

BIOCHEMISTRY II

SEMINARS

GENERAL MEDICINE

VSBC041s

Date

1. week
16. 2. – 20. 2. Methods in clinical biochemistry (photometry, electrophoretic methods).
Biochemical analyzers.
2. week
23. 2. – 27. 2. Laboratory tests in clinical biochemistry. Sources of error, assessing the significance of a test result. Enzyme assays in clinical diagnostics.
3. week
2. 3. – 6. 3. Plasma lipoproteins, interconversion of lipoproteins.
Cholesterol transport, balance of cholesterol intake and excretion.
4. week
9. 3. – 13. 3. Blood glucose (sources, consumption, regulation). Diabetes mellitus.
- 1st written test – 25 questions** (Methods, biochemical tests and sources of error in them, assessing the significance of results. Digestion, absorption and transport of lipids, lipoproteins, cholesterol, metabolism of lipids at the tissue and organ level, steroidal hormones, questions from practicals 1-3)
5. week
16. 3. – 20. 3. Catabolism of proteins and of amino acid nitrogen. Proteins in nutrition. Absorption of amino acids, utilization of amino acids in tissues, blood transport of ammonia, the glutamine cycle.
6. week
23. 3. – 27. 3. Integration of metabolism of nutrients: relationships among the major metabolic pathways in the fed state, postabsorptive state, prolonged starvation, obesity.
7. week
30. 3. – 3. 4. The liver functions – the role in metabolism of nutrients, hormones, and vitamins. Catabolism of hemoglobin, urobilinoids, the types of hyperbilirubinemia.
8. week
#7. 4. – 13. 4. Biotransformation of xenobiotics.
#Beginning the 8th week the weekly program starts on Tuesdays
2nd written test – 25 questions (Metabolism of glucose in the absorptive, postabsorptive state and in prolonged fasting. Proteins in nutrition, nitrogen metabolism, integration of intermediary metabolism of nutrients, biochemical functions of the liver, catabolism of haemoglobin, questions from practicals 4-7)
9. week
14. 4. – 20. 4. Neurotransmitter and hormone receptors.
10. week
21. 4. – 27. 4. Water and mineral metabolism. Electrolyte composition of blood plasma, buffer bases.
Respiration – transport of oxygen and CO₂. The role of the kidney and the liver in acid-base balance.
For groups 31, 34-36 also the topics from 11th seminar will be included, due to national holiday 1.5.
11. week
28. 4. – 4. 5. Blood acid-base parameters, the values indicating particular type of disturbance.
12. week
5. 5. – 11. 5. Major functions of the kidney. Glomerular filtration. Tubular resorption and secretion.
Groups 31, 34-36 have the seminar on 15.5. due to national holiday 8.5.
13. week
12. 5. – 18. 5. Urine - normal constituents, amounts of nitrogenous compounds excreted per 24 h. The proteinuria types. Urinary sediment, renal stones.
- 3rd written test – 25 questions**
Metabolism of xenobiotics, neurotransmitter and hormone receptors, water and mineral metabolism, ionograms, acid-base balance, kidneys, questions from practicals 8-12)
Groups 31, 34-36 have the seminar on 22.5. due to national holidays.
14. -15. week
19. 5. – 29. 5. Compensatory lessons.
Credit test for the students who did not reach 52/75 points.

Recommended textbooks: texts and questions in the section Study materials of Biochemistry –seminar in IS.

Conditions for giving the course-unit credit

- Full (100%) attendance in seminars is the principal condition.
If any absence, it must be apologized through Department of Study Affairs **up to five days**.
If apology is recorded in Information System (IS), then student is allowed to make up the absence according to teacher's instructions.
- Three revision tests are written in seminars, semestral limit for credit is 52/75
- If the semestral limit is not fulfilled, student must write the Credit test (limit 14/30). All absences must be made up before writing the credit test.
- One repetition of the Credit test is approved.

Deadline for any issue (making up all missing and justified lessons, passing the credit test) is 11. 6. 2015.

Students that will not meet this requirement will not be given the course-unit credit.

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