

MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Department of organization and economics of pharmacy with post-diploma
specialization

Syllabus of the course
" Occupational safety in the industry "

Scope of the academic discipline	Total number of hours per discipline: 90 hours, 3 ECTS credits.
Days, time, place of the academic discipline	According to the schedule Department of organization and economics of pharmacy with post-diploma specialization 37 O. Vadaturskyi Street, 2nd floor, Odesa
Teacher(s)	PhD in Pharmacy, Assoc. prof. Oksana BIELIAIEVA Senior teacher Oksana STEPANOVA
Contact information	E-mail: oksana.stepanova@onmedu.edu.ua In-person consultations: according to the schedule posted on the department's information board. Online consultations: from 14:30 to 17:00 every Tuesday. The link to the online consultation is provided to each group individually during class.

COMMUNICATION

Communication with students of higher education will be conducted in the classroom (face-to-face).

During distance learning, communication is carried out through the Microsoft Teams platform, as well as through e-mail correspondence, Viber, and Telegram messengers (within which the groups are created, separately through the head of a group).

COURSE ANNOTATION

Subject of the discipline -study of factors of the production environment, organizational, technical and sanitary-hygienic conditions in which human labor is carried out, as well as the system of legal measures for the implementation of safety and industrial sanitation rules.

The purpose of studying the discipline is formation of future specialists with the necessary level of knowledge and skills in legal and organizational issues of occupational safety in their further professional activities, and mastery of methods and means of creating safe working conditions to maintain the health and working capacity of personnel in the industrial production of medicines.

The tasks of the discipline:

1. Promoting the formation of professionally necessary knowledge, skills and abilities in accordance with the educational and qualification characteristics.
2. Providing a theoretical basis for obtaining knowledge on ensuring safe working conditions when receiving, transporting, storing and selling medicines.
3. Mastering methods and means of creating safe working conditions to maintain the health and working capacity of personnel in the industrial production of medicines.

Expected Learning Outcomes:

As a result of studying the academic discipline, the HE student should:

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Know:

- requirements of sanitary and hygienic regime and labor protection conditions;
- orders and instructional materials of the Ministry of Health of Ukraine regarding information and technical support for pharmacists' workplaces;
- fundamentals of the legal system and pharmaceutical legislation, requirements for working conditions, methodology for analyzing working conditions.

Be able to:

- to conduct professional activities in social interaction based on humanistic and ethical principles; to identify future professional activities as socially significant for human health;
- to position one's professional activities and personal qualities in the pharmaceutical labor market;
- to formulate the goals of one's own activities taking into account social and industrial interests;
- perform professional activities using creative methods and approaches.
- carry out professional communication in the state language, use oral communication skills in a foreign language, analyze professional texts and translate foreign-language information sources;
- use methods for assessing performance quality indicators; identify reserves for improving labor efficiency;
- analyze information obtained as a result of scientific research, summarize, systematize and use it in professional activities;
- provide first aid to patients with emergency conditions and victims in extreme situations.

COURSE DESCRIPTION

Forms of study. The discipline will be delivered in the form of lectures, practical classes, and organization of students' independent work.

Consultations are individual.

Teaching methods:

Lectures: problematic lectures, lectures-visualizations, lectures with analysis of specific situations, discussions.

Practical classes: discussion, debate, conversation, discussion of problem situations, role-playing games, case studies, preparation of the necessary documentation and its completion, preparation of reports by students.

Independent work of higher education students: work with methodological developments, recommendations, guidelines; solving tests, situational tasks; work with the recommended basic and additional literature, electronic information resources, and regulatory acts.

