

TURKISH-GERMAN UNIVERSITY
Faculty of Natural Sciences
Material sciences and technology

COURSE SYLLABUS FORM

Course Information				
Course Unit Title	Chemistry II			
Course Unit Code	Semester	Regular Cycle	T+A+L Hour	ECTS
CHE 112	1	2	2+1+2	6

Course Language	German				
Course Level	Undergraduate	X	Graduate		Postgraduate
Department / Program	Materials Science and Technology				
Types of Education	Face to face				
Course Type	Compulsory	X	Elective		
Objectives of the Course	To teach the basic concepts and principles of general and organic chemistry. To improve the students' problem solving skills on relevant subjects.				
Course Content	Chemical equilibrium Acids and bases Buffer solutions and titration curves Electrochemistry Binding of organic molecules and isomerism Alkanes and cycloalkanes Alkenes and alkynes Aromatic compounds Alkyl halides Alcohols, thiols, phenols Ethers and epoxides Aldehydes and ketones Amines				
Prerequisite	None				
Course Coordinator	Asst. Prof. Samira Fatma Kurtoğlu Öztulum, Asst. Prof. Çağla Söz				
Name of Lecturers	Asst. Prof. Çağla Söz				
Course Assistants	M. Sc. Eyüp Metin, M. Sc. Büşra Sekizkardeş, M. Sc. Gökçe Evren, M. Sc. Kadir Sağır				
Work Placement(s)	None				

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Recommended or Required Reading

Text Book(s) / Lecture Notes	Lecture notes
Other Sources	Nivaldo J. Tro, Chemistry A Molecular Approach; Pearson, 2nd Ed., 2011. Hart, Craine, Hart, Hadad: Organic Chemistry; Brooks, 12th Ed., 2007.

Material Sharing

Documents	Google-classroom page of the lecture
Assignments	Google-classroom page of the lecture
Exams	

Course Category

Mathematics and Basic Sciences	%
Engineering	%
Engineering Design	%
Social Sciences	%
Educational Sciences	%
Science	100%
Health Sciences	%
Field Knowledge	%

Assessment Criteria

Semester Works	Quantity	Percentage %
Midterm Exam	1	30%
Quiz		%
Assignment		%
Attendance		%

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Application/Laboratory		20%
Project		%
Final examination		50%
Total		100%

ECTS / Table for Student Working Load

Activities	Quantity	Duration (Hour)	Total Work Load (Hour)
Course Duration	14	2	24
Self-Study Hours	14	7	98
Assignment			
Presentation / Seminar Preparation			
Midterm exams	1	3	3
Application	14	1	14
Laboratory	14	2	24
Project			
Final examination	1	3	3
Total Work Load(Hour)	166		
Total Work Load(Hour)/ 30 (h)	5,5		
ECTS Credit of the Course	6		

Learning Outcomes of the Course

No.	Learning Outcomes
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1	Students will learn balancing of the chemical equations.
2	They will learn the electrolysis process and batteries.
3	They will learn chemical bonds and the concepts of acidity and alkalinity .
4	They will gain knowledge about the basic concepts of organic chemistry.

Course Content

Week	Topic	Preparation	Documents
1	Chemical equilibrium		Lecture notes and recommended books
2	Acids and bases		Lecture notes and recommended books
3	Buffer solutions and titration curves		Lecture notes and recommended books
4	Buffer solutions and titration curves		Lecture notes and recommended books
5	Electrochemistry		Lecture notes and recommended books
6	Binding of organic molecules and isomerism		Lecture notes and recommended books
7	Alkanes and cycloalkanes		Lecture notes and recommended books
8	Alkenes and alkynes		Lecture notes and recommended books
9	Aromatic compounds		Lecture notes and recommended books
10	Alkyl halides		Lecture notes and recommended books
11	Alcohols, thiols, phenols		Lecture notes and recommended books
12	Ethers and epoxides		Lecture notes and recommended books
13	Aldehydes and ketones		Lecture notes and recommended books
14	Amines		Lecture notes and recommended books

Prepared by:

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