



SUBJECT DATASHEET

Semester:	2010/11/1
Subject:	Modern Organic Synthesis
Code:	VEMKOKM112M
Responsible department:	Department of Organic Chemistry
Responsible department code:	MKOK
Responsible lecturer:	dr. József Kaizer

Educational objectives:

Educational Objectives: Introduction to theoretical and practical aspects of modern organic synthesis design.

Detailed content of the subject:

Contents: Week: 1. Synthetic Analysis and Design (Retrosynthetic Analysis) 2. Regio and Stereoselectivity of Catalytic Process 3. Reaction Mechanisms 4. Kinetics and Thermodynamics of Organic Reactions 5. Reaction Mechanisms and Conformational Effects on Reactivity 6. Oxidation Reactions (Asymmetric epoxidation, Dihydroxylation, Baeyer-Villiger and Related Reactions) 7. Oxidation Reactions (Beckmann Rearrangement and Related Reactions) 8. Reductions Reactions 9. Hydroboration-Oxidation 10. Enolate Chemistry 11. Metalation Reactions 12. Key Ring Forming Reactions 13. Olefin Synthesis (Wittig, Wadsworth-Horner-Emmons) 14. Olefin Synthesis (Tebbe Reaction, Sigmatropic Rearrangements) 15. Protecting Groups and their Application

Requirements:

Examination Requirements and Questions: The written test for the students involves the main areas of modern organic chemistry such as nomenclature, classification, and mechanistic aspects of organic reactions. The student has to reach a 50% result to get passed the course. The individual questions can be viewed on previous exam sheets. On every occasion new questions are posed.

Required and suggested references:

Kötelező és ajánlott irodalom: Dale L. Boger, Modern Organic Synthesis, Lecture Notes, TSRI Press, Copyright 1999, La Jolla, CA, USA