

	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											
BIO4512	Molecular Biology	Seçimlik		2		3	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	Doç. Dr. Özkan DANIŞ				Teaching Assistants											
Office/Room No	C016				Office/Room No											
Phone+extension	02163464553-1334				Phone+extension											
E-mail	<a href="mailto:odanis@marmara.edu.tr">odanis@marmara.edu.tr</a>				E-mail											
Web	kmy.fef.marmara.edu.tr				Web											
Office hour schedule					Office hour schedule											
Course Objectives	The main objective of the course is to enable the students to learn the nature of genes, DNA repair, Cellular reproduction as well as special topics in Molecular Biology such as cancer and immune system.															
Textbooks and or References	Course Web page:															
	1.	Molecular Biology of the Cell, 5th Edition, B. Alberts, A. Johnson, 2008														
Course Learning Outcomes	1.	Be able to understand basic features of gene replication and expression														
	2.	Be able to describe programmed cell death and necrosis														
	3.	Be able to explain the cell signalling in the cell														
	4.	Be able to know molecular biology of cancer and immune response														
	5.	Be able to comprehend the relationships between molecular biology and the biochemistry														
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						2						2	3		DK1. Be able to understand...
	3						3						2	3		DK2. Be able to describe ...
	3		3				2						2	3		DK3. Be able to explain t...
	3											2		3		DK4. Be able to know mole...
	3		3			2						2		3		DK5. Be able to comprehend...
3	0	3	0	0	2	2	0	0	0	0	2	2	3	0	TOTAL EFFECT	
Language of Instruction	Learning Activities and Teaching Methods										Course Presentation Form					
İngilizce	Lecture supported by power point slides, illustrations, blackboard notes and discussion.										Lecture supported by power point slides, illustrations, blackboard notes and discussion.					

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				T	A			
BIO4512	Molecular Biology	Seçimlik		2		3	3	8
Week	Date	Weekly Course Content				Reference No - Section		
1. Week		Introduction to the Basic Genetic Mechanisms						
2. Week		The Nature of the Gene and the Genome						
3. Week		Gene Expression: From Transcription to Translation						
4. Week		Control of Gene Expression						
5. Week		DNA Replication and Repair						
6. Week		DNA Damage and repair mechanisms						
7. Week		Special Topics in Molecular Biology: Oxidative stress in the cell						
8. Week		Midterm Exam						
9. Week		Cellular Reproduction I: Cell Cycle						
10. Week		Cellular Reproduction II: Regulation of Cell Cycle						
11. Week		Cellular Reproduction III: Sexual Reproduction						
12. Week		Cell Signaling and Signal Transduction: Communication Between Cells						
13. Week		Cell Death Apoptosis and Necrosis						
14. Week		Special Topics in Molecular Biology: Molecular Biology of Cancer						
15. Week		Special Topics in Molecular Biology: Immune Response						
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	100.00		
	Final-Make up Exam (if exists)				60.00	100.00		
	Semester Evaluation Tools				40.00	100.00		
	Midterm Exam(s)				28.00	70.00		
	Quiz(es)							
	Project				12.00	30.00		
	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	2.00	28	Midterm Exam and Preparation		10	Atelier and Preparation		
Applied Hours			Quiz and Preparation			Presentation/Seminar/Demo and Preparation		
Pre-class Self Study			Project and Preparation		10	Research/ Report/ Other and Preparation		
Pre-application/Post-application Self Study	1.00	14	Homework and Preparation			Final Exam and Preparation		10
<b>Total Student Workload Hours:</b>		72	<b>1 ECTS Credit = 25 Student Workload Hours</b>			<b>Workload Calculation:</b>	Hesap Doğru	