HETEROCYCLIC CHEMISTRY										
1	Course Title:	HETERO	DCYCLIC CHEMISTRY							
2	Course Code:	KIM4048	3							
3	Type of Course:	Optional								
4	Level of Course:	First Cyc	le							
5	Year of Study:	4								
6	Semester:	8								
7	ECTS Credits Allocated:	6.00								
8	Theoretical (hour/week):	3.00								
9	Practice (hour/week):	0.00								
10	Laboratory (hour/week):	0								
11	Prerequisites:	None However, it is strongly recommended that students should have read Organic Chemistry I and Organic Chemistry II.								
12	Language:	English								
13	Mode of Delivery:	Face to	face							
14	Course Coordinator:	Dr. Ögr. Üyesi MELİHA ÇETİN KORUKÇU								
15	Course Lecturers:	Prof. Dr. Necdet COŞKUN								
16	Contact information of the Course Coordinator:	melihacetin@uludag.edu.tr +90 224 29 41 730								
17	Website:									
18	Objective of the Course:	The aim of the course is to investigate the structure, synthesis and reactivity of heterocyclic compounds.								
19	Contribution of the Course to Professional Development:	To understand the importance and the place of heterocyclic compounds among the other organic compounds								
20	Learning Outcomes:									
		1	Understanding the importance and the place of heterocyclic compounds among the other organic compounds							
		2	Learning the nomenclature of the heterocyclic compounds							
		3	Learning the syntheses and properties of heterocyclic compounds							
		4								
		5								
		6								
		7								
		8								
		9								
		10								
21	Course Content:									
		Co	ourse Content:							
Week	Theoretical		Practice							
1	Introduction to the chemistry of Hete compounds. Nomenclature of Heterocyclic compo	erocyclic ounds.								

2	Aromatic Heterocyclic compounds: Six and five-membered six pi electron containing systems. Benzofused heterocyclic compounds. Other fused heterocyclic compounds.			
3	Some criteria for aromaticity in heterocyclic compounds: Bond distances, ring flow and chemical shift, thermochemical criteria for aromaticity. Tautomerism in heterocyclic compounds.			
4	Nonaromatic heterocyclic compounds: Bond angle strain, some results of bond angle strain, angle strain and torsion energy barriers in big rings.			
5	The effects of bond distance and van der Waals radius to conformations of saturated six, four and five membered flexible heterocycles.			
6	Introduction of five membered ,one heteroatom containing heterocyclic compounds. Pyrroles: Ring syntheses, substitution reactions over nitrogen atom.			
7	Substitution reactions over carbon atom at pyrrol, addition and cycloaddition reactions. Properties of substituted pyrroles, some pyrrole based natural compounds.			
8	Furans: Ring syntheses, electrophilic			
Activit	ies	Number	Duration (hour)	Total Work Load (hour)
Th g ore	ipaiophens: Ring syntheses, electrophilic	14	3.00	42.00
Practic	als/Labs	0	0.00	0.00
Self stu	dy autions e pediation e desulphurization,	14	0.50	7.00
Homew	vorks	0	0.00	0.00
Project	Indoles and related compounds: Ring	0	0.00	0.00
Field S	tudies	0	0.00	0.00
Midtern	read the man electrophiles, extended and the transmission of some substituted	1	38.00	38.00
Others		0	0.00	0.00
Final E	Six membered and one neteroatom	1	70.00	70.00
Total W	Vork Load			157.00
Total w	chemistry, aikalinity, aikyllation, acylation and			5.23
ECTS (Credit of the Course			6.00
	carbon atoms, nucleophilic substitutions. Dehydropyridines, dihydropyridinies, pyridine- N-oxides, hydroxy and aminopyridines, pyridine carboxylic acids.			
13	Quinolines and isoquinolines: Syntheses of quinoline and isoquinolines. Electrophilic substitutions over carbon atoms.			
14	Nucleophilic substitutions of quinoline and isoquinoline, nucleophilic addition, oxidative ring opening, N-oxides.			
22	Textbooks References and/or Other	[1] T.I. Gilchrist Hetero	ocvclic Chemistry, 19	985
	Materials:	[2] J.A.Joule aK.Mills, Hall and Hall, Cambridge, 20	Heterocyclic Chemis	stry,Chapman

TERM LEARNING ACTIVITIES						N R		WE	WEIGHT								
Midterm Exam						1		40.	40.00								
Quiz 0)	0.0	0.00									
Home work-project C							0.0	0.00									
Final Exam 1							60.	60.00									
Total 2						2	10	100.00									
Contribution of Term (Year) Learning Activities to Success Grade						40.	40.00										
Contribution of Final Exam to Success Grade						60.	60.00										
Total							10	100.00									
Measurement and Evaluation Techniques Used Course					d in th	ie Wr	Written exam										
24 EC	;TS/	' WO	RK L	OAD) TAB	LE											
25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16	
ÖK1	3	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
ÖK2	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	
ÖK3	3	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
LO: Learning Objectives PQ: Program Qualifications																	
Contrib ution1 very low2 lowLevel:1				3	Medi	ledium		4 High			5 Very High						