



SUBJECT DATASHEET

Semester:	2010/11/1
Subject:	Chemical Calculations from General and Inorganic Chemistry I
Code:	VEMKAKB122A
Responsible department:	Department of General and Inorganic Chemistry
Responsible department code:	MKAK
Responsible lecturer:	dr. Ottó Horváth

Educational objectives:

To attain the fundamental methods of chemical calculations and their practice.

Detailed content of the subject:

1. Gas laws, gas mixtures. 2. Gas laws, gas mixtures. 3. Calculation of concentrations and preparation of solutions. I. 4. Calculation of concentrations and preparation of solutions. II. 5. Examination paper I. (3 exercises) 6. Solubility calculations, crystallization. 7. Calculations based on chemical equations; balancing redox equations I. 8. Calculations based on chemical equations; balancing redox equations II. (Stoichiometry, calculations based on chemical equations) 9. Examination paper II. (3 exercises) 10. Calculations regarding titrations (acid-base) 11. Calculations regarding titrations (redox) 12. Calculations regarding titrations (gas) 13. Examination paper III. (3 exercises) 14. Calculations regarding titrations (gas, acid base, redox with mix) 15. Examination paper IV. (5 exercises)

Requirements:

During the semester the student is expected to write four examination papers (three of 3 exercises and one of 5 exercises at the end of the semester). A student is allowed to write the final (5-exercise) examination paper if she or he collects at least 13 of the possible 30 points from the three 3-exercise papers. The solution of the first exercise of the final paper ought to be exact for the evaluation of the whole paper. The final mark will be given by taking the results of all papers written during the semester into account.

Required and suggested references:

Maleczkiné Szeness Márta: Kémiai számítások-kémiai gondolatok, Veszprém, 1995. Maleczkiné Szeness Márta: Kémia egyensúlyok, Kézirat, 1992 Maleczkiné Szeness Márta: Sztöchiometria, kézirat, 1991