ORGANIC CHEMISTRY II

1	Course Title:	ORGANIC CHEMISTRY II	
2	Course Code:	KIM2012	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	4.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. MUSTAFA TAVASLI	
15	Course Lecturers:	Prof. Dr. NECDET COŞKUN	
16	Contact information of the Course Coordinator:	mtavasli@uludag.edu.tr +90 224 29 41 732 Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Kimya Bölümü, 16059 Görükle / BURSA, TÜRKİYE	
17	Website:		
18	Objective of the Course:	To introduce some fundemantal organic molecules and to discuss their synthesis and reactions.	
19	Contribution of the Course to Professional Development:	To apply some fundeböantal knowledge in industry and producttion facilities.	
20	Learning Outcomes:		
		1	Learning the basic organic chemistry terms
		2	Realizing the general properties of organic compounds
		3	Learning the risks about organic compounds (personal and environmental) and using the chemicals carefully
		4	Learning the reactions of some main organic functional groups.
		5	Understanding and being able to comment on the reaction mechanisms.
		6	Being able to plan some serried reactions.
		7	-Being able to comment on the problems about organic chemistry and getting skills for solving the problems.
		8	
		9	
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical	Practice	

1	Ethers and Epoxides • Classification-Symmetric and Asymmetric • Physical properties and Dipole-Dipole Interactions • Nomenclature • Syntheses ? Dehydration of Alcohols ? Williamson Ether Synthesis ? Addition of alcoxymercury-mercury elimination to alkenes ? Hydroxyboration of alkenes oxidation • Reactions: Breaking up with HI	
2	Epoxides ? Nomenclature ? Syntheses ? Reactions Alkenes I: Properties and Preparation • Nomenclature with (E)/(Z) System • Relative Stability of Alkenes Sycloalkenes	
3	• Syntheses of Alkenes: Elimination reactions over (E1/E2). ? From alkylhalides ? From alcohols Stability of carbocation and Molecular Rearrangements	
4	? Addition of sulphuric acid ? Addition of water ? HgSO4 catalised Hydration ? Hydroboration ? Reduction ? Oxidation	
5	? Formation of Halohydrin ? Hydroboration	
6	Alkines Nucleophilicity	
7	Nuclear Magnetic Resonance Spectrometer ? Nuclear Spin: The source of the signal (Shielding / Deshielding) ? Chemical shift (Equivalent / Nonequivalent Protons) ? Signal Splitting (Spin-Spin Coupling) Proton NMR Spektrums and Rate İşlemleri	
8	Benzene and Aromaticity ? Nomenclature of benzene derivatives ? The structure and stability of benzene	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	2.00	28.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	16.00	16.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			120.00
Total work load / 30 hr			4.00
ECTS Credit of the Course			4.00

9	? Aromaticity and Hückel Rule ? Aromatic Ions ? Benzenoid Aromatic Compounds ? Heterocyclic Aromatic Compounds	
10	Electophilic Aromatic Substitution Reactions • Genelal Mechanism: Arenium Ions ? Halogenation of Benzene ? Nitration of Benzene	
11	? Sulphonation of Benzene ? Alkyllation of Benzene - Friedel-Crafts ? Acylation of Benzene - Friedel-Crafts	
12	Aldehides and Ketones: Nucleophilic Addition Reactions to Carbonyl Group • Nomenclature • Physical Properties • Syntheses ? From oxidation of Alcohols ? From breaking up alkenes with ozone	
13	? Reactions: Nucleophilic Addition Reactions to Carbonyl Group ? Addition of Alcohols ? Addition of Ammonia and Derivatives ? Addition of Hydrogencyanide	
14	? Addition of Ylides (Wittig Reaction) ? Addition of Organometallic Reagents (Reformatsky Reaction) ? Reduction ? Oxidation	

22	Textbooks, References and/or Other Materials:	
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		written, multiple choice and short quiz

24 **ECTS / WORK LOAD TABLE**

25 **CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**

	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0

ÖK3	5	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0
ÖK4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	4	5	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**