

Module: Stereoselective Synthesis			
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 have deepened their understanding of the spatial arrangement of chemical structures and reactions and are familiar with the appropriate depiction of three-dimensional structures and their terminology. They have expanded their understanding of stereochemistry to include dynamic stereochemistry. They are familiar with stereoselective reactions and methods of controlling selectivity; they can apply their knowledge to the development of syntheses of complex, organic molecules. They can estimate the degree of difficulty of stereoselective syntheses and take this into account when planning syntheses, discussing these aspects critically in the group.			
Content: Stereochemical terminology and nomenclature; static stereochemistry; stereoisomers; conformational analysis; dynamic stereochemistry; (macro)cyclic stereocontrol; diastereoselective additions to carbonyl compounds; enolates and olefins; aldol reactions; principles and examples of asymmetric (organo) catalysis			
Teaching and learning units	Attendance (Semester hours per week = SH)	Forms of active participation	Study time (hours)
Lecture	2	-	Attendance L 30 Preparation and follow-up L 30
Tutorial	2	Working on problem sets, contributing to discussions	Attendance T 30 Preparation and follow-up T 30 Examination preparation, examination 30
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 summer semester	
Application		Master's program in Chemistry	