Biophysical Chemistry I (iMOS)

Module	Credits	Workload	Term	Frequency	Duration
11 EC	5 CP	150 h	1. Sem.	SuSe	1 Semester

Courses	Contact hours	Self-Study	Group size
a) Lectures b) Exercises c) Seminar	a) 2 SWS b) 1 SWS c) 1 SWS	90 h	30 Students

Prerequisites

Knowledge in basic Physical Chemistry.

Learning outcomes

After successful completion of the module/course, students will be able to:

- Acquire advanced knowledge in experimental techniques in biophysical chemistry with a focus on structure determining methods
- Understand their applications, advantages, and disadvantages of the methods
- Analyze and screen relevant literatures independently
- Develop presentation skills in front of an audience
- Utilize digital techniques to prepare and conduct a presentation

Content

Advanced Biophysical techniques:

- Protein structures
- Molecular interactions
- Computational approaches
- X-ray diffraction
- Calorimetry techhniques
- Fluorescence theory, FRET
- Super-resolution microscopy

Teaching methods

Lecture (2 SWS, 30 h), Exercise (1 SWS, 15 h), Seminar (1 SWS, 15 h).

Mode of assessment

Participation in all seminars and presentation about an assigned publication.
Written exam of 60 mins.

Requirement for the award of credit points

Pass both parts: presentation (50%) and written exam (50%).

Module applicability

M.Sc. iMOS, cross-posted to M.Sc. Chemistry, M.Sc. Biochemistry, M.Sc. Lasers and Photonics, B.Sc. Biochemistry (6. Semester)

Weight of the mark for the final score

Weighted according to CPs.

Module coordinator and lecturer(s)

Prof. Dr. Simon Ebbinghaus, Biophysical Chemistry

Further information