



MARMARA UNIVERSITY
Institute of Graduate Study for Pure and Applied Sciences
Physics Department - Physics Program

SYLLABUS

2016-2017 Fall and Spring Semesters **Course Level:** Yüksek Lisans (Second Cycle)

Course Code	Course Name	Course Type	Course Pool (if any)	Weekly Course Hours T U	Credits	ECTS Credits	Semester
BYL8012.1	Molecular Ecology	Zorunlu		3			

Prerequisite Courses (Course Code and Name, Min Letter Grade to success)	Prerequisite to (Course Code and Name, Min Letter Grade to success)	Weekly Time & Classroom Schedule (Day, Hours, Classroom)
<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. N. Cenk SESAL	Teaching Assistant(s)	<Title, Name, Surname>
Office	C223	Office	
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Web		Web	
Office Days and Hours	Pazartesi 08 30- 09 30	Office Days and Hours	

Course Objectives

	Course web pages:
Textbooks and/or References (Recommended Reading)	1 Çevre ve Ekoloji 2010
	2 Ekoloji ve Çevre Araştırmaları 2018
	3 Molecular ecology 2011
	4 Articles
	5

Learning Outcomes	1 The definition of molecular ecology will be understood
	2 Explain the biological methods used in molecular ecology and the reasons for their use
	3 Will be able to explain the methods used in molecular ecology and at which stages.
	4
	5
	6

Program Gains / Outputs																1:Week; 2:Medium; 3:Strong	
Program Gains x Course Learning Gains Matrix	PG1	PG2	PG3	PG4	PG5	PG6	PG7	PG8	PG9	PG10	PG11	PG12	PG13	PG14	PG15	Course Learning Gains	
	3	3	2	3	3	3	3	2	2	2	3	3				LG1 The definition of mo...	
	2	3	3	3	2	3	2	3	2	2	3	3				LG2 Explain the biologic...	
	3	3	2	3	3	2	2	3	2	3	3	3				LG3 Will be able to expl...	
																	LG4 ...
																	LG5 ...
																	LG6 ...
3	3	2	3	3	3	2	3	2	2	3	3	0	0	0	TOTAL EFFECT		

Language of Instruction	Learning Activity and Teaching Methods	Course Presentation
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<expression/presentation, question-answer, discussion, problem solving, case study, experiments/laboratory, observation, tripping dramatisation, project, homework, etc.>

<face-to-face, experiments, question-answer, discussion, case study, have it made by showing, etc.>

Week	Date	Course Contents (Topics)	Reference No - Section
Week 1		What is Molecular Ecology: Overview	
Week 2		Laboratory rules in Molecular Ecology	
Week 3		Introduction of instruments used in Molecular Biology	
Week 4		Methods Used in Molecular Ecology; centrifugation, electrophoresis, homogenization methods, chromatography	
Week 5		DNA Isolation and Analysis	
Week 6		RNA Isolation and Analysis	
Week 7		Polymerase chain reaction (PCR)	
Week 8		Midterm	
Week 9		Gene sequencing types	
Week 10		Isolation and purification of proteins	
Week 11		Determination of concentration of proteins and electrophoretic analysis	
Week 12		Methods based on nucleic acid and protein hybridization	
Week 13		Basic principles of enzymatic analysis and enzyme activity determination methods	
Week 14		Spectroscopic techniques	
Week 15		Cell culture and microbial techniques	
Week 16		Study Week	
Week 17		Final Exam Week	

Evaluation Method	YSSL (BDS)	BNAL (BDS)	BDKL (BDS)	Grade Calculation
Bağıl Değerlendirme Sistemi (BDS)				Yarıyıl/yıl içi değerlendirme ve yarıyıl/yıl sonu sınavı notlarından hesaplanır.

Assessment Methods and Criteria	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final	1		60,00	0,00
Resit (Final Make-up) Exam (if exists)			60,00	0,00	
Semester Evaluation			40,00	100,00	
Midterm(s)	1		10,00	25,00	
Quiz(es)					
Project(s)	1		10,00	25,00	
Homework(s)	1		10,00	25,00	
Laboratory / Workshop					
Presentation/ Seminar / Demo					
Research / Report / Other	1		10,00	25,00	
Presents to course					

Student Workload (ECTS Credit) Calculation									
Evaluation Tool	Hour/Quantity	Workload Hours	Evaluation Tool	Hour/Quantity	Workload Hours	Evaluation Tool	Hour/Quantity	Workload Hours	
Theoretical hours			Midterm & preparation			Laboratory/Atelier & preparation			
Application hours			Quiz & preparation			Presentation & preparation			
Pre-class and Post-class self study			Project & preparation			Research & preparation			
Pre and post-application self study			Homework & preparation			Final & preparation			
Total Student Workload Hours: 0		1 ECTS Credits = 25 Student Workload Hours				Workload Calculation:	True		