

THE TIME-TABLE
of biological chemistry practical classes

2023/2024 acad. year, *autumn semester* for 2nd year students of the faculty of international students

№	Date	The topic of the practical class
1	11.09 – 16.09	<i>Preparatory class.</i> Introduction to Biochemistry. Modern biochemical methods of research. <i>Accident prevention technique.</i> LW: Devices and utensils in biochemical laboratory and rules to operate them.
2	18.09 – 23.09	<i>Structure and functions of proteins.</i> LW: Determining of total protein concentration in blood plasma by biuretic method.
3	25.09 – 30.09	<i>Enzymes-1.</i> Structure, properties, nomenclature and classification of enzymes. LW: Determining of α -amylase activity in blood plasma by Caraway unified method.
4	02.10 – 07.10	<i>Enzymes 2.</i> The mechanism of enzyme action. LW: Determining of γ -glutamyltransferase activity in blood plasma by optimized kinetic method.
5	09.10 – 14.10	<i>Enzymes 3.</i> Medical enzymology. LW: Determining of creatine kinase activity in blood plasma.
6	16.10 – 21.10	<i>Biological oxidation 1.</i> Krebs cycle. Ways of oxygen consumption in organism. LW: Determining of lactic acid concentration in blood plasma by enzymatic colorimetric method.
7	23.10 – 28.10	<i>Biological oxidation 2.</i> Tissue respiration. Oxidative phosphorylation. Microsomal and peroxide oxidation. LW: Determining of iron concentration in blood plasma by colorimetric method without deproteinization.
8	30.10 – 04.11	Control class №1 on partitions: “Introduction to Biochemistry. Structure and functions of proteins”, “Enzymology” and “Biological Oxidation”.
9	06.11 – 11.11	<i>Carbohydrates 1.</i> Digestion and absorption. Glycogen, fructose and galactose metabolism. LW: Determining of α -amylase activity in urine by enzymatic kinetic method.
10	13.11 – 18.11	<i>Carbohydrates 2.</i> Tissue carbohydrate metabolism. Anaerobic and aerobic glycolysis. LW: Determining of lactate dehydrogenase (LDH) activity in blood plasma.
11	20.11 – 25.11	<i>Carbohydrates-3.</i> Tissue carbohydrate metabolism. Gluconeogenesis. Pentosophosphate pathway. Blood glucose level regulation. LW: Determining of plasma glucose concentration by hexokinase method.
12	27.11 – 02.12	<i>Carbohydrates 4.</i> Pathology of carbohydrate metabolism. LW: Determining of glucose concentration in urine by glucose oxidase method.
13	04.12 – 09.12	Control class №2 on partition: “Biochemistry of Carbohydrates”.
14	11.12 – 16.12	<i>Lipids 1.</i> Structure, classification, and biological functions of lipids. Digestion and absorption. Lipoprotein metabolism. LW: Determining of high density lipoprotein (HDL) concentration in blood plasma.
15	18.12 – 23.12	<i>Lipids 2.</i> Tissue lipid metabolism: lipolysis, fatty acid β -oxidation, ketone bodies metabolism. LW: Determining of triglyceride concentration in blood plasma by enzymatic colorimetric method.
16	25.12 – 30.12	<i>Lipids-3.</i> Tissue lipid metabolism: lipid biosynthesis. Regulation and pathology of lipid metabolism. LW: Determining of total cholesterol concentration in blood plasma by enzymatic colorimetric method.
17	03.01 – 06.01	Control on partition: “Biochemistry of Lipids”.
18	08.01 – 13.01	Final class of the semester. Computer test on partitions: “Enzymology” and “Biological Oxidation”, “Biochemistry of Carbohydrates”, “Biochemistry of Lipids”.