

LABORATORY CLASSES4th Semester 2008

	<i>Date</i>	<i>Experiments</i>
1	18 Feb. 22 Feb.	Directions for laboratory work. Handling biological material. 1.1 Blood collection. 1.2 Blood processing. 1.3 Manual methods, pipetting. 1.3 Biochemical analyzers. 1.4 Interpretation of test results. 1.5 Test requisition forms
2	25 Feb. 29 Feb.	<u>Investigation of lipid and cholesterol metabolism</u> 2.1 Determination of total cholesterol in serum and blood. 2.2 Determination of blood triacylglycerols usány Reflotron . 2.3 Determination of HDL-cholesterol and LDL-cholesterol. 2.4 Calculation of LDL-cholesterol 2.5 Electrophoresis of serum lipoproteins.
3	3 Mar. 7 Mar.	<u>Investigations of glucose metabolism. Diabetes mellitus</u> 3.1 Enzymatic determination of serum glucose. 3.2 Determination of glycaemia by personal glucometer. 3.3 Oral glucose tolerance test (oGTT). 3.4 Detection and determination of glucose in urine. 3.5 Detection of ketone bodies in urine. 3.6 Determination of glycated haemoglobin (HbA1). 3.7 Late complications of diabetes – microalbuminuria.
4	10 Mar. 14 Mar.	<u>Investigations in liver disease I– Enzymes</u> 4.1 Determination of ALT catalytic concentration in serum. 4.2 Determination of AST catalytic concentration in serum. 4.3 Determination of ALP catalytic concentration in serum.
5	17 Mar. 21 Mar.	<u>Selected investigations in liver disease II – bile pigments and albumin</u> 5.1 Determination of total bilirubin in serum. 5.2 Detection of bilirubin in urine. 5.3 Detection of urobilinogens in urine. 5.4 Determination of serum albumin.
6	24 Mar. 28 Mar.	<u>Laboratory diagnostics of myocardial infarction</u> 6.1 Determination of creatine kinase catalytic concentration. 6.2 Determination of serum CK-MB catalytic concentration. 6.3 Determination of troponin T in blood. 6.4 Determination of blood myoglobin.
7	31 Mar. 4 Apr.	<u>Investigation of plasma proteins</u> 7.1 Determination of total protein by the biuret test. 7.2 Determination of blood albumin in serum. 7.3 Electrophoresis of serum proteins. 7.4 Assay for increased level of C-reactive protein. 7.5 Determination of serum IgE by ELISA method.
8	7 Apr. 11 Apr.	<u>Biochemical tests of renal function – I</u> 8.1 Investigation of urine by inspection and physical methods. 8.2 Determination of creatinine in serum and urine. 8.3 Measurement of glomerular filtration rate with creatinine. 8.4 Fractional reabsorption and excretion of water.
9	14 Apr.	<u>Biochemical tests of renal function – II</u> 9.1 Detection of proteinuria.

	18 Apr.	9.2 Urine test for haemoglobin (haemoglobinuria and haematuria). 9.3 Determination of protein concentration in urine. 9.4 Detection of microalbuminuria. 9.5 Determination of urea in serum and urine. 9.6 Approximate assessment of the nitrogen balance.
10	21 Apr. 25 Apr.	<u>Routine urinalysis. Test strips</u> 10.1 Multipurpose diagnostic strips in urinalysis. 10.2 Detection of addictive drugs in urine. 10.3 Detection of barbiturates in urine. 10.4 Detection of luteinizing hormone in urine
11	28 Apr. 2 May	<u>Examinations in in urolithiasis</u> 11.1 Solubility of uric acid. 11.2 Detection of uric acid by murexide reaction. 11.3 Simplified chemical analysis of renal calculi. 11.4 Determination of uric acid in serum and urine.
12	5 May 9 May	<u>Some investigations of the gastrointestinal tract</u> 12.1 Selected examinations of stokách functions. 12.2 Laboratoty tests in pankreas diseases. 12.3 Breath tests in gastroenterology. 12.4 Test of occult bleeding in gastrointestinal test.
13	12 May 16 May	Compensatory lesons
14	19 May 23 May	Compensatory lessons. Selected topics.
15	26 May 30 May	Credits.

Neglected lessons have to be made up <u>by the 15th of June.</u>
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Students are expected to come to the seminary room at least 5 minutes before the start of the lesson.

Attendance in lessons is obligatory. All absences must be justified through the Department of study affairs. Illness is usually the only acceptable excuse for absence from class and must be officially confirmed. After being absent the student must make up the given topics according to the teachers instructions. If the student has been absent from three or more lessons without serious reasons, the course –unit credit will be not given.

Conditions for giving the course-unit credit

- full attendance in the all lessons
- presentation of all lab reports to the teacher

Obtaining of course-unit credits of practices is the pre-requisite for registration to the examination of Biochemistry II.