LECTURES PLANNED SCHEDULE
on Biological chemistry for 2-d year students
specialty 226 Pharmacy (Language of instructions – English)
Фм18(4,10д)англ –01-10
spring semester, 2020-2021 a.y.

##	Date	Lecture Topic	Hours	Lecturer
MODULE 1. GENERAL PRINCIPLES OF METABOLISM. ENZYMES AND PATHWAYS.				
1.	27.01.2021	Amino Acids, Peptides, and Proteins. Tree-dimensional Structure of Proteins.	1	ass.prof. Kravchenko G.B.
2.	03.02.2021	Physical-chemical Properties of Proteins.	1	ass.prof. Kravchenko G.B.
3	10.02.2021	Conjugated Proteins: Hemoproteins, Glycoproteins. Structure, Functions, Biological Role.	1	as.prof. Kravchenko G.B.
4	17.02.2021	Conjugated Proteins: Proteoglycans, Lipoproteins, Metalloproteins, Phosphoproteins. Structure, Functions, Biological Role.	1	ass.prof. Kravchenko G.B.
5	24.02.2021	Conjugated Proteins: Nucleoproteins and Nucleic Acids. Structure, Functions, Biological Role.	1	ass.prof. Kravchenko G.B.
6	03.03.2021	Enzymes: Structure, Classification and Functions. Vitamins as Coenzymes. Kinetics of Enzymatic Reactions.	1	ass.prof. Kravchenko G.B.
7	10.03.2021	Enzymes: Mechanism of action. Specificity and Regulation of Enzyme Activity.	1	ass.prof. Kravchenko G.B.
8	17.03.2021	Introduction into Metabolism: High-energy Bond Compounds and ATP Synthesis. Citric Acid Cycle.	1	ass.prof. Kravchenko G.B.
9	24.03.2021	Introduction into Metabolism: Biological Oxidation. Regulation of Energetic Processes in the Cell. Other Types of Oxidation.	1	ass.prof. Kravchenko G.B.
10	31.03.2021	Carbohydrate Metabolism: Carbohydrate Structure, Digestion and Absorption.	1	ass.prof. Kravchenko G.B.
11	07.04.2021	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation. Carbohydrate Metabolism Disorders.	1	as.prof. Kravchenko G.B.
12	14.04.2021	Lipid Metabolism: Lipid Structure, Digestion and Absorption.	1	ass.prof. Kravchenko G.B.
13	21.04.2021	Lipid Metabolism: The Major Pathways of Lipid Metabolism and its Regulation. Lipid Metabolism Disorders.	1	ass.prof. Kravchenko G.B.
14	28.04.2021	Protein Digestion and Amino Acid Absorption. Amino acid Putrefaction in Intestine and Detoxication its Products.	1	as.prof. Kravchenko G.B.
15	05.05.2021	General Amino Acid Pathways and their Regulation. Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders.	1	ass.prof. Kravchenko G.B.
16	12.05.2021	Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders	1	ass.prof. Kravchenko G.B.
17	19.05.2021	Heme biosynthesis, porphyrias. Heme catabolism, jaundices.	1	ass.prof. Kravchenko G.B.

18	26.05.2021	Nucleotide digestion, synthesis and degradation.	1	ass.prof. Kravchenko G.B.
		Total:	18	

Note: lectures are given on Tuesday from 09:25 to 10:10 online at Zoom.

Head of the biological chemistry department,
professor _____ Kravchenko V.M.

PRACTICAL TRAINING PLANNED SCHEDULE
on ___Biological Chemistry____ for ___2-d year__students
specialty 226 Pharmacy, industrial pharmacy (Language of instructions – English)
Фм18(4,10д)англ-03, 04
spring semester, 2020-2021 a.y.

