

BIOCHEMISTRY I

SEMINARS

GENERAL MEDICINE, DENTISTRY

VSBC021s, ZLBC021s

Date	
1. week 20. 2. – 24. 2.	Introduction into the metabolism of cells (differences between prokaryotic and eukaryotic cell, compartmentation of metabolic processes, enzyme markers of cell fractions, non-covalent interactions in the cell and their significance).
2. week 27. 2. – 2. 3.	Structure of haemoglobin and its relationship to the function. Hb types in the blood of healthy subjects, HbCO and MetHb, abnormal Hb types.
3. week 5. 3. – 9. 3.	Enzymes - reaction rate, progress curve, the Michaelis plot and K_m , enzyme inhibition.
4. week 12. 3. – 16. 3.	Coenzymes, their relationship to vitamins.
5. week 19. 3. – 23. 3.	Written test I – 25 questions (Haemoglobin, enzymology, coenzymes). Membrane structure and assembly. Transport across membranes.
6. week 26. 3. – 30. 4.	Metabolism of glucose: Glycolysis under anaerobic and aerobic conditions and the oxidation of pyruvate. Gluconeogenesis. Glycogenesis and glycogenolysis.
7. week 2. 4. – 6. 4.	Metabolism of proteins. Common features of amino acid conversion. The synthesis of urea. Nitrogen balance.
8. week 10. 4. – 16. 4.	Important reactions in amino acid catabolism.
9. week 17. 4. – 23. 4.	Written test II- 25 questions (Membranes, membrane transport, metabolism of saccharides and amino acids.) Biosynthesis and desaturation of fatty acids. The sources of essential fatty acids. Metabolism of triacylglycerols.
10. week 24. 4. – 30. 4.	Peroxidation of lipids. Metabolism of phospholipids. Biosynthesis of eicosanoids.
11. week 2. 5. – 7. 5.	Written test III – 25 questions (Metabolism of lipids.) The citric acid cycle.
12. week 9. 5. – 15. 5.	The respiratory chain and oxidative phosphorylation.
13. week 16. 5. – 22. 5.	Compensatory lessons. Credit test for the students who did not reach the required limit 52/75.
14.-15. week 23.5. – 1. 6.	<i>Anatomy dissections</i>

Date	
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Recommended textbook: Táborská, Tomandl: Biochemistry I – Seminars, MU, Brno 2012

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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 12/30).
- One repetition of the Credit test is approved.

Deadline for any issue (making up all missing and justified lessons, passing the credit test) **is 14. 6. 2012.**

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 I.