

Structural biology LKG9030

3 EAP

Learning outcomes: The student will gain a broad understanding of the techniques of macromolecular crystallization and will grasp the principles for the interpretation of diffraction patterns as well as electron density maps.

GRADING METHOD	GRADING CRITERIA
HOME ASSESSMENT	Familiarization with the contents of „Biomolecular crystallography“ by Bernhard Rupp (2018), and „Outline of Crystallography for Biologists“ by David Blow (2010).
FINAL EXAMINATION	The student will present to the class an X-ray crystal structure that they solved based on real diffraction data provided by the lecturer. The students will describe the solved structure, how they arrived at the final refined model and all the parameters necessary for its deposition to the world wide Protein Data Bank (wwPDB).
REQUIREMENTS FOR FINAL GRADE	The student will have to solve an X-ray structure with corresponding quality factors suitable for deposition in wwPDB. The students will attempt the crystallization of a simple protein (lysozyme).
EXAMINATION	The students will have one test/exam on theory, but the final pass/fail grade will depend on the successful determination of an X-ray structure.