##	Date	Topic	Hours	Points	
				min	max
CONTENT MODULE 1. STRUCTURE AND FUNCTIONS OF BIOMOLECULES.					
1	**25.01.2021**	Amino Acids, Peptides, and Proteins.	3	-	-
2	**01.02.2021**	Tree-dimensional Structure of Proteins.	3	1	3
3	**08.02.2021**	Physical-chemical Properties of Proteins.	3	1	3
4	**15.02.2021**	Conjugated Proteins: Hemoproteins, Glycoproteins. Structure, Functions, Biological Role.	3	1	3
5	**22.02.2021**	Conjugated Proteins: Proteoglycans, Lipoproteins, Metalloproteins, Phosphoproteins. Structure, Functions, Biological Role.	3	1	3
6	**01.03.2021**	Conjugated Proteins: Nucleoproteins and Nucleic Acids. Structure, Functions, Biological Role.	3	1	3
7.	**08.03.2021**	Enzymes: Structure, Classification and Functions. Vitamins as Coenzymes. Kinetics of Enzymatic Reactions.	3	1	3
8.	**15.03.2021**	Enzymes: Kinetics of Enzymatic Reactions. Enzymes. Mechanism of action.	3	1	3
9.	**22.03.2021**	Enzymes: Specificity and Regulation of Enzyme Activity. Medical Applications.	3	1	2
		Final content module control CM 1		2	3
			Total for CM 1	18	30
CONTENT MODULE 2. THE MAJOR METABOLIC PATHWAYS.					
10	**29.03.2021**	Introduction into Metabolism: High-energy Bond Compounds and ATP Synthesis. Citric Acid Cycle.	3	1	2
11	**05.04.2021**	Introduction into Metabolism: Biological Oxidation. Regulation of Energetic Processes in the Cell. Other Types of Oxidation.	3	2	3
12	**12.04.2021**	Carbohydrate Metabolism: Carbohydrate Structure, Digestion and Absorption.	3	2	3
13	**19.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation.	3	2	3
14	**26.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation. Carbohydrate Metabolism Disorders.	3	2	4
15	**03.05.2021**	Lipid Metabolism: Lipid Structure, Digestion and Absorption.	3	1	3
16	**10.05.2021**	Lipid Metabolism: The Major Pathways of Lipid Metabolism and its Regulation. Lipid Metabolism Disorders.	3	1	2

17	**17.05.2021**	Protein Digestion and Amino Acid Absorption. Amino acid Putrefaction in Intestine and Detoxication its Products.	3	2	3
18	**24.05.2021**	General Amino Acid Pathways and their Regulation.	3	2	3
19	**30.05.2021**	Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders.	3	1	1
		Final content module control CM 2		2	3
			Total for CM 2	18	30
20	**07.06.2021**	***Final Module 1 control: «General principles of metabolism. Enzymes and pathways»***	3	25	40
		Improving of Module 1 rating «General principles of metabolism. Enzymes and pathways».			
			TOTAL RATING FOR MODULE 1:	**60**	**60**	**100**

Head of the biological chemistry department,
Professor _____ Kravchenko V.M.

PRACTICAL TRAINING PLANNED SCHEDULE
on ___Biological Chemistry____ for ___2-d year__students
specialty 226 Pharmacy, industrial pharmacy (Language of instructions – English)
Фм18(4,10д)англ-05, 06, 09
spring semester, 2020-2021 a.y.

##	Date	Topic	Hours	Points	
				min	max
CONTENT MODULE 1. STRUCTURE AND FUNCTIONS OF BIOMOLECULES.					
1	**26.01.2021**	Amino Acids, Peptides, and Proteins.	3	-	-
2	**02.02.2021**	Tree-dimensional Structure of Proteins.	3	1	3
3	**09.02.2021**	Physical-chemical Properties of Proteins.	3	1	3
4	**16.02.2021**	Conjugated Proteins: Hemoproteins, Glycoproteins. Structure, Functions, Biological Role.	3	1	3
5	**23.02.2021**	Conjugated Proteins: Proteoglycans, Lipoproteins, Metalloproteins, Phosphoproteins. Structure, Functions, Biological Role.	3	1	3
6	**02.03.2021**	Conjugated Proteins: Nucleoproteins and Nucleic Acids. Structure, Functions, Biological Role.	3	1	3
7.	**09.03.2021**	Enzymes: Structure, Classification and Functions. Vitamins as Coenzymes. Kinetics of Enzymatic Reactions.	3	1	3
8.	**16.03.2021**	Enzymes: Kinetics of Enzymatic Reactions. Enzymes. Mechanism of action.	3	1	3
9.	**23.03.2021**	Enzymes: Specificity and Regulation of Enzyme Activity. Medical Applications.	3	1	2
		Final content module control CM 1		2	3
			Total for CM 1	18	30
CONTENT MODULE 2. THE MAJOR METABOLIC PATHWAYS.					
10	**30.03.2021**	Introduction into Metabolism: High-energy Bond Compounds and ATP Synthesis. Citric Acid Cycle.	3	1	2
11	**06.04.2021**	Introduction into Metabolism: Biological Oxidation. Regulation of Energetic Processes in the Cell. Other Types of Oxidation.	3	2	3
12	**13.04.2021**	Carbohydrate Metabolism: Carbohydrate Structure, Digestion and Absorption.	3	2	3
13	**20.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation.	3	2	3
14	**27.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation. Carbohydrate Metabolism Disorders.	3	2	4
15	**04.05.2021**	Lipid Metabolism: Lipid Structure, Digestion and Absorption.	3	1	3
16	**11.05.2021**	Lipid Metabolism: The Major Pathways of Lipid Metabolism and its Regulation. Lipid Metabolism Disorders.	3	1	2

