

Odesa National Medical University
Pharmacy Faculty
International Faculty

Syllabus of the academic discipline
“Organization and Economics of Pharmacy”

Volume	180 hours (lectures 30 hours, practical training 70 hours, IWS 80 hours)/ 6 ECTS credits
Semester / Year of studying	7 th and 8 th / 4 th year of studying
Days, time, place	According to the timetable Department Organization and Economics of pharmacy
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Information about consultations	Consultations are held on Tuesdays from 14:30 to 16:00 and Saturdays from 9:00 to 13:00 according to the approved schedule

Communication

Communication with students will be carried out in auditorium of the department.

In case of distance learning, communication is carried out through the Microsoft Teams platform, as well as Zoom platform, through e-mail correspondence oef@onmedu.edu.ua, through Viber, Telegram, WhatsApp messengers.

COURSE ANNOTATION

Academic discipline "Organization and economics of pharmacy" (OEPH) refers to the cycle of disciplines of general economical and professional-oriented training in the specialty 226 "Pharmacy, Industrial Pharmacy". It is also refers to the regulatory disciplines. The subject of study of the discipline is organizational and economic aspects of pharmaceutical activity.

Pre-requisites of the course

Discipline OEPH is based on student's knowledge from "Introduction in Pharmacy", "Pharmacy technology", "Pharmaceutical and medical commodity

science”, “Pharmaceutical law and legislation”, “Ethics and deontology in pharmacy”

Post-requisites of the course

Acquired knowledge, skills and competences are the framework for further study “Pharmaceutical management and marketing”, “Pharmacoeconomics”, “Social Pharmacy” and are the basis for continuous professional post-graduate education

Aim of the course

The purpose of learning the discipline OEPH is to form in students a system of knowledge on organizational and economic aspects of pharmaceutical activities in modern conditions, as well as the formation of professionally important skills to ensure the availability of pharmaceutical care.

Objectives of the course

The main objectives of studying the course OEPH are: promotion of professional knowledge and skills in accordance with educational and qualification characteristics; provide a theoretical basis for further study of other pharmaceutical and economics curriculum courses; to create a framework that defines the general professional competence and erudition of pharmacists.

Expected results:

Program learning outcomes for the discipline:

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

PLO 8. Carry out professional communication in the state language, use the skills of oral communication in a foreign language, analyzing texts of professional orientation and translate foreign sources of information.

PLO 9. Carry out professional activities with the use of information technology, "Information databases", navigation systems, Internet resources, software and other information and communication technologies.

PLO 12. To analyze the information obtained as a result of scientific research, summarize, systematize and use it in professional activities.

PLO 13. Carry out sanitary-educational work in professional activity in case of outbreaks of infectious, viral and parasitic diseases.

PLO 14. To determine the advantages and disadvantages of different groups of medicines, taking into account their chemical, physicochemical, biopharmaceutical, pharmacokinetic and pharmacodynamic features. To recommend to consumers over-the-counter medicines and other pharmacy commodities with the provision of counseling and pharmaceutical care.

PLO 15. Provide immediate care to patients in extreme situations

PLO 16. To determine the factors influencing the processes of absorption, distribution, deposition, metabolism and excretion of medicines and due to the condition and features of the human organism and physicochemical properties of medicines

PLO 17. Use clinical, laboratory and instrumental research data to monitor the efficacy and safety of medicines.

PLO 20. To carry out a set of organizational and managerial measures to provide the population and health institutions with medicines and other pharmacy commodities. To carry out all types of accounting, administrative records, analysis of pharmaceutical products

PLO 21. To calculate the main economic factors, as well as taxes and fees. Expect all types of prices (purchase and retail) for drugs and other pharmaceutical products.

PLO 22. To provide manage pharmacy organizations and to determine its effectiveness using management functions. Make management decisions based on the leadership and communication skills of pharmacy personnel for strategic planning of enterprises.

PLO 23. Take into account the data of socio-economic processes in society for the pharmaceutical supply of population, determine the effectiveness and availability of pharmaceutical care in terms of health insurance and reimbursement of the drug cost

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

PLO 30. Ensure quality control of medicines and document its results. Manage quality risks at all stages of the life cycle of medicines.

PLO 31. Carry out all types of quality control of medicines; draw up quality certificates for the batch of the medicinal product and the certificate of analysis, taking into account the requirements of current regulations, the State Pharmacopoeia of Ukraine and the results of quality control. Develop specifications and methods of quality control in accordance with the requirements of the State Pharmacopoeia of Ukraine.