Course Content

Topic 1: Basic laws and regulations on labor occupational safety and health. Basic legislative acts on labor protection: The Law of Ukraine 'On Labor Protection', the Law of Ukraine 'On Health Protection'; the Law of Ukraine 'On Compulsory Social State Social Insurance'; the Civil Protection Code of Ukraine; the Law of Ukraine 'On Ensuring Sanitary and Epidemiological Welfare of the Population'; the Law of Ukraine 'On the Basic Principles of State Supervision (Control) in the Sphere of Economic Activity'; Resolution of the Cabinet of Ministers of Ukraine No. 442 of 01.08.92. 'On the Procedure for Certification of Workplaces for Working Conditions'; Resolution of the Cabinet of Ministers of Ukraine No. 337 of 17 April 2019 "On Approval of the

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Procedure for Investigation and Recording of Accidents, Occupational Diseases and Accidents at Workplaces”; Labour Agreements. Internal labor regulations. Labor protection of women. Liability for violation of the law. Stimulation of labor protection. State social insurance against accidents and occupational diseases.

Topic 2. Guarantees of the right to occupational safety and health. The Labor Code of Ukraine. Collective agreement. Employment contract. Internal labor regulations. Rights and obligations of citizens on labor protection. Labour protection of women, youth and disabled persons. Mandatory medical examinations of employees of certain categories. State and public control over labor protection. Liability for violation of labor protection legislation.

Topic 3. Accidents, occupational diseases of employees of pharmacy institutions, their investigation and accounting. Causes of accidents and occupational diseases, their classification. Preventive measures to prevent accidents and diseases at work. The procedure for investigating accidents that occurred during working hours. Responsibilities of the manager and witnesses in the event of an accident. Reporting an accident. Organization of an accident investigation. Work of the accident investigation committee. Peculiarities of conducting a special accident investigation. Investigation materials, accounting and reporting.

Topic 4. Psychosocial hazards. Common psychosocial hazards Work health and safety duties. Consulting workers. Control the risks. The process to manage psychosocial risks. Mobbing in the workplace. Concept, causes of mobbing and its signs. Forms of mobbing and ways of its manifestation. Employer's obligations to counter mobbing. Actions of an employee who has been discriminated against or mobbed at work. Rights of victims of harassment and legal consequences for committing mobbing. Administrative liability for mobbing.

Topic 5. Occupational risks in the pharmaceutical industry. Potential Hazards and Recommended Controls for Pharmacy Worker. Biological Hazards and Controls. Chemical Hazards and Controls. Local Exhaust Ventilation. Isolation/Enclosed Processes. Chemical Storage Physical Hazards and Controls. Radiation. Trips, Slips and falls. Cuts. Temperature Extremes. Pressure Electrical Hazards Mechanical Hazards. Fire Hazards.

Topic 6. Occupational health and safety in pharmacies. Requirements for the location and composition of the premises of pharmacy institutions. Requirements for safety and industrial sanitation in the manufacture of medicines. Requirements for safety and industrial sanitation in the production of purified water and water for injection. Safety and industrial hygiene requirements for the storage of medicinal products. Arrangement of warehouses and material premises in accordance with the groups of medicinal products. Sanitary supervision of pharmacy institutions. Methods of pharmaceutical waste disposal.

Topic 7. Occupational health and safety when working with hazardous drugs. Hazardous drugs in the workplace. Performing a risk assessment for hazardous drugs. Task-specific guidelines for reducing exposure to hazardous drugs. Drug shipping. Drug receiving and storage. Drug transport. Drug preparation. Drug administration. Waste disposal. Spill response.

Topic 8. Microclimate of production facilities. Requirements for the microclimate of the premises. Requirements for the air of the working area. Ventilation of premises, their classification and definition. Indicators for evaluating the work of general ventilation. Calculation of air exchange. Evaluation of the effectiveness of ventilation. Normalization of microclimate parameters. Definition of the working area. Ventilation of workplaces in a pharmacy. Optimal and permissible microclimatic conditions.

Topic 9. Sanitary and hygienic regulation of air pollution in the workplace. Maximum permissible concentrations and approximate safe levels of exposure to harmful substances in the air of the work area. General measures and means against air pollution. Protection of workers.

