEP takes place.

The OEP is taught for students of the Pharmaceutical Faculty of the specialty “Pharmacy” 7.12020101 for full-time and part-time forms of studying, according to the Curriculum, which is compiled according to the curriculum for higher pharmaceutical establishments and a standard program of a normative discipline “Organization and Economics of Pharmacy” for students of a higher pharmaceutical educational establishment and pharmaceutical faculties of higher medical educational establishments of III-IV accreditation levels (Kyiv – 2013).

The purpose of the studying of a mentioned discipline is to: provide the student with systematic knowledge of the organizational and economic aspects of pharmaceutical activity in modern conditions; to promote the formation of professionally necessary knowledge, skills and abilities according to the educational and qualification characteristics; to provide a theoretical basis for further studying of other pharmaceutical and economic disciplines of the curriculum: management and marketing in pharmacy, pharmacoconomics, medical and pharmaceutical commodities, etc.; to create a base that defines a professional competence and a general erudition of pharmacists.

The organization and economy of pharmacy as an educational discipline is based on the study of students “Introduction to Pharmacy”, “Economic Theory”, “Pharmacy Technology of Drugs”, “Pharmaceutical Chemistry”, “Informational Technologies in Pharmacy”, “Pharmaceutical Law-study” and provides the basis for students for studying such disciplines as “Management and marketing in Pharmacy”, “Medical and pharmaceutical commodity science”, “Pharmacoeconomy”.

The program of the teaching discipline “Organization and Economics of Pharmacy” consists of three modules (Fig. 1).

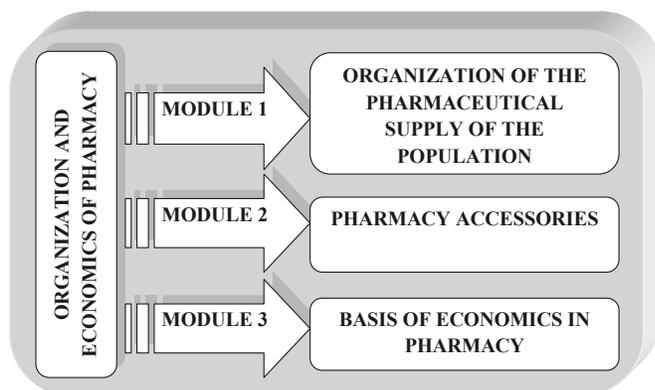


Fig. 1 The program of the teaching discipline “An organization and economics of pharmacy”

According to Module 1 “An organization of pharmaceutical supply of the population”, the students learn the basic principles of the formation of the National Medical (Pharmaceutical) policy; the arrangement for creating a pharmacy establishment; an organization of pharmaceutical activity as health facilities according to the requirements of Good Pharmacy Practice (GPP); an organization of work of the out-of-prescription and prescription departments in pharmacies; rules for prescribing and receiving recipes; the arrangement for dispensing drugs from pharmacies and their structural subdivisions; studying the characteristics of accounting for the formulation; organization of quantitative registration of drugs in pharmacies; organization of the quality control system of medicines and goods of the pharmacy variety; organization of supply of pharmacies by the product; studying the work of the stock department; the organization of wholesale department (wholesale pharmaceutical company, pharmacy warehouse).

According to Module 2 “Pharmacy Accessories” the student studies the correct organization of the system of accounting and reporting in pharmacies (pharmaceutical firms); studies the basic concepts and principles of the accounting system; automated accounting systems for movement of goods in pharmacies; accounting for getting commodity in pharmacies (pharmaceutical companies); accounting for retail and wholesale sales, other depreciation of goods in pharmacies; accounting for fixed assets and intangible assets in pharmacies; accounting for labor and salaries in pharmacies; accounting of cash and cashless payments in pharmacies (pharmaceutical companies); the peculiarities of work with registrars of settlement operations; the procedure for inventory of commodity, cash and payments in pharmacies; learn to compile financial statements, including the Accounting balance of pharmacies (pharmaceutical companies).

According to Module 3 “The basis of Economics in Pharmacy”, students learn to make economic calculations and planning of a trade turnover, circulating assets and goods receipt, pharmacy costs, results of trade and financial activities of the pharmacy – profits and profitability; to conduct an analysis of the financial and economic activity of pharmacies (pharmaceutical companies); plan activity of the enterprise; conduct an audit of pharmacies (pharmaceutical companies); to carry out an analysis of the financial condition of the enterprise on the basis of the financial statements; keep accounting of taxes pharmacy (firm); to calculate value added tax and other taxes; to keep accounting of obligatory deductions in state funds; study the peculiarities of crediting pharmacies (pharmaceutical companies); basic principles and methods of forming the price system for medicinal products; an organization of pharmaceutical provision of the population in the conditions of medical insurance.

