

Ph.D. Course in Biophysical Chemistry
Department of Chemistry, University of Copenhagen

Program

First week (June 6-10, 2005)

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning 9.15 am. – 12.00 am	1. Introduction to biophysical chemistry 2. Introduction to enzyme kinetics Ulla Christensen	Introduction to X-ray crystallography Leila Lo Leggio	Enzyme kinetics Ulla Christensen	X-ray crystallography – examples Leila Lo Leggio	Biocomplexity Preben Graae Sørensen and Axel Hunding
Afternoon 1 pm – 4 pm	Introduction to crystallization – crystallization practical	Structure visualization - practical/ enzyme kinetics exercises	Structure visualization - practical/ enzyme kinetics exercises	Enzyme kinetics theory and exercises	Biocomplexity Preben Graae Sørensen and Axel Hunding

Second week (June 13-17, 2005)

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning 9.15 am. – 12.00 am	Raman spectroscopy of proteins. Introduction and theory. Ole Faurskov Nielsen	NMR Spectroscopy, introduction and theory Jens J. Led Structure determination of biomacromolecules by NMR, I Søren M. Kristensen	1. Structure determination of biomacromolecules by NMR, II Søren M. Kristensen 2. Dynamics of biomacromolecules studied by NMR Jens J. Led	NMR spectroscopy, exercises: 1. Determination and visualization of tertiary protein structures 2. Protein dynamics Malene R. Jensen and Mathias A.S.Hass	Preparation for presentations
Afternoon 1 pm – 4 pm	Raman spectroscopy, exercises. Determination of protein secondary structure. Protein formulation.	NMR spectroscopy, exercises: Assignment of NMR spectra and determination of secondary protein structures Malene R. Jensen and Mathias A.S.Hass	NMR spectroscopy, exercises: Computer aided assignment of NMR spectra. Malene R. Jensen and Mathias A.S.Hass	Evaluation of crystallization experiments	Presentations

Evaluation:

Student's presentations Friday afternoon, June 17. Each group of 2-3 students will present the results of a paper they can choose from a series of papers that cover the topics of the course.