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| 1. Course title: **General and Inoganic Chemistry I. laboratory** | | | | |
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| 2. Code: | | 3. Type (lecture, practice etc.): practice | | |
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| 4. Contact hours: 4 hoursper week | | 5. Number of credits (ECTS): 5 | | |
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| 6. Preliminary conditions (max. 3): | | | | |
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| 7. Announced:fall semester, spring semester, both | | | | |
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| 8. Limit for participants: 12 | | | | |
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| 10. Responsible teacher (faculty, institute and department):  György Petőcz PhD (Faculty of Science, Institute of Chemistry, Department of Inorganic Chemistry | | | | |
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| 11. Teacher(s) and percentage: | | Dr. György Petőcz | | 100% |
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| 12. Language:English | | | | |
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| 13. Course objectives and/or learning outcomes:  Objectives: Acquiring the knowledge of basic laboratory techniques, lab equipments, measurements and calculations.  Learning outcomes: Students will get acquainted with basic glasswares and lab equipments and will be able to carry out basic laboratory procedures. | | | | |
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| 14. Course outline   1. Safety education, (accident and fire hazards) equipments, list of individual glasswares and other tools. Glass preparation. 2. Mass measurement. Density measurement (areometer, Mohr-Westphal scale, picnometer). 3. Preparation of solutions. 4. Thermochemistry. Melting point determination, boiling point determination. 5. Filtration, crystallization, distillation, extraction. 6. Separation of mixtures. 7. Experiments related to reaction speed. Homogeneous catalysis. 8. Experiments related to chemical equilibrium. 9. Redox reactions. 10. Complex compounds. 11. Colloids. 12. pH Buffer preparation. 13. Report. | | | | |
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| 15. Mid-semester works  At the beginning of the laboratory practices students must write a minitest related to the current and the last laboratory work and must attain at least 50 % of the points.  Students must write laboratory reports about their own work and must hand it in after the current lab practice in 24 hours.  Failed lab reports have to be corrected and handed in the next week together with the current lab report. All the lab practices must be accomplished and students must attain minimum grade acceptable.  During the semester students must write two overall tests and the average of the grades must be at least 50 %.  At the second week lab practice students write a test related to the lab glasswares, at the fifth week lab practice students write another test related to the nomenclature of the inorganic compounds and must attain at least 90 % of the points. Amendment is possible only once during the next lab practice.  Repetition and amendment can be carried out at the last lab practice. | | | | |
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| 16. Course requirements and grading  During the semester all the work activity (lab practices and tests) will be graded as follows:   * minitests at the beginning of the lab practices: 30%, * overall tests: 30% * lab reports: 30%, * work activity at the lab practices: 10%   Grades:  0–50% failed  51–65% acceptable  66–75% average  76–90% good  91–100% excellent | | | | |
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| 17. List of readings | | | | |
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| 18. Recommended texts, further readings | | | | |
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| **Date** | 13 April, 2017 | **Prepared by** |  | |
| Dr. György Petőcz  responsible teacher | |
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| **Endorsed by** | | |  | |
| Dr. László Kollár program supervisor | |