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 T	Weekly Course Hours A	Local Credit	ECTS Credit	Semester
CHEM4511	Introduction to Molecular Biology	Seçimlik		2		3	3	7

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**	
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Office hour schedule		**Office hour schedule**	

Course Objectives

The main objective of the course is to enable the students to learn the structural and molecular features of cells such as membranes, organelles as well as to understand basic functions of these supramolecules

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 and types of cells and viruses
2. Be able to identify and describe the physico-chemical characteristics and biomolecules and their building blocks.
3. Be able to explain the function of cell componenets
4. Be able to describe transport pathways that occurs in the cell
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 understan...
3						3						2	3		DK2. Be able to identify ...
3		3				2						2	3		DK3. Be able to explain t...
3											2		3		DK4. Be able to describe ...
3		3			2						2		3		DK5. Be able to comprehen...
3	**0**	**3**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**2**	**2**	**3**	**0**	**TOTAL EFFECT**

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				T	A			
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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.

Week	Date	Weekly Course Content	Reference No - Section
1. Week		Introduction to the Study of Cell and Molecular Biology	
2. Week		The Discovery and Basic Properties of Cells	
3. Week		Cell Classes and Viruses	
4. Week		Chemical Basis of life and Biomolecules	
5. Week		Bioenergetics, Enzymes and Metabolism: An overview	
6. Week		Introduction to Cell: Components and functions	
7. Week		Special Topics in Molecular Biology. Recombinant DNA Technology	
8. Week		Midterm Exam	
9. Week		The Structure and Function of the Plasma Membrane	
10. Week		The Movement of Substances Across Cell Membranes	
11. Week		Mitochondria, Chloroplast an Peroxisome: Structure and Function	
12. Week		Extracellular Matrix and Cytoskeleton	
13. Week		Cytoplasmic membrane Systems I: Endoplasmic Reticulum	
14. Week		Cytoplasmic membrane Systems II: Golgi and Lysozome	
15. Week		Special Topics in Molecular Biology: Gene Therapy and Stem Cells	
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
Total Student Workload Hours:	72		***1 ECTS Credit = 25 Student Workload Hours***			**Workload Calculation:**	Hesap Doğru	