

	MARMARA UNIVERSITY Faculty of Arts and Sciences															
	Chemistry Department															
	SYLLABUS															
	2015-2016 Spring					Course level: Lisans (First Cycle)										
Course Code	Course Name			Course Type	Course Pool (if exists)	Weekly Course Hours		Local Credit	ECTS Credit	Semester						
CHEM2154	Organic Chemistry I			Zorunlu		T	A	4	6	4						
	Prerequisite (Ders Kodu ve Adı, Min Harfli Başarı Notu)			Prerequisite to (Ders Kodu ve Adı, Min Harfli Başarı Notu)			Weekly Time & Classroom Schedule (Gün, Saat Aralığı, Derslik)									
	<Bu dersi bağlayan önceki derslerin kodu, adı, min hb> {Her bir dersi birbirinden noktalı virgülle ayırınız.}			<Bu dersin bağladığı sonraki derslerin kodu, adı, min hb> {Her bir dersi birbirinden noktalı virgülle ayırınız.}												
Course Lecturer	Prof. Dr. Safiye Erdem			Teaching Assistants	<Unvan, Adı, Soyadı>											
Office/Room No	C413			Office/Room No												
Phone+extension	1377			Phone+extension												
E-mail	erdem@marmara.edu.tr			E-mail												
Web	http://mimoza.marmara.edu.tr/~erdem/			Web												
Office hour schedule	Tuesday 13.00-14.00			Office hour schedule												
Course Objectives	Main objective of the course is to present the basic concepts of organic chemistry with a logical and systematic way. This introductory course will also emphasize the relationships between structure, property and reactivity of organic compounds.															
Textbooks and or References	Course Web page:															
	1.	G. Solomons, C. Fryhle, Organic Chemistry, Wiley & Sons														
	2.	J. Mc Murry, Organic Chemistry, Brooks/Cole Publishing														
Course Learning Outcomes	1.	Establish the links between molecular structure, stability, stereochemistry and reactivity.														
	2.	Perform retrosynthetic analysis related to alkyl halides, alkenes and alkynes.														
	3.	Identify optically active compounds.														
	4.	Explain the factors influencing conformations in acyclic and cyclic systems.														
	5.	Rank the relative acid/base strength.														
	6.	Write the structures of possible isomers and functional groups of a given molecular formula.														
Program Outcomes x Course Learning Outcomes Matrix	Program Outcomes														1:Weak; 2:Medium; 3:Strong	
	PK1	PK2	PK3	PK4	PK5	PK6	PK7	PK8	PK9	PK10	PK11	PK12	PK13	PK14	PK15	Course Learning Outcomes
	3		3		2									3		DK1. Establish the links ...
	3		3		2									3		DK2. Perform retrosynthet...
	3		3		2									3		DK3. Identify optically a...
	3		3		2									3		DK4. Explain the factors ...
	3		3		2									3		DK5. Rank the relative ac...
									2					3		DK6. Write the structures...
3	0	3	0	2	0	0	0	0	2	0	0	0	0	3	0	TOTAL EFFECT
Language of Instruction	Learning Activities and Teaching Methods					Course Presentation Form										
	Lecture, problem solving.					Face to face, Interactive question-answer, video movies.										

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				T	A			
CHEM2154	Organic Chemistry I	Zorunlu		4	0	4	6	4
Week	Date	Weekly Course Content				Reference No - Section		
1. Week		Carbon Compounds and Chemical Bonds				1-Chapter 1		
2. Week		Lewis Structures, Hybridization, Molecular Geometry (VSEPR Model)				1-Chapter 1		
3. Week		Representative Carbon Compounds: Functional Groups, Intermolecular Forces				1-Chapter 2		
4. Week		An Introduction to Organic Reactions: Acids and Bases				1-Chapter 3		
5. Week		Alkanes: Nomenclature				1-Chapter 4		
6. Week		Alkanes: Conformational Analysis, Introduction to Synthesis				1-Chapter 4		
7. Week		Stereochemistry: Enantiomers, (R-S) System, Optical Activity, Diastereomers.				1-Chapter 5		
8. Week		Midterm Exam						
9. Week		Racemic Mixtures, Meso Compounds, Fisher Projections, Enantiomeric Excess				1-Chapter 5		
10. Week		Ionic Reactions-Nucleophilic Substitution Reactions of Alkyl Halides.				1-Chapter 6		
11. Week		SN2, SN1 Mechanisms, Factors Affecting the Rates of SN2 and SN1 Reactions				1-Chapter 6		
12. Week		Elimination Reactions of Alkyl Halides, E2 and E1 Mechanisms				1-Chapter 6		
13. Week		Alkenes and Alkynes I, Properties and Synthesis				1-Chapter 7		
14. Week		Zaitsev's Rule, Acid Catalyzed Dehydration of Alcohols				1-Chapter 7		
15. Week		Alkenes and Alkynes II, Addition Reactions,				1-Chapter 8		
16. Week		Markovnikov's Rule, Oxidative Cleavage				1-Chapter 8		
17. Week		Final Exam						
Evaluation Tool		YSSL (BDS)	BNAL (BDS)	BDKL (BDS)	Calculation of Grade			
Evaluation Tools and Weight %	Evaluation Tools		Quantity	Date	Weight in Total (%)		Weight in Semester Evaluation (%)	
	Final Exam		1		60,00		0,00	
	Final-Make up Exam (if exists)		1		60,00		0,00	
	Semester Evaluation Tools				40,00		100,00	
	Midterm Exam(s)		1		40,00		100,00	
	Quiz(es)							
	Project							
	Homework							
	Laboratory/Atelier							
	Presentation / Seminar / Demo							
	Research / Report / Other							
	Attendance							
Student Workload Calculation								
Tool	Weekly Avr. Hour	Semester Total Hour	Tool	Weekly Avr. Hour	Semester Total Hour	Tool	Weekly Avr.	Semester Total hour
Theoretical Hours	4,00	56	Midterm Exam and Preparation	2,00	28	Atelier and Preparation		
Applied Hours	0,00	0	Quiz and Preparation			Presentation/Seminar/Demo and Preparation		
Pre-class Self Study	1,00	14	Project and Preparation			Research/ Report/ Other and Preparation		
Pre-application/Post-application Self Study			Homework and Preparation			Final Exam and Preparation	4,00	56
Total Student Workload Hours:	154		1 ECTS Credit = 25 Student Workload Hours			Workload Calculation: Hesap Doğru		