Module: Natural Products Chemistry and Advanced Bioorganic Chemistry	
University/department/institute: Freie Universität Berlin/Department of Biology, Chemistry and Pharmacy/Institute of Chemistry and Biochemistry	
Responsible for the module: module lecturers	
Admission requirements: none	
Qualification aims: The students know the chemical and physical properties of biopolymers and their monomers. They are capable of developing syntheses for the main classes of natural products and can analyze, assess and describe their structures, their supramolecular chemistry and their material properties and demonstrate the links to biochemistry. They can carry out independent research into current aspects (including controversial aspects) of bioorganic chemistry, present them accurately in lectures tailored to a particular audience and discuss them critically in groups.	
Content: Synthesis of nucleotides; modern synthesis processes for peptides and proteins; enzyme catalysis; synthesis of complex carbohydrates and saccharides; synthesis and special aspects of lipids and polyketides; post-translational modifications of proteins; current topics in bioorganic chemistry (e.g. labelling and diagnostics, siRNA, drug delivery)	

Teaching and learning units	**Attendance** (Semester hours per week = SH)	**Forms of active participation**	**Study time** (hours)	
Lecture	2	-	Attendance L Preparation and follow-up L Attendance S Preparation and follow-up S Examination preparation, examination	30 30 30 30 30
Seminar	2	Scientific talks on current topics, discussions		

Language of instruction	German or English	
Compulsory regular attendance	Attendance recommended	
Study time, total hours	150 hours	5 CP
Duration of module	One semester	
Module offered	Every winter semester	
Application	Master's program in Chemistry	