| 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
- 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:

Lecturer (name, position, degree): Zoltán Gáspári, associate professor, PhD.

Additional lecturers, if exist: