ORGANIC CHEMISTRY

1	Course Title:	ORGANIC CHEMISTRY	
2	Course Code:	KIM1080	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. AYHAN YILDIRIM	
15	Course Lecturers:	Prof. Dr. Necdet Coşkun Doç. Dr. Mustafa Tavaslı Doç. Dr. Nevin Arıkan Ölmez	
16	Contact information of the Course Coordinator:	yildirim@uludag.edu.tr Tel: 0 (224) 294 1771 Uludağ Üniversitesi Fen-Edebiyat Fakültesi Kimya Bölümü, Görükle/BURSA 16059	
17	Website:		
18	Objective of the Course:	The aim of the course is to teach the biologically important organic molecules contain functional groups, structural frame and tri-dimensional structural of organic molecules.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Knowing of the Organic Chemistry and being aware of the importance in Biology.
		2	Learning of the basic Organic Chemistry terms.
		3	Learning the reactions of some basic Organic functional groups.
		4	Learning the physical and chemical properties of some organic compounds that being Biological important.
		5	Learning the bio-effectiveness and/or the bio-harmfulness of some organic compounds and using these with this consciousness
		6	Being knowledgeable about the applications of some organic compounds existed in nature.
		7	
		8	
		9	
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical	Practice	

1	Alkanes: - Molecular geometry and Bond angle - Closed, Opened, Compressed and Lineer Formula - Straight chained Alkanes (Methane….Decan)	
2	Alkyl Groups: -General Formula -Methyl, ethyl, n-propyl, n-butyl, n-pentyl, n-hexyl…n-decyl -İsopropyl, sec-butyl, ter-butyl, sec-pentyl, neopentyl	
3	Branched alkanes: -Structural isomerism -Systematic nomenclature	
4	Alcohols and Ethers: -Water molecule -Molecular geometry and Bond angle Alcohols: -Closed, Opened, Compressed and Lineer Formula -Primary, secondary and tertiary alcohols -Mono and poly alcohols, Systematic nomenclature -Forces that holding the molecules together (H-Bond) Ethers: -Closed, Opened, Compressed and Lineer Formula	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	2	5.00	10.00
Homeworks	1	18.00	18.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm Exams	1	20.00	20.00
Others	0	0.00	0.00
Final Exams	1	30.00	30.00
Total Work Load			120.00
Total workload / 30 hr			4.00
ECTS Credit of the Course			3.00

	Ketones: -Closed, Opened, Compressed and Lineer Formula -Systematic nomenclature -Structural isomerism -Forces that holding the molecules together (Dipole-dipole interaction) -Aldose and Ketose sugars	

7	Carboxylic acids and Esters: -Carbonyl, Hydroxyl and Alcoxy groups -Molecular geometry and Bond angle Carboxylic acids: -Closed, Opened, Compressed and Lineer Formula -Systematic nomenclature -Mono and polycarboxylic acids -Forces that holding the molecules together (H-Bond) Esters: -Closed, Opened, Compressed and Lineer Formula -Systematic nomenclature -Forces that holding the molecules together (Dipole-dipole interaction) -Vegetable and animal oils and Waxs	
8	Amides: -Carbonyl, Hydroxyl and Amide groups -Molecular geometry and Bond angle -Closed, Opened, Compressed and Lineer Formula -Systematic nomenclature -Forces that holding the molecules together (H-Bond or Dipole-dipole interaction) -Aminoacids, Proteins and Peptide bonds	
9	Alkenes: -Molecular geometry and Bond angle -Closed, Opened, Compressed and Lineer Formula -Systematic nomenclature -Geometrical isomerism (Cis-Trans isomerism) -Forces that holding the molecules together (Van der Waals interaction) -Vegetable fatty acids	
10	Aromatic compounds: -Aromaticity -Benzenoid Aromatic compounds -Heterocyclic Aromatic compounds -Ortho-/meta-/ para- positions	
11	Functional group converisons: -Determination of oxidation step -Electronegativity (C, H, O, Cl, Br)	
12	Reduction Reaction: -Reductive reagents	
13	Oxidation Reaction: -Oxidative reagents	
14	Acid-base reaction: -Description of acid and base -Poor acids -Strong acids -Buffer solutions	
22	Textbooks, References and/or Other Materials:	i) G. Solomons ve C. Fryhle (Çev. Ed. G. Okay ve Y. Yıldırır), Organik Kimya, Literatür Yayınları, 2002. ii) R. J. Fessenden ve J. S. Fessenden (Çev. Ed. T. Uyar), Organik Kimya, Güneş Kitabevi, 1992. iii) J. McMurry, Organic Chemistry, Brooks/Cole Publishing Comp., 1992. iv) P. Y. Bruice, Organic Chemistry, Prentice Hall, 2001.
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		

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	5	0	0	5	0	4	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	5	0	0	0	0	0	0	0	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**