



Kharkiv National Medical University

ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

ELECTIVE EDUCATIONAL COMPONENT SYLLABUS

ADVERSE DRUG REACTIONS (SIDE EFFECTS OF MEDICATION)

Specialty:**221 "Dentistry"**

Educational and professional program:**Dentistry**

Component code: **32**

Higher education level:**second (master's)**

Form of education:**full-time (day)**

Year of study: **3**

Semester(s):**V (autumn)**

Type of educational component:**elective**

Academic year:**2026-2027**

Volume:**3 ECTS credits (90 years)**

Training sessions:**practical classes, consultations**

Final control: Credit (Pass/Fail)

Prerequisites: **Medical biology; histology, cytology and embryology; physiology.**

Department/division:**Department of Medical Diagnostic Technologies, 4 Speyer St., 1st floor**

Head of the educational component: Prof.**Bereznyakova M.E.**,

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Educational component page in the KNU Distance Learning System (Moodle):
<https://distance.knu.edu.ua/course/view.php?id=3200>

DESCRIPTION OF THE EDUCATIONAL COMPONENT

"Adverse Drug Reactions" includes information on assessing the effectiveness and safety of medicines and the side effects of medications on laboratory test results.

Course Purpose: To provide knowledge on factors affecting laboratory parameters, mechanisms of adverse drug reaction development, and the operational principles of equipment in various laboratory profiles.

Learning Outcomes:

1. Determine the approach, plan, type, and principle of treatment for dental diseases (according to List 2) by making informed decisions based on existing algorithms and standard schemes.
2. Treat major dental diseases according to existing algorithms and standard schemes under the supervision of a chief physician in a medical institution (according to List 2.1).

CONTENT OF THE EDUCATIONAL COMPONENT

List of topics and (Unforeseen):

Practical Classes (20 hours):

1. Fundamentals of Ukrainian legislation on medicines. Main methods of preventing adverse drug reactions. Classification of side effects.
2. Drugs affecting organ and tissue functions. Changes in laboratory parameters.
3. Drugs affecting metabolic processes and the internal environment of the body.
4. Drugs with antimicrobial and antiparasitic activity.
5. Special purpose medicines. Side effects of local and general anaesthesia. Overdose of local anaesthetics (lidocaine, procaine, etc.).

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List of Topics for Student Independent Work (70 hours)

1. **Basic principles** and approaches to the treatment of drug poisoning.
2. **Side effects** of drugs used to treat Central Nervous System (CNS) diseases.
3. **Modern classification** of neuroleptics, tranquillisers, sedatives, and antidepressants.
4. **Classification** of hypnotics, anti-parkinsonian, and anti-epileptic drugs.
5. **Pharmacological features** of hypnotics: onset and duration of action, after-effects, cumulation, addiction, drug dependence, and side effects.
6. **Clinical presentation** of acute poisoning with hypnotics and emergency medical care.
7. **Adverse effects** of anti-epileptic and anti-parkinsonian drugs.
8. **Toxicology of ethyl alcohol**: Clinical features of acute and chronic poisoning and first aid measures.
9. **Pharmacodynamics of disulfiram**: Side effects of neuroleptics, tranquillisers, sedatives, antidepressants, and psychostimulants.
10. **Antidotes for overdose**: Mechanism of action of **flumazenil** (antidote for hypnotics and tranquillisers).
11. **Emergency care** for local **anaesthetic** overdose. **Management algorithm** for anaphylactic shock and methods for preventing adverse drug reactions.
12. **Impact of inhalation anaesthesia** agents on the cardiovascular system, respiration, metabolism, and thermoregulation.

VTS is aimed at deepening and consolidating theoretical knowledge obtained during classroom training and contributes to the formation of professional competencies. The results of VTS are subject to control and are included in the final knowledge control.

Consultations: online, with prior registration on the course page in the Distance Learning System.

Teaching methods: performing exercises and practical work, solving situational tasks and cases, standardized patient method

EVALUATION

Current educational activities (PND). Assessment of the success of education seekers is carried out in accordance with the Instructions for assessing the educational activities of higher education seekers at KhNMU (<https://knmu.edu.ua/documents/normatyvni-dokumenty-navchalnogo-proczesu/>). The grade for the practical or final lesson is from 2 to 5 points. Submitting assignments late for unwarranted reasons entails a reduction in the grade according to the percentage of lateness in time from the time of completing the assignment. Assignments are checked within 24 hours. Grades are posted in the electronic journal. Unsatisfactory grades are worked out in accordance with the Regulations on the procedure for working out academic classes by students of KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_vidprac_zaniat.pdf).

