

Study Programme: Master Academic Studies in Chemistry			
Course Unit Title: Reactive intermediates			
Course Unit Code: IHO-507			
Name of Lecturer(s): Assistant professor Aleksandar Oklješa			
Type and Level of Studies: Master of Science Degree			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 6			
Prerequisites: none			
Course Aims: Expanding the knowledge base of reactive intermediates (theory, mechanism, synthesis, structure, and stereochemistry) and their applications in modern organic synthesis.			
Learning Outcomes: After successfully completing the course, the student is able to understand the importance of reactive intermediates and apply knowledge in solving specific problems in organic synthesis.			
Syllabus: <i>Theory</i> Carbocations. Carbanions. Radicals. Carbenes. Nitrenes. Miscellaneous Intermediates. Structures and geometry of reactive intermediates, generation, stability and application in organic synthesis. <i>Practice</i> Laboratory synthesis of organic compounds.			
Required Reading: 1. M. S. Singh; Reactive Intermediates in Organic Chemistry Structure, Mechanism, and Reactions, WILEY-VCH, Weinheim, 2014. 2. R. A. Moss, M. P. Doyle; CONTEMPORARY CARBENE CHEMISTRY, John Wiley & Sons, Inc., New Jersey, 2014. 3. D. E. Falvey, A. D. Gudmundsdottir; NITRENES AND NITRENIUM IONS, John Wiley & Sons, Inc., New Jersey, 2013.			
Weekly Contact Hours:	Lectures: 3 (45)	Practical work: 2 (30)	
Teaching Methods: Lectures, laboratory work			
Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	Final exam	points
Active class participation	10	written exam	50
Practical work	40	