



## COURSE DATASHEET

<b>Semester:</b>	2012/13/2
<b>Course:</b>	Green Chemistry
<b>Code:</b>	VEMKOKB112Z
<b>Responsible department:</b>	Department of Organic Chemistry
<b>Department code:</b>	MKOK
<b>Responsible instructor:</b>	Dt. József Bakos

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### Course objectives:

Educational Objectives: Utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products.

### Course content:

Contents: Week 1. Development and basic principle of green chemistry. 2. Synthetic methodology without the use of toxic material. 3. Discussion on the use of chlorine. 4. Treatment of toxic heavy metals. 5. Reagents and catalysts easily separable from products. 6. Green separation methods. 7. Solventless synthesis. 8. Biocatalysts and biodiversity. 9. Role of stereochemistry in green chemistry. 10. Pesticide chemistry. 11. Materials selected by the requirements of environmental aspects in a competitive economy. 12. Sustainability in chemistry. 13. Renewable feedstock. 14. Environmental aspects of energy focus. 15. Environmental aspects of aspects of the growth of population. 16. Environmental aspects in a competitive economy.

### Requirements, evaluation and grading:

Examination: test

### Required and recommended readings:

1. Anastas, P. T. & Warner, J. C., Green Chemistry: Theory and Practice, Oxford University Press, Oxford, 1998. 2. Anastas, P. T. & Williamson, T. C., Green Chemistry, Frontiers in Benign Chemical Syntheses and Processes, Oxford University Press, Oxford, 1998. 3. Alloway, B. J. and Ayres, D. C., Chemical Principles of Environmental Pollution, Blackie Academic and Professional, London, 1997.