

	MARMARA UNIVERSITY Faculty of Arts and Sciences															
	Chemistry Department															
	SYLLABUS															
	2015-2016 Fall										Course level:		Lisans (First Cycle)			
Course Code	Course Name				Course Type	Course Pool (if exists)	Weekly Course Hours		Local Credit	ECTS Credit	Semester					
							T	A								
CHEM4554	Organic Chemistry Laboratory Techniques				Seçimlik	CHEM-S2	2			3	8					
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. ÜMİT SALAN				Teaching Assistants											
Office/Room No	GZFC419				Office/Room No											
Phone+extension	0216 347 96 41/1371				Phone+extension											
E-mail	usalan@marmara.edu.tr				E-mail											
Web					Web											
Office hour schedule					Office hour schedule											
Course Objectives	Main objectives of the course are to demonstrate with a broad selection of important, useful and advanced or difficult synthetic methods.															
Textbooks and or References	Course Web page:															
	1.	Experimental Organic Chemistry, Principles and Practice, Laurence M. HARWOOD, Christopher J. Moody														
	2.	Introduction to Organic Laboratory Techniques, D. L. PAVIA, D. M. LAMPMAN, G. S. KRIZ														
Course Learning Outcomes	1.	Know literature search (PO13)														
	2.	Know the laboratory techniquesPÇ1, PÇ5, PÇ7)														
	3.	Know necessary rules in laboratory (PO4)														
	4.	Know security precautions in laboratory (PO4)														
	5.	Discuss problems and solutions with the other participants (PO3)														
	6.	Decide the required application of lab-techniques for their solution (PO1)														
Program Outcomes x Course Learning Outcomes Matrix	Program Outcomes															1:Weak; 2:Medium; 3:Strong
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	PO15	Course Learning Outcomes
													3			DK1. Know literature sear...
	3				3		3									DK2. Know the laboratory ...
																DK3. Know necessary rules...
																DK4. Know security precau...
																DK5. Discuss problems and...
															DK6. Decide the required ...	
	3	0	0	0	3	0	3	0	0	0	0	0	3	0	0	TOTAL EFFECT

Course Code	Course Name	Course Type	Course Pool (if exists)	Weekly Course Hours		Local Credit	ECTS Credit	Semester	
				T	A				
<b>CHEM4554</b>	Organic Chemistry Laboratory Techniques	Seçimlik	CHEM-S2	2			3	8	
<b>Language of Instruction</b>	<b>Learning Activities and Teaching Methods</b>			<b>Course Presentation Form</b>					
	<Anlatım/sunum, soru-cevap, tartışma, problem çözme, örnek olay, deney/laboratuvar, gözlem, gezi, dramatizasyon, proje, ödev vb.>			<Yüzyüze, deney, soru-cevap, tartışma, örnek olay, gösterip yaptırma vb.>					
Week	Date	Weekly Course Content			Reference No - Section				
1. Week		Suitable and safe set-ups							
2. Week		Handling of reactive and sensitive reagents (butyllithium, low boiling liquids, liquid ammonia, etc.)							
3. Week		Handling of small quantities of material.							
4. Week		Methods for addition of reagents under special or difficult conditions(septum, syringe, etc.)							
5. Week		Methods for mixing and stirring under intricate conditions							
6. Week		Methods for temperature regulation (reactions at excessive temperatures, micro wave heating, etc.)							
7. Week		Selection of reaction vessels and performance of reactions under intricate conditions (screw cap sealed reaction vessels, reactions under pressure or under							
8. Week		Midterm Exam							
9. Week		Methods for transport and filtration under intricate conditions (siphon-technique, pressure filtration, filtration under inert atmosphere, Schlenk technique, hot filtration, cold filtration, etc.)							
10. Week		Methods for optimisation of lab-processes.							
11. Week		Chromatographic methods for checking purity and purification (preparative tlc, rotating disc tlc, flash chromatography, preparative hplc, etc.)							
12. Week		Distillation and recrystallisation of small quantities.							
13. Week		Ball tube diitillation							
14. Week		Simple methods for programming and automatisisation of lab-processes.							
15. Week		Simple methods for programming and automatisisation of lab-processes.							
16. Week		Study Week							
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				60,00		0,00		
	Final-Make up Exam (if exists)				60,00		0,00		
	<b>Semester Evaluation Tools</b>				100,00		100,00		
	Midterm Exam(s)				40,00		40,00		
	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. Hour	Semester Total hour	
Theoretical Hours	2,00	28	Midterm Exam and Preparation	2,00	28	Atelier and Preparation			
Applied Hours			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			
<b>Total Student Workload Hours:</b>		70	<b>1 ECTS Credit = 25 Student Workload Hours</b>			<b>Workload Calculation:</b>		Hesap Doğru	