17	**18.05.2021**	Protein Digestion and Amino Acid Absorption. Amino acid Putrefaction in Intestine and Detoxication its Products.	3	2	3
18	**25.05.2021**	General Amino Acid Pathways and their Regulation.	3	2	3
19	**01.06.2021**	Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders.	3	1	1
		Final content module control CM 2		2	3
			Total for CM 2	18	30
20	**08.06.2021**	***Final Module 1 control: «General principles of metabolism. Enzymes and pathways»***	3	25	40
		Improving of Module 1 rating «General principles of metabolism. Enzymes and pathways».			
			TOTAL RATING FOR MODULE 1:	**60**	**60**	**100**

Head of the biological chemistry department,
Professor _____ Kravchenko V.M.

PRACTICAL TRAINING PLANNED SCHEDULE
on ___Biological Chemistry____ for ___2-d year__students
specialty 226 Pharmacy, industrial pharmacy (Language of instructions – English)
Фм18(4,10д)англ-07, 08
spring semester, 2020-2021 a.y.

##	Date	Topic	Hours	Points	
				min	max
CONTENT MODULE 1. STRUCTURE AND FUNCTIONS OF BIOMOLECULES.					
1	**28.01.2021**	Amino Acids, Peptides, and Proteins.	3	-	-
2	**04.02.2021**	Tree-dimensional Structure of Proteins.	3	1	3
3	**11.02.2021**	Physical-chemical Properties of Proteins.	3	1	3
4	**18.02.2021**	Conjugated Proteins: Hemoproteins, Glycoproteins. Structure, Functions, Biological Role.	3	1	3
5	**25.02.2021**	Conjugated Proteins: Proteoglycans, Lipoproteins, Metalloproteins, Phosphoproteins. Structure, Functions, Biological Role.	3	1	3
6	**04.03.2021**	Conjugated Proteins: Nucleoproteins and Nucleic Acids. Structure, Functions, Biological Role.	3	1	3
7.	**11.03.2021**	Enzymes: Structure, Classification and Functions. Vitamins as Coenzymes. Kinetics of Enzymatic Reactions.	3	1	3
8.	**18.03.2021**	Enzymes: Kinetics of Enzymatic Reactions. Enzymes. Mechanism of action.	3	1	3
9.	**25.03.2021**	Enzymes: Specificity and Regulation of Enzyme Activity. Medical Applications.	3	1	2
		Final content module control CM 1		2	3
			Total for CM 1	18	30
CONTENT MODULE 2. THE MAJOR METABOLIC PATHWAYS.					
10	**01.04.2021**	Introduction into Metabolism: High-energy Bond Compounds and ATP Synthesis. Citric Acid Cycle.	3	1	2
11	**08.04.2021**	Introduction into Metabolism: Biological Oxidation. Regulation of Energetic Processes in the Cell. Other Types of Oxidation.	3	2	3
12	**15.04.2021**	Carbohydrate Metabolism: Carbohydrate Structure, Digestion and Absorption.	3	2	3
13	**22.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation.	3	2	3
14	**29.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation. Carbohydrate Metabolism Disorders.	3	2	4
15	**06.05.2021**	Lipid Metabolism: Lipid Structure, Digestion and Absorption.	3	1	3
16	**13.05.2021**	Lipid Metabolism: The Major Pathways of Lipid Metabolism and its Regulation. Lipid Metabolism Disorders.	3	1	2