Topic 10. Requirements for production facilities and technological equipment. Production of

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medicinal products. Safety requirements for pressure vessels. Safety of operation of steam and hot water boilers. Safety of operation of compressor refrigeration units. Safety of operation of stationary pressure vessels. Requirements for the storage and transportation of raw materials, materials, finished products and production wastes. Safety, signaling and locking devices. Safety in the operation of cylinders. Classification of cylinders. Inscriptions on cylinders, colour of paint, colour of the transverse stripe.

Topic 11. Safety and personal hygiene of personnel when working in pharmacies. Safety and industrial sanitation rules NAOP 9.1.50-1.07-76. Implementation of measures aimed at preventing hazards associated with the specifics of work in a pharmacy. Occupational safety and personal hygiene of staff working in pharmacies. Occupational health and safety instructions by profession and type of work

Topic 12. Personal protective equipment for pharmaceutical workers The role of PPE in workplace safety. Purpose of PPE. Classification. Principles of selection of PPE. Application, care of PPE. Rules for the use of PPE. Responsibility for the proper condition of PPE

Topic 13. Electrical safety. Causes of electrical injuries at workplace. The effect of electric current on humans. Factors affecting the consequences of electric shock. Types of electrical injuries. Safety precautions when working with electrical appliances. Organisation of safe operation of electrical appliances. First aid in case of electric shock. Training and briefings on electrical safety.

Topic 14. Fire safety requirements in pharmacy institutions. Basic concepts and definitions. Regulatory documents governing fire safety. Fire hazardous properties of materials and substances. Fire prevention systems. Fire protection system. Occupational safety requirements for the storage and use of combustible substances. Fire supervision of pharmacy institutions.

Topic 15: Radiation. Types of radiation. Human protection against ionising radiation. Detailed instructions on the procedure for conducting work, accounting, storage and use of radiation sources. Procedure for conducting Dosimetric monitoring. Means of protection of workers against radiation.

List of recommended literature:

Basic:

1. Unhurian L. M., Bieliaieva A. I., Vishnitskaya I. V., Aleksandrova A. A. Texts of lectures on the discipline "Labor protection in the industry." Odessa: ONMedU, 2020. 111 p.
2. Unhurian L. M., Bieliaieva A. I., Aleksandrova A. A., Vishnitskaya I. V. et al. Labor protection in the industry: workshop. Odessa: ONMedU, 2019. 48 p.
3. Unhurian LM, Bieliaieva AI, Vishnitskaya IV, Aleksandrova AA and others. Labor protection in the industry: teaching aid. Odessa: ONMedU, 2019. 60 p.
4. Voinalovych O. V., Golopura S. M. Occupational Safety and Health. Practical. Kyiv: Center of Educational Literature, 2018. 448 p.
5. Reese, Charles D. Occupational Safety and Health: fundamental principles and philosophies. Crc Press, 2017. 403 p.
6. Phil Hughes, Ed Ferrett. Introduction to Health and Safety at Work: for the NEBOSH National General Certificate in Occupational Health and Safety. Routledge, 2015. 676 p.
7. Pedro M. Arezes, João S. Baptista, Mónica P. Barroso. Occupational and Environmental Safety and Health. Springer International Publishing, 2019. 765 p.
8. Thomas P Fuller. Global Occupational Safety and Health Management Handbook. CRC Press, 2019. 359 p.
9. Karl H.E. Kroemer. Fitting the human introduction to ergonomics. Human factors engineering. Boca Raton: CRC Press, 2017. 480 p.

