


Volodymyr GELMBOLDT
“29” august 2024 year

CALENDAR - THEMATIC PLAN OF PRACTICAL CLASSES
From the course "Pharmaceutical Chemistry" for III – year students
Faculty of Pharmacy for the 2024-2025 academic year

No i/o	The topic of the lesson and its content	Volume in hours	Group	Who is conducting	Class equipment	Date of the event	Venue
1	2	3	4	5	6	7	8
1.	<i>The subject and tasks of pharmaceutical chemistry.</i> The system of evaluation of the quality of medicinal products. Stability of the composition as a necessary condition for all stages of the existence of the medicinal product.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
2.	<i>Identification of medicinal substances</i> of an inorganic nature according to the DFU.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
3.	<i>Laboratory work:</i> Analysis of cations and anions.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
4.	<i>Analysis of medicinal substances</i> for the limit level of ion impurities.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
5.	<i>Laboratory work:</i> Analysis of the limit level of ion impurities.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
6.	<i>Identification of medicinal substances</i> of organic nature by functional groups (functional analysis).	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
7.	<i>Laboratory work:</i> Analysis by functional groups.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department

8.	Solving situational and test tasks on the Analysis of medicinal substances of an inorganic nature and functional analysis.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
9.	<i>Methods of analysis</i> of the quantitative content of medicinal products.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
10.	<i>Gravimetric analysis</i> of medicines.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
11.	<i>Titrimetric methods of analysis.</i> Classification of methods. Acid-base titration in an aqueous medium.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
12.	<i>Acid-base titration</i> in non-aqueous medium.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
13.	<i>Laboratory work:</i> Quantitative determination of hydrochloric acid.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
14.	<i>Titrimetric precipitation methods. Methods of complex formation.</i>	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
15.	<i>Laboratory work:</i> Quantitative determination of the substance Sodium chloride by Mohr's method.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
16.	<i>Laboratory work:</i> Quantitative determination of magnesium sulfate by complexometry.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
17.	<i>Redox titration.</i>	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
18.	<i>Laboratory work:</i> Quantitative determination of 3% hydrogen peroxide solution by permanganometry.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department

19.	Solving situational and test tasks on Methods of quantitative analysis of the content of medicinal products.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
20.	<i>Spectral methods</i> of drug analysis.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
21.	<i>Chromatographic methods</i> of drug analysis.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
22.	<i>Optical methods</i> of drug analysis.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
23	Laboratory work: Quantitative determination of Glucose solution d/in. 40% 20 ml by the method of polarimetry.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
24.	<i>Express analysis</i> of single-component and complex medicines.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
25.	Solving situational and test tasks on Physico-chemical methods of analysis.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
26.	Principles of classification of medicinal products , their nomenclature. Structure-activity relationship in the creation and analysis of medicinal products. The main ways of drug metabolism. Factors affecting metabolic processes. Prodrugs.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
27.	Nonsteroidal anti-inflammatory drugs (NSAIDs). Sodium salicylate, acetylsalicylic acid, metamizole sodium salt, butadione, paracetamol, sodium diclofenac.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
28.	Laboratory work: Analysis of Analgin tab. 500 mg.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
29.	Narcotic analgesics and their analogues. Morphine hydrochloride, codeine, codeine phosphate, fentanyl, promedol.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department

30.	Sleep aids. Derivatives of barbituric acid, chloral hydrate, bromisoval.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
31.	Means for anesthesia. Medical ether, flurothane, nitrous oxide, sodium thiopental, hexenal.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
32.	Solving situational and test tasks on the pharmaceutical analysis of non-steroidal anti-inflammatory drugs, narcotic analgesics, hypnotics, anesthetics.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
33.	Psychotropic drugs. Part 1. Neuroleptics: phenothiazine derivatives, chlorprothixene, haloperidol. Antidepressants: imizin, amitriptyline, nialamide, transamine.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
34.	Psychotropic drugs. Part 2. Tranquilizers: benzodiazepine derivatives, meprotran, amisil.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
35.	Psychotropic drugs. Part 3. Sedatives: sodium and potassium bromide. Psychostimulants: phenamine, pyridrol, sodium caffeine benzoate, cocaine hydrochloride.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
36.	Anticonvulsant and antiepileptic drugs. Phenobarbital, carbamazepine, difenin, clonazepam, hexamidine, sodium valproate.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
37.	Means for the treatment of parkinsonism. Levodopa, bromocriptine, selegiline, mydantan, cyclodol.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
38.	Solving situational and test tasks on the pharmaceutical analysis of psychotropic drugs, anticonvulsant and antiepileptic drugs, drugs for the treatment of parkinsonism.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
39.	Emetics and antiemetics. Emetics: copper sulfate pentahydrate, zinc sulfate heptahydrate. Antiemetics: scopolamine, diprazine, stageperazine, tryphazine.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
40.	Laboratory work: Analysis of the substance Copper sulfate pentahydrate.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department

41.	Means for the treatment of cough. Codeine, Codeine phosphate, ethylmorphine hydrochloride, libexin.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
42.	Nootropic drugs. Piracetam, GABA, aminalon, picamilon, glycine.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
43.	Antihistamines. Diphenhydramine (diphenhydramine hydrochloride), suprastin, diazolin, diprazine.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
44.	Laboratory work: Analysis of Diphenhydramine solution d/in. 1% 1 ml.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
45.	Solving situational and test tasks on the pharmaceutical analysis of emetics and antiemetics, means for the treatment of cough, nootropics, antihistamines.	2	3-5	Khrystyna HOLUBCHYK	Presentation Laboratory equipment Reagents	according to the schedule	department
Total: practical - 90 hours.							

**The head of the educational part
of the Department of Pharmaceutical Chemistry
and Drug Technology**



Oleksii NIKITIN