PLO 32. To determine the main organoleptic, physical, chemical, physicochemical and pharmacotechnological indicators of medicines, to substantiate and choose standardization methods, to carry out statistical processing of results in accordance with the requirements of the State Pharmacopoeia of Ukraine.

COURSE DESCRIPTION

Forms and methods of teaching

The training course consists of lectures (30 hours), practical classes (70 hours) and individual work of students (80 hours).

Problem-based presentation, case studies, discussions, work in a computer class (moodle-testing), electronic (review or problem) lectures, presentations, "business games" are used as teaching methods

Content of the course

Part 1. Organization of pharmaceutical providing to the population. Organization of the pharmacy activity as a health institution

Topic 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.

Topic 2. Basic principles of organization of pharmaceutical aid for population. Main International Standards. GPP.

Topic 3. State regulation of pharmaceutical activity. Government control and regulation of pharmaceutical activity. Licensing to pharmaceutical activity.

Topic 4. A national drug policy as a common framework to solve problems in pharmaceuticals. Organizational structure of pharmacy industry management.

Topic 5. Pharmaceutical providing of population in the conditions of health insurance.

Topic 6. Organization of pharmaceutical care. Conception of responsible self-medication. The Medicine Classifications in pharmaceutical practice. Organization of the OTC-medicines dispensing.

Topic 7. The Organization of prescription department in pharmacy. Rules of excerption and reception of prescriptions.

Topic 8. Turnover of the narcotic, psychotropic drugs and precursors. Accounting of the controlled drugs.

Topic 9. Pricing different extemporaneous forms. Determination of taxa laborum for the extemporaneous medications.

Topic 10. Organization of the quality control system of pharmaceutical products.

Topic 11. Organization of work with commodity supplies. Transactions on the purchase of commodities. International rules INCOTERMS.

Part 2. Accounting System in Pharmacies (Pharma Companies)

Topic 12. Organization of the Accounting System in Pharmacies (Pharma Companies).

Topic 13. Accounting as Information System in Pharmacies

Topic 14. Cash Flow Accounting in Pharmacies (Pharma Companies).

Topic 15. Pharmacy Labour and Payroll Accounting

Topic 16. Pharmacy Stocktaking

Part 3. Basic of Finance and financial analysis in pharmacies and pharmaceutical firms

Topic 17. Financial Analysis in Pharmacies

Topic 18. Basic of pharmaeconomics: principles, calculations and methods

Topic 19. Pharmacy Financial Ratio Analysis

Topic 20. Pharmaceutical Pricing

Topic 21. Taxation of Pharma Companies

Topic 22. Lending of Pharma Companies

Topic 23. Audit in Pharma Companies

LIST OF RECOMMENDED LITERATURE

Basic

1. Texts of lectures on the discipline "Organization and economics in pharmacy" / LM Unhurian, OI Bieliaieva, IV Vyshnytska, OO Alexandrova. - Odessa: ONMedU, 2018. - 107 p.

2. Pharmaceutical Law and Legislation : the textbook for applicants for higher education / A.A. Kotvitskaya, I.V. Kubarieva, A.V. Volkova et al. Kharkiv : NUPh : Golden Pages, 2019.204 p.

3. Organization of pharmaceutical aid to the population / Under ed. prof. Nemchenko A.S. - Kharkov, 2016.- Unit 1, 116 p.

4. Introduction into the pharmacy: teach. manual / Under the general editorship: A.S. Nemchenko. - Kh.: NUPh, 2016 - 115 p.

Additional

1. Comorbidities as factors influencing choice of drug in arterial hypertension therapy/ Vyshnytska Iryna, Unhurian Liana, Bieliaieva Oksana, Pietkova Iryna. Medical theory: collective monograph / Bulavenko Olga, Muntian Olga, Muntian Maksym, Yarovenko Anatolii, etc. International Science Group. Boston: Primedia eLaunch, 2020. P. 68-76. Available at: DOI: 10.46299/isg.2020.MONO.MED.II

2. Methodical approaches to teaching pharmacoeconomics at the faculty of pharmacy/ Vyshnytska Iryna, Unhurian Liana, Bieliaieva Oksana, Smyrnova Olha. Scientific foundations of modern pedagogy: collective monograph / Bets I., Bets Yu., Filippov M., etc. International Science Group. Boston: Primedia eLaunch, 2020. P. 76-82 Available at: DOI: 10.46299/isg.2020.MONO.PED.II

3. Unhurian L., Bielyaieva O., Vyshnytska I., Suschuk N., Petkova I. (2018) Implementation of Standards of Good Pharmacy Practice in the World: A Review. Asian Journal of Pharmaceutics. Vol. 12. N 1 (Suppl). Pp. 42 - 46.

