

MEDICAL BIOCHEMISTRY 1 2nd COURSE Academic year 2026/2027 (Winter semester)		
SEMINARS AND LABORATORY PRACTICALS		
WEEK	DATE	TOPIC
1.	14. 09. – 18. 09. 2026	Seminar: Basic calculations, structures and reactions of biomolecules (repetition of the 1 st year topics). Laboratory practical: Preparation and evaluation of p-nitrophenol calibration curve
2.	21. 09. – 25. 09. 2026	Seminar: Principles of metabolism regulation Laboratory practical: The effect of conditions on pepsin activity
3.	28. 09. – 02. 10. 2026	Seminar: Digestion and absorption of saccharides. Metabolism of glycogen (5-question test, lecture 1) Laboratory practical: Determination of glycogen in biological material
4.	05. 10. – 09. 10. 2026	Seminar: Metabolism of glucose (5-question test, lecture 2) Laboratory practical: Determination of activity of lactate dehydrogenase in biological material
5.	12. 10. – 16. 10. 2026	Seminar: Pentose phosphate pathway, metabolism of fructose, galactose, glucuronic acid, proteoglycans and glycoproteins (5-question test, lecture 3) Laboratory practical: Qualitative detection reaction of fructose and galactose
6.	19. 10. – 23. 10. 2026	Seminar: Formation of acetyl-CoA, citric acid cycle (5-question test, lecture 4) Laboratory practical: Enzymatic determination of glucose in biological material
7.	26. 10. – 30. 10. 2026	Seminar: Oxidation-reduction processes in living systems (5-question test, lecture 5, lecture 6) Laboratory practical: Determination of succinate dehydrogenase activity in biological material
8.	02. 11. – 06. 11. 2026	Seminar: Digestion and absorption of lipids, metabolism of fatty acids (5-question test, lecture 7) Laboratory practical: Determination of activity of lipase in serum
9.	09. 11. – 13. 11. 2026	Seminar: Metabolism of triacylglycerols, phospholipids and glycolipids (5-question test, lecture 8) Laboratory practical: Determination of serum triacylglycerols
10.	16. 11. – 20. 11. 2026	Seminar: Metabolism of cholesterol and bile acids (5-question test, lecture 9) Laboratory practical: Determination of the total cholesterol in serum
11.	23. 11. – 27. 11. 2026	Seminar: Metabolism of plasma lipoproteins (5-question test, lecture 10)
12.	30. 11. – 04. 12. 2026	Laboratory practical: Determination of HDL-cholesterol in serum, calculation of LDL-cholesterol, evaluation of lipid profile and its importance in diagnostics
13.	07. 12. – 11. 12. 2026	Credit-bearing test – 1 st retake; compensatory seminars and laboratory practicals, compensatory test
14.	14. 12. – 18. 12. 2026	Credit-bearing test – 2 nd retake; compensatory seminars and laboratory practicals, compensatory test