According to the Article 50 of the Law of Ukraine “On Higher Education” No. 1556-VII dated July 1, 2014 (Editing dated July 25, 2018) [4] the main types of training in higher educational establishments are:

- 1) lecture;
- 2) laboratory, practical, seminars, individual classes;
- 3) consultation.

The types of training sessions in the discipline “An organization and Economics of Pharmacy” are lectures, practical classes, individual work of the student and consultations (Fig. 2).

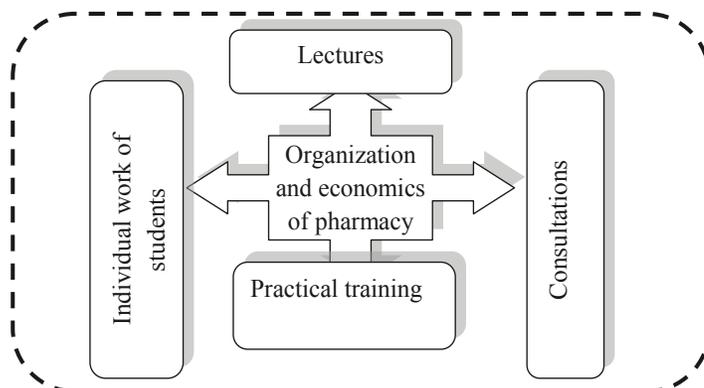


Fig. 2 Types of lessons from the discipline “An organization and Economics of Pharmacy”

For practical specialties, specialties of organizational and economic direction, whose activities are tied to frequent changes in the regulatory framework, the lecture remains the dominant source of information for the student. Especially during the lecture a student has the opportunity to obtain a considerable amount of scientific information in a relatively short time, in addition to being full of the latest material.

Practical classes and consultations with the OEP are held at the training and practical center – the laboratory of practical pharmacy number 5. Here, a layout of the part of the pharmacy shop with the layout of the secondary packaging of medicinal products is created. The design of showcases, shelves, consumer corner in the pharmacy is carried according to the requirements of the legislation. The layout of real warehouse shelves is constructed (according to the GDP and the order of the Ministry of Health № 44 dated March 16, 1993 “On the organization of storage in pharmacies of different groups of medical products and medical products”). As a result of this form of activation of the classroom work, the level of student interest increases significantly as they acquire practical skills and abilities to perform work related to receptions from the population, their registration (especially under the terms of the Government Program “Available Medicines”), the release of medicinal products with the using of the registrar settlement operations in close to real practical conditions.

At the Department of Organization and Economics of Pharmacy and Technology of Medicines IFNMU, a great attention is paid to an individual preparation of students. According to the curriculum for each discipline, the Working Magazines have been developed, which contain methodical instructions with the list of main topics, questions for the comprehensive disclosure of the topic of the class. The students, according to the thematic plans are offered tasks for individual studying of the material, which are designed in such a way that in the process of their implementation, knowledge was fixed and deepened, imaginative thinking was developed, skills, including practical skills, were formed.

To diagnose the level of students' training for studying each module, the following means of control are used:

- computer tests,
- solving situational problems,
- conducting research,
- explaining and evaluating their results;
- control of practical skills.

The assessment of the current educational activity of the student is carried out in practical classes in the mastering of each topic of the module (modules 1, 2, 3).

The success of each student from the “An organization and Economics of Pharmacy” is assessed on a 200-point scale. The maximum number of points awarded to students when assimilating each module (credit) is 200, including 120 points for the current training activity, 80 points for the module's final control.

The final module control is carried out after the completion of the module. The students who study the theoretical material, have fulfilled all types of works provided by the curriculum and, during the studying of the module scored the number of points, not less than the minimum allowed to pass the final control.

The form of a final control is standardized and includes the control of theoretical and practical training. The maximum number of points a student can score during the compilation of the final module control is 80 points (Fig. 3).

| Means of control from the final module | Points |
|--|--------|
| Theoretical training                   | 48     |
| Practical training                     | 32     |
| Total                                  | 80     |

Fig. 3 Means of control from the final module № 1, 2, 3

For theoretical training a student can get as much as 48 points, which include:

- theoretical tasks – 8 points;
- test control – 40 points (the correct answer to the test task is 1 point).