4. Unhurian L., Bielyaieva O., Burenkova N. (2017) Analysis of the Modern Pharmaceutical Market of Anxiolytic Drugs in Ukraine. International Journal of Pharmaceutical Sciences Review and Research. Vol. 43 N 1. Pp. 169 – 172.

5. Standarts for quality of pharmacy services <http://fip.org/files/fip/Statements/latest/Dossier%20004%20total.PDF>

6. Good pharmacy practice in community and hospital pharmacy settings <http://apps.who.int/medicinedocs/documents/s21088en/s21088en.pdf>

7. International health systems http://www.pnhp.org/facts/international_health_systems.php?page=all

8. The legal and regulatory framework for community pharmacies in the WHO European Region <https://apps.who.int/iris/bitstream/handle/10665/326394/9789289054249-eng.pdf>

9. Asset Management Ratios <https://courses.lumenlearning.com/boundless-finance/chapter/asset-management-ratios/>

10. Financial Analysis in Pharmacy Practice E-resource <https://pdfs.semanticscholar.org/3104/8f567e76089ed7d33c5224c3c4c0faec06bf.pdf>

Information resources, including the Internet

1. Departments' site: http://info.odmu.edu.ua/chair/economy_pharmacy/files

2. Ministry of Health of Ukraine http://www.moz.gov.ua/ua/portal/dn_20050719_360.html

3. World Health Organization <http://www.who.int/>

4. National Scientific Medical Library of Ukraine <http://library.gov.ua/>

5. National Library of Ukraine named after V.I. Of Vernadsky
<http://www.nbuv.gov.ua/>
6. HTA [E-resource]. <https://www.hta.ua>
7. FDA [E-resource]. - Access:<https://www.fda.gov>
8. WHO [E-resource]. - Access:<https://www.who.int>

EVALUATION

There are various forms of control for classes (oral, written, combined, testing, practical skills, etc.). The results of the academic progress for students exhibited in the form of evaluation on a national scale, 200-point scale, ECTS and have standardized generic assessment criteria:

Criteria for assessing the student's current learning activity

<p>grade "excellent" ("5") grade "excellent" ("5") is given to a student who systematically worked during the term, has showed versatile and deep knowledge of the program content during the exam, is able to successfully complete the tasks provided for by the program, has mastered the content of the main and additional literature, realized the relationship of individual sections of the discipline, their importance for the future profession, identified creative ability to understand and use educational and program materials, showed the ability to independently replenish and update knowledge; high level of competence (creative)</p>
<p>grade "good" ("4") is given to a student who has revealed complete knowledge of the educational and program materials, successfully completes the tasks provided for by the program, has mastered the basic literature recommended by the program, has shown a sufficient level of knowledge in the discipline and is capable of independently updating and replenishing them in the course of further education and professional activity; the level of competence is sufficient (constructive - variation)</p>
<p>grade "satisfactory" ("3") is given to a student who has revealed knowledge of the basic educational and program materials in the amount necessary for further training and subsequent work in the profession, copes with the tasks provided for by the program, made some mistakes in the answers on the exam and when performing the exam tasks, but has the necessary knowledge to overcome mistakes made under the guidance of a scientific and pedagogical worker; the level of competence is medium (reproductive).</p>
<p>grade "unsatisfactory" ("2") is given to a student who did not reveal sufficient knowledge of the basic educational and program materials, made fundamental mistakes in performing the tasks provided for in the program, cannot use knowledge in further training without the help of a teacher, could not master the skills of independent work, the level of competence is low (reciprocal-productive).</p>

Current control

Current control is carried out at each practical class through oral questioning or written control. After studying each section, based on the control of theoretical knowledge, practical skills and abilities, the control of the acquisition of practical

skills is carried out. The student's current educational activity is assessed in a practical class on a 4-point (traditional) scale.

Final control

The form of the final control is an exam, which is assessed on a 4-point scale.

An exam is carried out according the exams schedule based on the results of the final interview with the obligatory performance by the student of all types of work stipulated by the work curriculum (subject to attending all classes, receiving a positive assessment to control the development of practical skills, not less than 90% of the Final Test Control Krok-2) and rated for current educational activities on average not lower 3.00.

The means of diagnosing the assimilation of the material is the control of the implementation of practical skills (2 situational tasks), an oral answer to 2 theoretical questions.

