

	Week from	Lecture date	Lectures Seminary Room ÚLBLD (No. 3.074)	Teacher	Seminars Seminary Room ÚLBLD (No. 3.074)	Teacher	Practical Lessons	
			<i>Tuesdays 12.30-13.15</i>		<i>Tuesdays 13.30 - 15.00</i>		<i>Fridays 14.15-16.30</i>	
1	19. 2.	20. 2.	<i>21.2.-1.3. Anatomical dissections</i>					
2	26. 2.	27. 2.						
3	4. 3.	5. 3.	General features of metabolism. Bioenergetics.	Dr. Pláteník	Biologic oxidation, mitochondrial respiratory chain and oxidative phosphorylation	Dr. Pláteník		
4	11. 3.	12. 3.	The citric acid cycle.	Dr. Pláteník	Stereochemistry of saccharides	Dr. Pláteník	Saccharides I: Colored reactions of saccharides. Analysis of unknown saccharide.	
5	18. 3.	19. 3.	Digestion, absorption, storage and transport of saccharides.	Dr. Pláteník	Metabolism of saccharides.	Dr. Pláteník	Saccharides II: Acidic hydrolysis of starch. Substrate specificity of amylase and sucrase. Polarimetry of glucose and fructose.	
6	25. 3.	26. 3.	Regulation of metabolism of saccharides.	Dr. Pláteník	Overview of basic methods used in biochemical lab: photometry, chromatography, electrophoresis, blotting.	Dr. Pláteník	<i>Friday 29.3. Easter Holiday</i>	
7	1. 4.	2. 4.	Biomembranes. Composed lipids.	As. Vecka	Lipids: Biosynthesis and degradation of fatty acids	Doc. Křepela	Introduction to spectrophotometry: Absorption spectra of colored solutions. Calibration curve, factor calculation.	
8	8. 4.	9. 4.	Lipoproteins: Classification, properties and metabolism.	Dr. Vejražka	Relationships between metabolism of lipids and saccharides. Starvation	Dr. Pláteník	Saccharides III: Estimation of glycemia. Glucose and ketone bodies in urine.	
9	15. 4.	16. 4.	Steroids: Synthesis and metabolism. Steroid hormones. Bile acids.	Dr. Vecka	Metabolism of amino acids: Transamination, deamination, synthesis of urea.	Dr. Pláteník	Lipids: Estimation of total cholesterol and triacylglycerols. Demonstration of double bonds in fatty acids. Test for malondialdehyde.	
10	22. 4.	23. 4.			Revision Test: Core Metabolic Pathways			
11	29. 4.	30. 4.	Conversion of amino acids to biologically active derivatives.	Dr. Krtíl	Porphyrins and bile pigments	Doc. Křepela	Liver tests: Direct and indirect bilirubin. Estimation of aminotransferases.	
12	6. 5.	7. 5.	The connective tissue, bone and cartilage. Proteoglycans, collagen and elastin – metabolism.	Doc. Malbohan	Metabolism of calcium, phosphate, and other elements and vitamins necessary for mineralisation of bone and teeth.	Doc. Malbohan	Bone and teeth: Estimation of calcium and phosphate in serum and urine. Isoenzymes of alkaline phosphatase. Properties of dental hydroxyapatite.	
13	13. 5.	14. 5.	<i>Tuesday 14.5. Rector's Day</i>					Saliva: Demonstration of selected components
14	20. 5.	21. 5.	Saliva	Doc. Malbohan	Tooth: Chemical composition and structure	Doc. Malbohan	Practical Credit Test	
15	27. 5.						Credit	