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| 1. Course title: Organic Chemistry 2 | | | | | |
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| 2. Code: | | 3. Type (lecture, practice etc.): lecture | | | |
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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):  Organic Chemistry 1 lecture fulfilled | | | | | |
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| 7. Announced:fall semester, spring semester, both | | | | | |
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| 8. Limit for participants: | | | | | |
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| 10. Responsible teacher (faculty, institute and department):  Dr. Cecília Sár PhD (Faculty of Medicine, Institute of Organic and Medicinal Chemistry) | | | | | |
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| 11. Teacher(s) and percentage: | | Dr. Cecília Sár | | 50 % | |
| Dr. Tamás Kálai | | 50 % | |
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| 12. Language:English | | | | | |
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| 13. Course objectives and/or learning outcomes:  This is a part of the ordinary freshman course for chemistry majors to teach the nomenclature, structure, reactions, synthesis and utilization of main classes of organic compounds. | | | | | |
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| 14. Course outline  week 1: Aldehydes and ketones – structure, physical, chemical properties, reactions, important representatives.  week 2: Nucleophilic addition and condensation reactions of aldehydes and ketones  week 3: Monosaccharides – structure, mutarotation, reactions and biological importance.  week 4: Di- and polysaccharides – food reserve and structural material polysaccharides.  week 5: Carboxylic acids and their derivatives – structure, physical, chemical properties  week 6: α-Position substituted carboxylic acid derivatives, di- and polycarboxylic acids, representatives; Esters of inorganic acids, biological significance (phosphatides, phospholipids).  week 7: α-Amino acids, peptides and proteins, biological importance.  week 8-9: Heterocycles (5- and 6-membered heteroaromatic compounds, structure, biologically important representatives, chemical mode of action of coenzymes);  week 10: Heterocycles in nucleotides, nucleosides, nucleic acids.  week 11-12: Vitamins;  week 13: Degradation of organic compounds and their effect on biological environment (ozone degradation, pesticides, chemical fertilizer, combustion end-products); | | | | | |
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| 15. Mid-semester works  Attending lectures is highly recommended. | | | | | |
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| 16. Course requirements and grading  Written exam is based on lectures, accessible electronic sources and books. | | | | | |
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| 17. List of readings  McMurry, J., Simanek, E.: Fundamentals of Organic Chemistry, 6th ed., Thomson Higher Education, Belmont, 2007.  Parsons, A.F. Keynotes in Organic Chemistry, 2nd ed, Wiley, Chichester, 2014 | | | | | |
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| 18. Recommended texts, further readings  T. W. Graham Solomons: Organic Chemistry, 7th edition, Wiley and Sons, New York, 2000.  William H. Brown: Organic Chemistry, Saunders College Publishing, Fort Worth, 1995.  The slides of the lecture are available on Neptun. | | | | | |
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| **Date** | 13 April, 2017 | **Prepared by** |  | | |
| Dr. Cecília Sár  responsible teacher | | |
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| **Endorsed by** | | |  | | |
| program supervisor | | |