ASYMMETRIC SYNTHESIS IN ORGANIC CHEMISTRY										
1	Course Title:	ASYMM	ETRIC SYNTHESIS IN ORGANIC CHEMISTRY							
2	Course Code:	KIM6012	2							
3	Type of Course:	Optional								
4	Level of Course:	Third Cy	cle							
5	Year of Study:	1								
6	Semester:	2								
7	ECTS Credits Allocated:	5.00								
8	Theoretical (hour/week):	3.00								
9	Practice (hour/week):	0.00								
10	Laboratory (hour/week):	0								
11	Prerequisites:	CHEM 6018 Principles Organic Synthesis I								
12	Language:	Turkish								
13	Mode of Delivery:	Face to f	ace							
14	Course Coordinator:	Prof. Dr.	NECDET COŞKUN							
15	Course Lecturers:	-								
16	Contact information of the Course Coordinator:	coskun@uludag.edu.tr +90 224 29 41 725 Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Kimya Bölümü, 16059 Görükle / BURSA, TÜRKİYE								
17	Website:									
18	Objective of the Course:	Learn the theory of the methodologies applied to the synthesis of enantiomericaly pure organic compounds, and use in the future synthetic targets.								
19	Contribution of the Course to Professional Development:									
20	Learning Outcomes:									
		1	What is asymmetric synthesis, understanding and recognition of the reagents and reactions widely used in the synthesis of the compounds in enantiomeric purity							
		2	Designing an asymmetric synthesis reaction							
		3								
		4								
		5								
		6								
		7								
		8								
		9								
		10								
21	Course Content:									
		ourse Content:								
Week	Theoretical		Practice							
1	The importance of chirality and the stereoisomeric differences, the asym	nmetry								
2	Determination of the Composition of enantiomers, Determination of absol configuration	ute								

3	Asymmetric Synthesis Approaches, S Common Definitions in Asymmetric S and Stereochemistry	Some Synthesis							
4	Chirality Transfer, Establishment of Quaternary Carbon Centers								
5	Preparation of Alfa-Amino Acids, Chi Acetals Nucleophilic displacement	ral							
6	Alkylation of aldehydes induced by cl catalyst: Asymmetric Nucleophilic Ad Catalytic Asymmetric Participation of Dialkylzinc to ketones compounds: Enantioselective preparation of the te alcohols	hiral Idition, ertiary							
7	Asymmetric cyanohydration, Asymmotydroxyphosphonylation	etric							
8	Substrate-Controlled Aldol Reaction, Reagent-controlled Aldol Reactions								
9	Chiral catalyst-controlled aldol reaction Double Asymmetric Aldol Reactions MIDTERM PRESENTATIONS	on,							
10	Asymmetric Allylation Reactions, asy alkylation and allylation of imines	mmetric							
11	Some other addition reactions: Henry Reaction	/							
12	Asymmetric Diels-Alder and other								
Activit	es		Number	Duration (hour)	Total Work Load (hour)				
Theore	Applications of asymmetric reactions Ical Isynthesis of natural compounds	in the	14	3.00	42.00				
Practic	als/Labs		0	0.00	0.00				
Selfstu	Lextbooks, References and/or Other dy and preperation		The Guo-Qiang Lin, Yue- Principles and application	Ving Li, Albert S. C	. Chan, 28,00 Vnthesis Wiley-				
Homew	vorks		1	36.00	36.00				
Project	8		ZLA.KOSKINEN, ASYMME	unc synthesis of na	iurai products, 0.00				
Field S	tudies	IV	0	0.00	0.00				
M 23 ern	A exaq gent		0	0.00	0.00				
Others		••	0	0.00	0.00				
FinalE	xams	0	do	72.00	72.00				
Total W	/ork Load		5.00		178.00				
Total w	ork Joad/ 30 hr	1	50.00		5.93				
ECTS (Credit of the Course	11 13	50.00		5.00				
Tatal			100.00						
Total		2	-0.00						
Succes	stion of Term (Year) Learning Activities SGrade	es to	50.00						
Contrib	ution of Final Exam to Success Grade	e (50.00						
Total			100.00						
Measu Course	rement and Evaluation Techniques Us	sed in the							
24	ECTS / WORK LOAD TABLE								

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	0	5	5	5	5	0	5	0	4	5	0	4	0	0	0	0
ÖK2	0	5	5	5	5	0	5	0	4	5	0	4	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	Contrib 1 very low ution Level:			2 low			3 Medium		4 High		5 Very High					