

Study Programme: Master Academic Studies in Chemistry			
Course Unit Title: Dynamic Stereochemistry			
Course Unit Code: IHO-504			
Name of Lecturer(s): Assistant professor Andrea Nikolić			
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: Advanced research stereochemical aspects of organic reactions. Solving complex practical problems in dynamic stereochemistry.			
Learning Outcomes: Acquired knowledge will allow students to extend their knowledge of dynamic stereochemistry.			
Syllabus: <i>Theory</i> Principles of Chirality and Dynamic Stereochemistry. Racemization, Enantiomerization and Diastereomerization. Pharmacological Significance of Racemization. Principles of Asymmetric Synthesis. Alkylation of Carbonyl Compounds. Asymmetric Oxidations and Reductions. Asymmetric Reactions in the Synthesis of Natural Products. Enzymatic Reactions and Miscellaneous Asymmetric Syntheses. <i>Practice</i> Synthetic application of the studied reactions.			
Required Reading: 1. Christian Wolf, Dynamic Stereochemistry of Chiral Compounds, The Royal Society of Chemistry, 2008 2. Reinhard Bruckner, Organic Mechanisms Reactions, Stereochemistry and Synthesis, Springer, 2010 3. Paul Wyatt, Stuart Warren, Organic Synthesis: Strategy and Control, John Wiley & Sons Ltd, 2007			
Weekly Contact Hours:	Lectures: 3 (45)	Practical work: 2 (30)	
Teaching Methods: Lectures, laboratory work, seminar(s)			
Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	60
Practical work	15	
Seminar(s)	20		