

Course name: Advanced structural bioinformatics	Credits: 6 ECTS
Class type: On-line lectures + individual practice	
Type of the exam: Project work	
Prerequisites (if exist): Courses: Introduction to structural bioinformatics	
Course description: Advanced concepts and tools in biomolecular structure analysis <ul style="list-style-type: none"> • Assigning secondary structural elements from 3D coordinates • The concept of domains: definitions based on structural and sequence features • Origins and uses of global and local similarity in structures • Structure classification and functional assignment • Prediction of structural features from sequences • Full 3D structure prediction • Protein:ligand docking • Ensemble-based structural models to represent protein internal dynamics • Analysis of the structure of nucleic acids 	
Course URL:	
Required reading:	
Recommended reading: Gu, J & Bourne, P.E. (eds, 2009): Structural bioinformatics, 2nd ed. Wiley-Blackwell	
Lecturer (<i>name, position, degree</i>): Zoltán Gáspári, associate professor,, PhD.	
Additional lecturers , if exist:	