



## COURSE DATASHEET

<b>Semester:</b>	2012/13/2
<b>Course:</b>	Organic chemistry I.
<b>Code:</b>	VEMKOK1212A
<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: Basic principles and systematics in organic chemistry

### Course content:

Contents: Week 1. Bonding theory. The structure and bonding in organic chemistry. Nomenclatures. Classification of organic reactions. 2. Alkanes and cycloalkanes. The radical chain reaction. Strained ring systems. Polycyclic hydrocarbons. 3. Isomerism in organic chemistry. Structural, geometric, and optical isomerism. The CIP convention. 4. Olefines. The mechanism of electrophilic HX addition reactions. The mechanism of elimination reactions. 5. Alkines. The acidity of the C-H bond. Vinylation reactions. 6. Di- and polyolefins.  $\pi$ -electron delocalization. Thermodynamic and kinetic control. 7. Aromaticity. The Hückel theory for unsaturated compounds. SE and SN reactions of aromatics. 8. SE and SN reactions of aromatics. 9. Isoprenoids. Terpenes and steroids. 10. Alkyl and alkenyl halides (vinyl and allyl halides). Aryl halides. 11. Alkoholes. Saturated and unsaturated alcohols. 12. Phenols. The phenolic OH group. 13. Ethers, epoxydes, peroxydes. 14. The carbonyl group. Aldehydes and ketones. 15. The mechanism of AN reactions. Aldol type reactions.

### Requirements, evaluation and grading:

Contact Hours/Week: 2+0+0 Examination: test

### Required and recommended readings:

Markó-Farády: Szerves kémia I-VIII Lempert Károly: Szerves kémia Kajtár Márton: Változatok négy elemre: Szerves kémia