

<b>Module:</b> Basics of Organic Chemistry			
<b>University/Department/Institute:</b> Freie Universität Berlin/Department of Biology, Chemistry, Pharmacy/Institute of Chemistry and Biochemistry			
<b>Module supervisors:</b> Lecturers of the module			
<b>Entrance Requirements:</b> none			
<b>Goals of Qualification:</b> Students have acquired the basics of organic chemistry. They have knowledge of nomenclature, chemical classes, functional groups, natural substances and the relevance of organic compounds for industry, technology and environment. They know the most important reaction types and understand the corresponding mechanisms. They are able to solve lecture related problems independently, can present their solutions to their study group and discuss the results.			
<b>Contents:</b> Historical development of the chemical branches, models of chemical bonds, basics of the molecular orbital theory, structure- and stereochemistry, nomenclature of organic compounds, important chemical classes, their characteristics and reactions, relevance of organic compounds in biochemistry, technology and environment. Discussed chemical classes: alkanes and cycloalkanes, alkenes and alkynes, organic halogen-compounds, organometallic compounds, alcohol and ether, organic sulphur compounds amines, aldehydes, ketones, carbon acids and carbon derivatives, hydroxycarbonyl compounds and carbohydrates, amino acids, aromatic hydrocarbons and aromaticity, colorants, heterocyclic compounds. Discussed reactions: radicalic and nucleophilic substitutions, elimination- and addition reactions, cycloaddition, oxidation and reduction, condensation reaction of carbonyl compounds, aldol reaction, electrophilic substitution of aromatic compounds			
Teaching methods	Hours of attendance (Hours per week)	Forms of active participation	Workload (hours)
Lecture	4	-	Presence (L) 60 Pre-, post-preparation (L) 60 Presence (T) 15
Tutorial	1	Solving assignments, Contributions to topic related discussions	Pre-, post-preparation (T) 15 Exam preparation and examination 60
<b>Language offer of lecture</b>		German	
<b>Compulsory regular attendance</b>		Attendance is recommended	
<b>Workload (total)</b>		210 hours	7 CP
<b>Length of module</b>		One semester	
<b>Examination</b>		Exam (180 minutes); The exam can also be conducted electronically	
<b>Lecture is offered</b>		Every semester	
<b>Applicability</b>		Bachelor study program Chemistry, Bachelor study program Biochemistry, Bachelor study program Chemistry for teachers in training, 60-CP-Module offer Chemistry	