
		<b>CALENDAR-THEMATIC PLAN OF LECTURES</b> <b>Biological chemistry for 2-d course</b> <b>in specialty 226 Pharmacy, Industrial</b> <b>Pharmacy (Language of instructions – English)</b> <b>ΦΜ22 (4,10Δ)αγγλ –01 autumn semester, 2023-2024 a.y.</b>		
No	Date	Lesson Name	Hours	Lecturer
<b>MODULE 1. GENERAL PRINCIPLES OF METABOLISM. ENZYMES AND PATHWAYS.</b>				
1.	13.03.2024	Amino Acids, Peptides, and Proteins. Tree-dimensional Structure of Proteins. Physical-chemical Properties of Proteins.	2	ass.prof. Seniuk I.V.
2.	27.03.2024	Conjugated Proteins: Hemoproteins, Glycoproteins. Structure, Functions, Biological Role. Conjugated Proteins: Proteoglycans, Lipoproteins, Metalloproteins, Phosphoproteins. Structure, Functions, Biological Role.	2	as.prof. Seniuk I.V.
3.	10.04.2024	Conjugated Proteins: Nucleoproteins and Nucleic Acids. Structure, Functions, Biological Role. Enzymes: Structure, Classification and Functions. Vitamins as Coenzymes. Kinetics of Enzymatic Reactions.	2	ass.prof. Seniuk I.V.
4.	24.04.2024	Enzymes: Mechanism of action. Specificity and Regulation of Enzyme Activity. Introduction into Metabolism: High-energy Bond Compounds and ATP Synthesis. Citric Acid Cycle.	2	ass.prof. Seniuk I.V.
5.	08.05.2024	Introduction into Metabolism: Biological Oxidation. Regulation of Energetic Processes in the Cell. Other Types of Oxidation. Carbohydrate Metabolism: Carbohydrate Structure, Digestion and Absorption.	2	ass.prof. Seniuk I.V.
6.	15.05.2024	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation. Carbohydrate Metabolism Disorders. Lipid Metabolism: Lipid Structure, Digestion and Absorption.	2	as.prof. Seniuk I.V.
7.	22.05.2024	Lipid Metabolism: The Major Pathways of Lipid Metabolism and its Regulation. Lipid Metabolism Disorders. Protein Digestion and Amino Acid Absorption. Amino acid Putrefaction in Intestine and Detoxication its Products.	2	ass.prof. Seniuk I.V.
8.	05.06.2024	General Amino Acid Pathways and their Regulation. Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders	2	ass.prof. Seniuk I.V.
9.	12.06.2024	Heme biosynthesis, porphyrias. Heme catabolism, jaundices. Nucleotide digestion, synthesis and degradation.	2	ass.prof. Seniuk I.V.
<b>Total:</b>			18	

Note: lectures are given on Wednesday from 10:25 to 12:05 online.

Head of the Department of Biological Chemistry  
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Vira KRAVCHENKO

		<b>CALENDAR-THEMATIC PLAN OF PRACTICAL LESSONS</b> <b>Biological Chemistry for 2-d course</b> <b>specialty 226 Pharmacy, Industrial Pharmacy (Language of instructions – English)</b> <b>ΦΜ22(4,10Δ)ΑΝΓΛ-01 autumn semester, 2023-2024 a.y.</b>			
No	Date	Lesson Name	Volume in hours Type of activity	Knowledge Assessment System, points	
				min	max
<b>CONTENT MODULE 1. STRUCTURE AND FUNCTIONS OF BIOMOLECULES</b>					
1.	28.02.2024	Amino Acids, Peptides, and Proteins.	4	-	-
2.	13.03.2024	Tree-dimensional Structure of Proteins. Physical-chemical Properties of Proteins.	4	3	5
3.	20.03.2024	Structure and functions of Carbohydrates and Lipids	4	3	5
5.	27.03.2024	Conjugated Proteins: Glycoproteins, Lipoproteins, Hemoproteins, Metalloproteins, Phosphoproteins. Structure, Functions, Biological Role.	4	3	5
6.	03.04.2024	Conjugated Proteins: Nucleoproteins and Nucleic Acids. Structure, Functions, Biological Role.	4	4	6
7.	10.04.2024	Enzymes: Structure, Classification and Functions. Vitamins as Coenzymes. Kinetics of Enzymatic Reactions. Enzymes: Kinetics of Enzymatic Reactions. Enzymes. Mechanism of action.	4	3	5
8.	17.04.2024	Enzymes: Specificity and Regulation of Enzyme Activity. Medical Applications.	3	4	6
		<i>Final test of CM 1 assimilation</i>	1	10	18
<b>Total from CM 1</b>				<b>30</b>	<b>50</b>
<b>CONTENT MODULE 2. THE MAJOR METABOLIC PATHWAYS</b>					
9.	24.04.2024	Introduction into Metabolism: High-energy Bond Compounds and ATP Synthesis.	4	2	4
12.	01.05.2024	Citric Acid Cycle. Introduction into Metabolism: Biological Oxidation. Regulation of Energetic Processes in the Cell. Other Types of Oxidation.	4	3	5
13.	08.05.2024	Carbohydrate Metabolism: Carbohydrate Structure, Digestion and Absorption.	4	3	5
14.	15.05.2024	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation. Carbohydrate Metabolism Disorders.	4	3	5
15.	22.05.2024	Lipid Metabolism: Lipid Structure, Digestion and Absorption. Lipid Metabolism: The Major Pathways of Lipid Metabolism and its Regulation. Lipid Metabolism Disorders.	4	3	5
17.	29.05.2024	Protein Digestion and Amino Acid Absorption. Amino acid Putrefaction in Intestine and Detoxication its Products.	4	3	5
18.	05.06.2024	Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders. General Amino Acid Pathways and their Regulation.	4	3	5
20.	12.06.2024	<i>Final test of CM 2 assimilation</i>	3	10	16
		<i>Semester credit of the Module 1</i>	1		
<b>Total from CM 2</b>				<b>30</b>	<b>50</b>
<b>THE WHOLE NUMBER OF HOURS FOR THE MODULE 1:</b>			<b>60</b>	<b>60</b>	<b>100</b>

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