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| 1. Course title: Problem Solving in Organic Chemistry | | | | | |
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| 2. Code: | | 3. Type (lecture, practice etc.): seminar | | | |
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| 4. Contact hours: 2 hoursper week | | 5. Number of credits (ECTS): 2 | | | |
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| 6. Preliminary conditions (max. 3): Organic Chemistry II. absolved | | | | | |
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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):  Balázs Bognár PhD (Faculty of Medicine, Institute of Organic and Medicinal Chemistry) | | | | | |
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| 11. Teacher(s) and percentage: | | Dr. Balázs Bognár | | 100 % | |
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| 12. Language:English | | | | | |
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| 13. Course objectives and/or learning outcomes:  Objectives: This course supports the evaluation and understanding of basic organic chemistry ideas through the improvement of problem solving and calculus.  Learning outcomes: students completing the course will have *knowledge* on the basic reaction mechanisms and their conditions. They will be *able* to plan synthetic pathways for preparing complex molecules. | | | | | |
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| 14. Course outline   1. Nomenclature and molecular structure. 2. Nucleophilic substitutions. 3. Aromatic substitutions. 4. Additions to carbon-carbon multiple bond. 5. Stereochemistry problems. 6. Test I., calculation problems. 7. Elimination, oxidation. 8. Reactions of aldehydes, ketones. 9. Reactions, structure and synthesis of carboxylic acids and acid derivatives. 10. Condensation reactions. 11. Total synthesis I. 12. Total synthesis II. 13. Test II. | | | | | |
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| 15. Mid-semester works  Attending seminars is highly recommended. | | | | | |
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| 16. Course requirements and grading  Based on the results of 2 tests and activity on seminars.  Grade mainly bases on the results of the tests:  Both tests have to be better, then 45%. | | | | | |
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| 17. List of readings   1. Meislich, E. K.; Meislich, H.; Sharefkin, J. 3000 Solved problems in Organic Chemistry, McGraw-Hill, 1994: Hightstown 2. Ghiron, C.; Thomas, R. J. Exercises in Synthetic Organic Chemistry, Oxford University Press, 1997: Oxford | | | | | |
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| 18. Recommended texts, further readings   1. Goto, T.; Hirata, Y.; Stout, G. H. Problems in Advanced Organic Chemistry, Holden-Day, 1968: San Francisco | | | | | |
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| **Date** | 15 April, 2017 | **Prepared by** |  | | |
| Dr. Balázs Bognár  responsible teacher | | |
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| **Endorsed by** | | |  | | |
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