

THE TIME-TABLE  
of **Biological Chemistry** classes  
for 2<sup>nd</sup> year students of the Faculty of International Students  
**third semester**, 2023/2024 academic year

№	DATE	TOPIC
1	08.02	<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	15.02	<i>Structure and functions of proteins.</i> LW: Determining of total protein concentration in blood plasma by biuretic method.
3	22.02	<i>Enzymes-1.</i> Structure, properties, nomenclature and classification of enzymes. LW: Determining of $\alpha$ -amylase activity in blood plasma by Caraway unified method.
4	29.02	<i>Enzymes-2.</i> The mechanism of enzyme action. LW: Determining of $\gamma$ -glutamyltransferase activity in blood plasma by optimized kinetic method.
5	07.03	<i>Enzymes-3.</i> Medical enzymology. LW: Determining of creatine kinase activity in blood plasma.
6	14.03	<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	21.03	<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 deproteinizing.
8	<b>28.03</b>	<b>Control class №1 on partitions:</b> “Introduction to Biochemistry. Structure and functions of proteins”, “Enzymology”, and “Biological Oxidation”.
9	04.04	<i>Carbohydrates-1.</i> Digestion and absorption. Glycogen, fructose and galactose metabolism. LW: Determining of $\alpha$ -amylase activity in urine by enzymatic kinetic method.
10	11.04	<i>Carbohydrates-2.</i> Tissue carbohydrate metabolism. Anaerobic and aerobic glycolysis. LW: Determining of lactate dehydrogenase (LDH) activity in blood plasma.
11	18.04	<i>Carbohydrates-3.</i> Tissue carbohydrate metabolism. Gluconeogenesis. Pentosophosphate pathway. Blood glucose level regulation. LW: Determining of glucose concentration in blood plasma by enzymatic colorimetric method.
12	25.04	<i>Carbohydrates-4.</i> Pathology of carbohydrate metabolism. LW: Glycemic curve plotting.
13	<b>02.05</b>	<b>Control class №2 on partition:</b> “Biochemistry of Carbohydrates”.
14	09.05	<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	16.05	<i>Lipids-2.</i> Tissue lipid metabolism: lipolysis, fatty acid $\beta$ -oxidation, ketone bodies metabolism. LW: Determining of triglyceride concentration in blood plasma by enzymatic colorimetric method.
16	23.05	<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	<b>30.05</b>	<b>Control class №3 on partition:</b> “Biochemistry of Lipids”.
18	<b>06.06</b>	<b>Computer test on partitions:</b> “Enzymology”, “Biological Oxidation”, “Biochemistry of Carbohydrates”, and “Biochemistry of Lipids”. <b>Final class of the semester.</b>