17	**20.05.2021**	Protein Digestion and Amino Acid Absorption. Amino acid Putrefaction in Intestine and Detoxication its Products.	3	2	3
18	**27.05.2021**	General Amino Acid Pathways and their Regulation.	3	2	3
19	**03.06.2021**	Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders.	3	1	1
		Final content module control CM 2		2	3
			Total for CM 2	18	30
20	**10.06.2021**	***Final Module 1 control: «General principles of metabolism. Enzymes and pathways»***	3	25	40
		Improving of Module 1 rating «General principles of metabolism. Enzymes and pathways».			
			TOTAL RATING FOR MODULE 1:	**60**	**60**	**100**

Head of the biological chemistry department,
Professor _____ Kravchenko V.M.

PRACTICAL TRAINING PLANNED SCHEDULE
on ___Biological Chemistry____ for ___2-d year__students
specialty 226 Pharmacy, industrial pharmacy (Language of instructions – English)
Фм18(4,10д)англ-01, 02
spring semester, 2020-2021 a.y.

##	Date	Topic	Hours	Points	
				min	max
CONTENT MODULE 1. STRUCTURE AND FUNCTIONS OF BIOMOLECULES.					
1	**29.01.2021**	Amino Acids, Peptides, and Proteins.	3	-	-
2	**05.02.2021**	Tree-dimensional Structure of Proteins.	3	1	3
3	**12.02.2021**	Physical-chemical Properties of Proteins.	3	1	3
4	**19.02.2021**	Conjugated Proteins: Hemoproteins, Glycoproteins. Structure, Functions, Biological Role.	3	1	3
5	**26.02.2021**	Conjugated Proteins: Proteoglycans, Lipoproteins, Metalloproteins, Phosphoproteins. Structure, Functions, Biological Role.	3	1	3
6	**05.03.2021**	Conjugated Proteins: Nucleoproteins and Nucleic Acids. Structure, Functions, Biological Role.	3	1	3
7.	**12.03.2021**	Enzymes: Structure, Classification and Functions. Vitamins as Coenzymes. Kinetics of Enzymatic Reactions.	3	1	3
8.	**19.03.2021**	Enzymes: Kinetics of Enzymatic Reactions. Enzymes. Mechanism of action.	3	1	3
9.	**26.03.2021**	Enzymes: Specificity and Regulation of Enzyme Activity. Medical Applications.	3	1	2
		Final content module control CM 1		2	3
			Total for CM 1	18	30
CONTENT MODULE 2. THE MAJOR METABOLIC PATHWAYS.					
10	**02.04.2021**	Introduction into Metabolism: High-energy Bond Compounds and ATP Synthesis. Citric Acid Cycle.	3	1	2
11	**09.04.2021**	Introduction into Metabolism: Biological Oxidation. Regulation of Energetic Processes in the Cell. Other Types of Oxidation.	3	2	3
12	**16.04.2021**	Carbohydrate Metabolism: Carbohydrate Structure, Digestion and Absorption.	3	2	3
13	**23.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation.	3	2	3
14	**30.04.2021**	Carbohydrate Metabolism: The Major Pathways of Carbohydrate Metabolism and its Regulation. Carbohydrate Metabolism Disorders.	3	2	4
15	**07.05.2021**	Lipid Metabolism: Lipid Structure, Digestion and Absorption.	3	1	3
16	**14.05.2021**	Lipid Metabolism: The Major Pathways of Lipid Metabolism and its Regulation. Lipid Metabolism Disorders.	3	1	2

17	**21.05.2021**	Protein Digestion and Amino Acid Absorption. Amino acid Putrefaction in Intestine and Detoxication its Products.	3	2	3
18	**28.05.2021**	General Amino Acid Pathways and their Regulation.	3	2	3
19	**04.06.2021**	Ammonium Detoxication. Specific Pathways of Amino Acid Metabolism and its Disorders.	3	1	1
		Final content module control CM 2		2	3
			Total for CM 2	18	30
20	**11.06.2021**	***Final Module 1 control: «General principles of metabolism. Enzymes and pathways»***	3	25	40
		Improving of Module 1 rating «General principles of metabolism. Enzymes and pathways».			
			TOTAL RATING FOR MODULE 1:	**60**	**60**	**100**

Head of the biological chemistry department,
Professor _____ Kravchenko V.M.