

## SEMINARS

Students are expected to come to the seminar room at least 5 minutes before the start of the lesson.

<i>Week</i>	<i>Date</i>	
1	20. 9. – 24. 9.	The properties of single particles, mole and molar quantities; concentration of solutions, basic laboratory calculations.
2	27. 9. – 1. 10.	<b>1<sup>st</sup> test</b> (10 Q- <i>Basic laboratory calculations.</i> ) Dissociation of electrolytes, activity of ions, ionic strength; osmotic pressure, osmolality.
3	4. 10. – 8. 10.	Acid-base reactions – pH of acid, base, and salt solutions, buffers, calculations.
4	11. 10. – 15. 10.	Intermolecular forces and adsorption. Tensides.
5	18. 10. – 22. 10.	<b>2<sup>nd</sup> test</b> (12Q- <i>Electrolytes, calculations of pH, hydrolysis of salts, buffers, osmotic pressure, intermolecular forces, tensides</i> ) Reaction kinetics, the law of chemical equilibrium.
6	25. 10. – 29. 10.	Energy in chemical reactions, free energy and equilibrium, relationship between standard free energy change and equilibrium constant. Latin nomenclature.
7	1. 11. – 5. 11.	<b>3<sup>rd</sup> test</b> (12 Q- <i>Reaction kinetics, thermodynamics of chemical change, latin nomenclature</i> ) Oxidation-reduction reactions, electrode potentials, electrochemical cell potentials and the free energy change.
8	8. 11. – 12. 11.	Organic compounds – Part I.
9	15. 11. – 19. 11.	Organic compounds – Part II.
10	22. 11. – 26. 11.	<b>4<sup>th</sup> test</b> (18 Q- <i>Oxidation-reduction, organic compounds – nomenclature, structures, reactions.</i> ) Heterocyclic compounds and their derivatives.
11	29. 11. – 3. 12.	Chemistry of saccharides.
12	6. 12. – 10. 12.	<b>5<sup>th</sup> test</b> (12 Q- <i>Heterocycles, saccharides.</i> ) Chemistry of lipids and steroids.
13	13. 12. – 17. 12.	Properties of amino acids. Proteins – secondary and tertiary structures.
14	3. 1. – 7. 1. 2011	<b><u>Credit test (30Q).</u></b>

Recommended textbooks: Medical Chemistry – Seminars (J.Dostal, Brno 2008)  
Táborská, Sláma: Medical Chemistry I (General and Inorganic Chemistry) Brno 2006  
Dostál: Medical Chemistry II (Organic Chemistry) Brno 2006

**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.
- Five revision tests are written in seminars, semestral limit for credit is 49/64.
- 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 21. 1. 2011.**

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

Obtaining of course-unit credits of seminars is the pre-requisite for registration to the examination of Medical chemistry and for enrollment of Biochemistry in the Spring semester.