

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

Course Details					
Code				Academic Year	Semester
CHE112				1	1
Title	T	A	L	ECTS	
Chemistry II	2	1	2	6	
Language	German				
Level	Undergraduate	X	Graduate	Postgraduate	
Department / Program	Materials Science and Technology				
Forms of Teaching and Learning	Face to face				
Course Type	Compulsory	X	Elective		
Objectives	Students acquire the basic knowledge of organic chemistry. They have a good understanding of the common classes of substances, the linking of structure, binding and the classification of organic compounds. Here, in addition to a deeper understanding of the chemical principles, a good understanding of the standard organic-chemical reactions with mechanistic details, the influence of the framework conditions in an organic-chemical reaction and the most important analytical methods (eg mass spectrometry, IR and NMR spectroscopy) should be developed				
Content	Structure and Binding of Organic Molecules, Structure and Reactivity: Introduction to Organic Molecule Reactions: Kinetics, Acidity / Basicity and Mechanisms, Functional Groups, Alkanes and Their Reactions, Nomenclature and Stereochemistry, Alcohols and Ethers and Their Reactions, Alkenes and Haloalkanes, Mass Spectrometry, IR and NMR spectroscopy for structure elucidation, alkynes and their reactions, aromatics and their reactions, reactions of carbonyl compounds, aldehydes, ketones and carboxylic acids, amines and thiols, carbohydrates, amino acids, peptides and proteins				
Prerequisites					
Coordinator	None				
Lecturer(s)	Asist Prof.Dr. Duygu Ekinci				
Assistant(s)	None				
Work Placement	No				
Recommended or Required Reading					
Books / Lecture Notes	K.P.C. Vollhardt, N.E. Schore, K. Peter. "Organische Chemie"				
Other Sources	1. K.P.C. Vollhardt, N.E. Schore, K. Peter. "Organische Chemie" 2. N.E. Schore. "Arbeitsbuch Organische Chemie" 3. H.G.O Becker et al. "Organikum" 4. R. Brückner "Reaktionsmechanismen" 5. M. Hesse, H. Meier, B. Zeeh. "Spektroskopische Methoden in der organischen Chemie"				
Additional Course Material					
Documents					
Assignments					

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Exams			
Course Composition			
Mathematics und Basic Sciences			%
Engineering			%
Engineering Design			%
Social Sciences			%
Educational Sciences			%
Natural Sciences			100%
Health Sciences			%
Expert Knowledge			%
Assessment			
Activity	Count		Percentage (%)
Midterm Exam	1		30
Quiz			
Assignments			
Attendance			
Recitations	1		30
Projects			
Final Exam	1		40
Total			100
ECTS Points and Work Load			
Activity	Count	Duration	Work Load (Hours)
Lectures	15	2	30
Self-Study	15	5	75
Assignments	10	4	40
Presentation / Seminar Preparation			
Midterm Exam	1	2	2
Recitations	15	1	15
Laboratory	10	2	20
Projects			
Final Exam	1	2	2
Total Work Load			184
ECTS Points (Total Work Load / Hours)			6
Learning Outcomes			
1	basic principles of organic chemistry, organic molecular bonding, properties and reactivity; properties and behavior of organic compounds. Understanding organic synthesis and mechanisms		



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5								
6								
7								
8								
9								
10								
11								
12								
Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High							
Compiled by:								
Date of Compilation:								