Additional:

1. Law of Ukraine "On labor protection" No. 2694-XII. dated 14.10.1992 (as amended)

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2. Law of Ukraine "Fundamentals of Ukrainian legislation on healthcare" No.2801-XII of 19.11.1992. (As amended)
3. Law of Ukraine "On ensuring sanitary and epidemic well-being of the population" No. 4004-XII dated February 24, 1994 (As amended)
4. Law of Ukraine "On Compulsory State Social Insurance" No. 1105-XIV of 23.09.1999 (As amended)
5. Law of Ukraine "On the basic principles of state supervision of business entities" No. 877-V dated 05.04.2007. (As amended)
6. Code of Civil Protection of Ukraine No. 5403-VI dated 02.10.2012 (As amended)
7. Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Procedure for Investigation and Recording of Accidents, Occupational Diseases and Industrial Accidents" No. 337 dated April 17, 2019
8. Resolution of the Cabinet of Ministers of Ukraine No. 431 of 23.06.94r. "On the procedure for conducting state examination (verification) of technological, design, technical documentation for the manufacture of means of production for compliance with their regulations on labor protection"
9. Regulations on the Ministry of Health of Ukraine Approved by the Decree of the President of Ukraine dated March 25, 2015 No. 267.
10. Regulations on the State Drug Control Service of Ukraine. Approved by the Decree of the President of Ukraine dated April 13, 2011 N 457/2011.
11. Regulations on the State Service of Ukraine for Medicines. Approved by the Decree of the President of Ukraine dated April 8, 2011 No. 440/2011
12. Order of the Ministry of Health of Ukraine No. 275 dated 15.05.2006. "On the approval of the instructions for the sanitary and anti-epidemic regime of pharmacies."
13. CMU No. 843 dated 10.09.2001r. "On the approval of the criterion by which the degree of risk from the implementation of activities in the field of public health protection is assessed and the determination of the frequency of implementation of planned measures of state supervision (control)."
14. Resolution of the Cabinet of Ministers of Ukraine "On approval of the licensing conditions for the implementation of economic activities for the production of medicines, wholesale and retail trade in medicines, import of medicines (except for active pharmaceutical ingredients)" No. 929 dated November 30, 2016
15. NPAOP 0.00-4.35-04 "Standard regulation on the labor protection service". 26.DNAP 0.00-6.23-92 "Procedure for certification of workplaces for working conditions".
16. NAPB A.01.001-2004. Fire safety rules in Ukraine.
17. Aslan, I., & Morsunbul, D. Preferences for job life quality and motivation in healthcare. Marketing and Management of Innovations. №2. P. 79-93.
18. Saifullah Hakro, Li Jinshan. Workplace Employees' Annual Physical Checkup and During Hire on the Job to Increase Health-care Awareness Perception to Prevent Disease Risk: A Work for Policy-Implementable Option Globally. Safety and Health at Work. №10. 2018. P. 132-140.
19. Mark A. Friend, James P. Kohn. Fundamentals of Occupational Safety and Health. Lanham, Toronto, Plymouth: The Scarecrow Press 2007. 506 p.

Electronic information resources:

1. Ministry of Health of Ukraine
http://www.moz.gov.ua/ua/portal/dn_20050719_360.html
2. World Health Organization <http://www.who.int/>
3. Occupational Safety and Health Administration (OSHA) <https://www.osha.gov/workers>

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4. The National Institute for Occupational Safety and Health (NIOSH)
<https://www.cdc.gov/niosh/index.htm>
5. National Scientific Medical Library of Ukraine <http://library.gov.ua/>
6. National Library of Ukraine named after V.I. Of Vernadsky <http://www.nbu.gov.ua/>
7. HTA [E-resource]. <https://www.hta.ua>
8. FDA [E-resource]. - Access:<https://www.fda.gov>
9. The magazine "Labor Protection Service" [E-resource]. <https://www.sop.com.ua/>
10. The magazine "Handbook of labor protection specialist" [E-resource] <https://esop.mcfra.ua/>

ASSESSMENT

Forms and methods of current control:

Current control: oral questioning, testing, evaluation of practical skills, solving situational tasks, evaluation of activity in the classroom.

Final control: *credit*

Assessment of the ongoing learning activity at the practical class:

1. Assessment of the theoretical knowledge on the theme:
 - methods: individual survey on the theme, participation of the students in the discussion of problem situations; assessment of performance of tests on the theme;
 - the maximum score – 5, the minimum score – 3, the unsatisfactory score – 2.
2. Assessment of practical skills on the theme:
 - methods: assessment of the solution of situational tasks (including calculation) on the theme;
 - the maximum score – 5, the minimum score – 3, the unsatisfactory score – 2.

