

<b>Level:</b> bachelor			
<b>Course title:</b> Organic Chemistry IV			IHO-301
<b>Status:</b> elective			
<b>ECTS:</b> 5			
<b>Requirements:</b> none			
<b>Learning objectives</b> Obtaining knowledge of Molecular Orbital (MO) theory and the principle of hard and soft acids and bases (HSAB) as the most accessible approaches to understanding many aspects of reactivity. Gaining knowledge and skills in planning of organic reactions and their applications in modern organic synthesis.			
<b>Learning outcomes</b> Qualifying students to create and interpret organic reactions for the synthesis of the planned compounds.			
<b>Syllabus</b> <i>Theoretical instruction</i> Molecular Orbital (MO) theory and structures of organic molecules. The Principle of Hard and Soft Acids and Bases (HSAB). Factors affecting the position of an equilibrium and chemical reactivity. Ionic Reactions—Reactivity. Pericyclic Reactions (sigmatropic rearrangement, Diels–Alder reactions, [3+2]- and [2+2] cycloaddition reactions. The Woodward-Hoffmann Rules. Photochemical Reactions. <i>Practical instruction</i> Laboratory synthesis of organic compounds.			
<b>Weekly teaching load</b>			<b>Other:</b>
<b>Lectures:</b> 2	<b>Exercises:</b> 2	<b>Other forms of teaching:</b>	