The grade received for the answer on the exam and the average current academic performance in the study of the discipline are used to calculate the arithmetic mean, which is the overall grade for the discipline.

In the student's record book, the teacher enters the grade for the discipline on the traditional and 200-point scale.

A multi-point scale characterizes the actual progress of each student in mastering the academic discipline. The conversion of the traditional grade in the discipline into a 200-point grade is carried out by the information and computing center of the university by the "Contingent" program according to the formula:

$$\text{grade point average (current / by discipline) x 40}$$

national grade	points
«5»	185-200
«4»	151-184
«3»	120-150

ECTS scale

The ECTS rating scale evaluates the achievements of students in the discipline who study in one course of one specialty, according to the points they received, by ranking, namely:

ECTS score	Statistical indicator
"A"	top 10% of students
"B"	next 25% of students
"C"	next 30% of students
"D"	next 25% of students
"E"	the remaining 10% of students

The ECTS scale establishes the student's belonging to the group of the best or worst among the reference group of fellow students (faculty, specialty), that is his rating. When converting from a multi-point scale, as a rule, the boundaries of grades "A", "B", "C", "D", "E" do not coincide with the boundaries of grades "5", "4", "3" on the traditional scale. The "A" grade on the ECTS scale cannot be equal to the "excellent" grade, and the "B" grade - the "good" grade, etc.

Students who have received grades "FX" and "F" ("2") are not included in the list of ranking students. Such students, after retaking, automatically receive an "E" score.

The mark "FX" is given to students who have scored the minimum number of points for the current educational activity, but who are not credited with the final control. Grade "F" is given to students, attended all classroom lessons in the discipline, but did not score an average score (3.00) for the current educational activity and were not admitted to the final control.

Independent work of students.

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Independent work in the study of the discipline is provided by methodological developments for the independent work of students, visual teaching aids (presentations, educational films etc.), the information resource of the department, the topic of independent tasks for each task, algorithms for the implementation of practical skills, algorithms for self- and mutual control of knowledge and skills, test tasks such as "Krok-2" for each practical class.

Independent work of students, which is provided by the topic of the class along with classroom work, is assessed during the current control of the topic in the corresponding practical class. The assimilation of topics that are taken out only for independent work is checked during an exam.

COURSE POLICY

Deadline and retake policy

Students for education are expected to attend all lectures and practical classes. If they missed classes, it is necessary to make-up them (according to the schedule posted on the information stand of the department and according to the permission of the dean's office, if necessary).

The retake of the control of the acquisition of practical skills is carried out during the semester on an individual basis with the determination of the time of the training.

Retake of unsatisfactory grades is carried out during the term of studying the discipline, provided that the average score for the current educational activity is less than 3.00 (carried out according to the schedule posted on the information stand of the department).

Academic Virtue Policy

Respect for academic virtue by education seekers includes:

- independent fulfillment of educational tasks, tasks of current and final control (current controls and discipline exam) of learning outcomes (for persons with special educational needs, this requirement is applied taking into account their individual needs and capabilities);

- links to sources of information when using ideas, developments, statements, information;

- provision of reliable information about the results of their own (scientific, creative) activities, the research methods used and sources of information.

It is unacceptable in educational activities for participants in the educational process to use prohibited auxiliary materials or technical means (crib notes, earpieces, phones, smartphones, tablets, etc.) during control events.

For violation of academic virtue, education seekers may be held liable for such academic responsibility

- decrease in the results of assessment (control work, exam);
- re-passing the assessment (test, exam);
- appointment of additional control measures (additional individual tasks, control works, tests, etc.).

Attendance policy

Attendance at lectures and practical classes is compulsory. If you are more than 15 minutes late, the lesson is considered missed and requires working out.

Mobile devices

During practical exercises, the use of a smartphone, tablet or other device for storing and processing information is allowed only with the permission of the tutor.

When conducting any form of control, the use of mobile devices and their accessories is strictly prohibited.

Audience behavior

During the classes it is allowed: to leave the audience for a short time, if necessary and with the permission of the teacher; photograph presentation slides; actively participate in the class.

During the lessons it is prohibited: to eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required), smoking, drinking alcoholic and low-alcohol drinks or drugs; use obscene language or use words that offend the honor and dignity of colleagues and faculty; gamble; damage the material and technical base of the university (spoil inventory, equipment; furniture, walls, floors, litter premises and territories), make noise, shout or listen to loud music in classrooms and even in the corridors during classes.