

<b>Level:</b> bachelor				
<b>Course title:</b> Stereochemistry, B-201				
<b>Status:</b> elective				
<b>ECTS:</b> 6				
<b>Requirements:</b> none				
<b>Learning objectives</b> Course is designed to introduce students to the necessary methodological basis (theoretical and practical) in the field of stereochemistry of important biomolecules as a basis for further understanding and application in other fields of chemistry.				
<b>Learning outcomes</b> Demonstrate systematic understanding and knowledge of the fundamental stereochemical principles, three-dimensional structures of important biomolecules, chirality and configuration. Analysis of the conformations of molecules, especially biomolecules.				
<b>Syllabus</b> <i>Theoretical instruction</i> Chirality and molecular symmetry of important biomolecules. Enantiomers and diastereoisomers. Chirality of the enzymes. Biologically active atropoisomers. Chirality in biphenyls and allenes. Relative and absolute configurations. Resolution of racemic mixtures of biomolecules. Kinetic resolution of racemic modifications by enzymes. Conformational analysis of acyclic and cyclic compounds. Condensed rings. Biologically active cyclic compounds. Stereochemistry of carbohydrates. Conformational analysis of carbohydrates. Anomeric effect. Stereochemistry of steroids. Conformational analysis of steroid compounds. Stereochemistry of organic reactions. Stereoselective and stereospecific reactions. Asymmetric Synthesis.  <i>Practical instruction</i> Application of theoretical knowledge and understanding in solving practical problems.				
<b>Weekly teaching load</b>				Other:
Lectures: 3	Exercises: 3	Other forms of teaching:	Student research:	