At the end of the semester, the average grade for the semester is converted into a multi-point grade (70–120 points) in accordance with Table 1 of the Grading Instructions (see above). The arithmetic average GPA for both semesters is **general educational activities (GED)**.

Individual tasks (FROM) are rated up to 10 points.

Final control. The condition for admission to the test is to score 70 CIS points.

Discipline assessment (OD). The form of control is "credit" and it is assumed that the LND will be taken into account. The points for the LND are calculated as the arithmetic average of the grades for all semesters of studying the discipline (with an accuracy of one hundredth) according to table 2, automatically within the framework of the functionality of the electronic journal of the ACS. The LND is converted into a multi-point scale according to table 2 (Appendix 2) from 120 to 200 points and marked - "credited", "not credited".

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Appealing the results of the final control is carried out in accordance with the procedure established at KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_apel_kontrol.pdf).

EDUCATION COMPONENT POLICIES

Recommendations for course work: take an active part in all forms of work in the classroom, dedicate 1-2 hours daily for independent work and preparation for classes, asking questions during classes, attend consultations, submit assignments on time, and complete all forms of control.

Attending classes. Attendance at lectures and practical classes is mandatory. The uniform for offline classes is a white medical gown. If you are more than 5 minutes late, you may not be allowed to attend the class. Missed classes are made up in accordance with the Regulations on the procedure for students of KhNMU to complete classes (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_vidprac_zaniat.pdf).

Academic integrity. KhNMU stands on positions of zero tolerance for manifestations of academic dishonesty. Any violations of the principles of academic integrity entail responsibility in the manner established by the KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_ad-1.pdf).

Use of electronic gadgets and artificial intelligence tools is allowed only with the permission of the teacher.

Policy on individuals with special educational needs. Applicants with special educational needs should contact a teacher to develop an individual educational trajectory.

Teacher response time: 24 years old.

Technical requirements for working on the course:

- access to a computer, laptop, tablet or smartphone
- corporate Google account with your own photo
- skills in working with Google Workspace (Google Meet, Docs, Sheets, Slides, Forms) and Moodle

Technical support: ASU (ev.shevtsov@knmu.edu.ua), Google (tehotdelknmu@gmail.com), Moodle (al.korol@knmu.edu.ua)

RECOMMENDED SOURCES

1. Side effects of drugs: textbook: for students of higher medical education institutions / Igor Fedorovych Belenichev, Nadiya Oleksandrivna Gorchakova, Nina Viktorivna Bukhtiarova, I. B. Samura, T. A. Bukhtiarova; Zaporizhzhya State Medical University, National Academy of Medical Sciences of Ukraine, Institute of Pharmacology and Toxicology, State Expert Center of the Ministry of Health of Ukraine; ed. V. O. Parfenyuk. – Vinnytsia: Nova kniga, 2021. – 355 p.: tab.

2. Side effects of drugs. Textbook. / Posokhova K.A., Oleshchuk O.M., Korda M.M.; Ukrmedknyga, Ternopil, 2023. – 288 p.

2. Ostrovska, G., Sydorenko, A., Chechotina, S., Lutsenko, R., & Petrova, T. (2025). SIDE EFFECTS OF DRUGS: DENTAL ASPECTS. Current Problems of Modern Medicine: Bulletin of the Ukrainian Medical Stomatological Academy, 25(2), 278-282. <https://doi.org/10.31718/2077-1096.25.2.278>

2. Lutsenko, O., Ostrovska, G., Lavreniuk, Y., Petrova, T., & Lutsenko, R. (2024). RESEARCH OF THE PROBLEM OF ANTIBIOTIC RESISTANCE AT THE REGIONAL LEVEL. Current Problems of Modern Medicine: Bulletin of the Ukrainian Medical and Dental Academy, 24(2), 31-35. <https://doi.org/10.31718/2077-1096.24.2.31>

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