Criteria for ongoing assessment in a practical lesson

Rating	Evaluation criteria
"5"	The applicant is fluent in the material, actively participates in the discussion and solution of the situational/case problem, logically expresses and argues his/her thoughts on the topic of the lesson.
"4"	The applicant has a good command of the material, participates in the discussion and solution of the situational/case problem, and expresses and argues his/her opinions on the topic of the lesson well.
"3"	The applicant does not have sufficient knowledge of the material, participates uncertainly in the discussion and solution of the situational/case problem, and expresses opinions on the topic of the lesson with significant errors.
"2"	The applicant does not possess the material, does not participate in the discussion and solution of the situational/case problem, and does not express opinions on the topic of the lesson.

A credit is issued to an applicant who has completed all the tasks of the work program of the academic discipline, actively participated in practical classes, completed and defended an individual assignment, and has a current average grade of at least 3.0 and has no academic debt.

Test is carried out: in the last lesson before the start of the examination session. The passing grade is the arithmetic mean of all components on a traditional four-point scale and has a value that is rounded using the statistical method to two decimal places.

INDEPENDENT WORK OF HIGHER EDUCATION STUDENTS

Independent work includes studying the recommended core and additional literature, working with electronic information resources, preparing for practical classes, and preparing reports.

Students' independent work involves mastering the material, preparing for the performance and defense of practical tasks, preparing for ongoing and final assessments, completing practice tests, and searching for information from literary sources and the Internet.

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COURSE POLICY

Policy on Deadlines and Retaking:

- Missed classes due to unexcused reasons must be made up according to the schedule with the assigned instructor.
- Absences for valid reasons may be made up individually with permission from the Dean's Office.
- Retaking unsatisfactory assessments is allowed on consultation and make-up days; in the case of distance learning – within the period agreed upon with the instructor.

Academic Integrity Policy:

Students are required to adhere to academic integrity principles, including:

- Independent completion of all types of academic tasks, assignments, and assessments as specified in the course syllabus.
- Proper citation of sources when using others' ideas, developments, statements, or data.
- Compliance with copyright and related legislation.
- Providing accurate information about one's own academic (research) achievements, including applied methods and sources of information.

Unacceptable behaviors in the learning process include:

- Using family or professional connections to receive favorable grades or advantages in academic or research activities.
- Use of unauthorized materials or devices during assessments (e.g., cheat sheets, notes, micro-earphones, phones, smartphones, tablets, etc.).
- Substitution of identity during testing or assessments.

For violations of academic integrity, students may be subject to the following academic sanctions:

- Grade reduction for oral responses, test assignments, case-based tasks, individual projects, or exams.
- Retaking evaluations (e.g., tests, case tasks, projects, exams).
- Assignment of additional assessments (extra case tasks, projects, tests, etc.).
- Additional review of other academic work submitted by the student in question.

Attendance and Tardiness Policy:

Health Status: Students suffering from acute infectious diseases, including respiratory illnesses, are not permitted to attend class.

Tardiness: Late arrivals are not acceptable. A student who arrives late may stay for the class, but if the instructor marks "absent" in the journal, the class must be made up in the regular manner.

Use of Mobile Devices:

The use of any mobile devices during class is strictly prohibited. If violated, the student must leave the class, and the absence ("absent" mark) must be made up.

Mobile devices may be used only with the instructor's permission if they are necessary to complete an assignment.

Classroom Behavior:

The conduct of students and instructors must be professional and calm, strictly adhering to the rules outlined in the Regulation on Academic Integrity and Ethics of Academic Relations of Odesa National Medical University, the Code of Academic Ethics and Community Relations, and the Regulation on the Prevention and Detection of Academic Plagiarism in research and educational work of students, scholars, and instructors of the University.