For practical training a student can get as much as 32 points, which include:

- done correctly – 32 points;
- completed with a drawback and corrected by the student personally – 30 points;
- corrected by the student after the tutor's remarks – 20 points;
- corrected incorrectly after the tutor's remarks – 10 points;
- done incorrectly – 0 points.

The final module control is considered to be taken if the student scored at least 50 points, including:

- according to the results of the test control, the student received at least 30 points (that is, at least 75% of the correct answers of test control);
- implementation of theoretical tasks – not less than 2 points;
- implementation of practical skills – not less than 18 points.

Being 5-year students of the IFNMU also undergo a production practice with the OEP, during which the theoretical knowledge gained during the training is fixed and expanded. The industrial practice that facilitates in-depth study of students' managerial and organizational and economic issues at the positions of the pharmacist-organizer (manager, director), deputy director, head of the structural unit, as well as other posts foreseen for the replacement by specialists with higher pharmaceutical education. During the course of practice the foundations of the professional experience of the student, skills, including practical skills, professional qualities of the individual specialist are given.

By the order of the rector of the IFNMU No. 29-d of January 18, 2016, a new edition of the Regulations on the organization and procedure for conducting the certification of graduates at the Pharmaceutical Faculty was approved, which regulates the certification of a complex practical-oriented examination of 5 disciplines: "Management and Economics in Pharmacy", "Clinical Pharmacy", "Pharmaceutical Chemistry", "Pharmacognosy", "Technology of Medicines". Thus, the study of the OEP is an important pharmaceutical discipline, since it promotes successful state certification and passing the licensing of integrated exam "Step-2. Pharmacy", which is carried out by the Center for testing the professional competence of specialists with higher education in the areas of training "Medicine" and "Pharmacy" at the Ministry of Health of Ukraine in order to test the knowledge of students and practical-oriented skills.

**The conclusions from this study and further perspectives in this direction.** The modern professional and qualified requirements for the economic training of pharmacists and other specialists in the pharmaceutical industry are rather high due to the processes of globalization, transformation, integration and reform of domestic pharmacy, and therefore should include the introduction of effective educational technologies and cover teaching as the basis of the methodology of a market economy, and purely applied issues of the economics of pharmacy.

The teaching of the discipline of the OEP in the IFNMU is based on the main directions of reforming the domestic health system in general and pharmacology in particular. Students of the IFNMU study the OEP to get prepared as competent pharmaceutical workers who own professional knowledge.

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### ВИКЛАДАННЯ ДИСЦИПЛІНИ «ОРГАНІЗАЦІЯ ТА ЕКОНОМІКА ФАРМАЦІЇ» В ІВАНО-ФРАНКІВСЬКОМУ НАЦІОНАЛЬНОМУ МЕДИЧНОМУ УНІВЕРСИТЕТІ

В умовах реформування системи охорони здоров'я та фармацевтичного сектору в Україні викладання дисциплін організаційно-економічного напрямку набуває неабиякого значення.

У статті визначено окремі аспекти викладання дисципліни «Організація та економіка фармації» в Івано-Франківському національному медичному університеті. Обґрунтовано актуальність вивчення студентами цієї дисципліни. З'ясовано важливі питання, на яких акцентується увага викладачів при навчанні «Організації та економіки фармації».

**Ключові слова:** дисципліни організаційно-економічного напрямку; організація та економіка фармації; вища фармацевтична освіта; фахівець фармації; практично-орієнтований іспит.

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### ПРЕПОДАВАНИЕ ДИСЦИПЛИНЫ «ОРГАНИЗАЦИЯ И ЭКОНОМИКА ФАРМАЦИИ» В ИВАНО-ФРАНКОВСКОМ НАЦИОНАЛЬНОМ МЕДИЦИНСКОМ УНИВЕРСИТЕТЕ

В условиях реформирования системы здравоохранения и фармацевтического сектора в Украине преподавание дисциплин организационно-экономического направления приобретает немалое значение.

В статье определены отдельные аспекты преподавания дисциплины «Организация и экономика фармации» в Ивано-Франковском национальном медицинском университете. Обоснована актуальность изучения студентами этой дисциплины. Выяснено важные вопросы, на которых акцентируется внимание преподавателей при обучении «Организации и экономики фармации».

**Ключевые слова:** дисциплины организационно-экономического направления; организация и экономика фармации; высшее фармацевтическое образование; специалист фармации; практически-ориентированный экзамен.

