



Institut für Chemie und Biochemie
Module descriptions for the bachelor program Chemistry

Module: Basics of biochemistry			
University/Department/Institute: Freie Universität Berlin/Department of Biology, Chemistry, Pharmacy/Institute of Chemistry and Biochemistry			
Module supervisors: Lecturers of the module			
Entrance Requirements: none			
Goals of Qualification: The students know formation and molecular structure of the most important macro molecules of a living cell, the substance classes and their biological context. The main aspect is the knowledge of the chemical basics of the molecular design of bio-molecules.			
Contents: Chemical and cell-biological basics, structure of DNA and RNA, replication and transcription, biosynthesis of proteins, regulation of the gene expression, gene technology methods, amino acids and peptides, structure and folding of proteins, proteome, post-translational modifications, methods of protein research, enzymes, carbohydrates, lipids and bio-membranes, introduction into metabolism and its regulation.			
Teaching methods	Hours of attendance (Hours per week)	Forms of active participation	Workload (hours)
Lecture	2	-	Presence (L) 30 Pre-, post-preparation (L) 30
Tutorial	2	Solving assignments, oral presentation	Presence (T) 30 Pre-, post-preparation (T) 60 Exam preparation and examination 30
Language offer of lecture		German	
Compulsory regular attendance		Attendance is recommended	
Workload (total)		180 hours	5 CP
Length of module		One semester	
Examination		Exam (90 minutes); The exam may contain multiple-choice-questions and can also be conducted electronically	
Lecture is offered		Every summer semester	
Applicability		Bachelor study program Biochemistry	