AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Epigenetics								
Course Code	BİO654		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	7	Workload	169 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	This course aims to teach analysis epigenetics and recent advances.								
Course Content	This course aims to analysis epigenetics and summarizes recent advances in this intriguing field of study. This course includes evolution of epigenetics, the epigenetic basis of normal and pathological processes, and the practical applications of epigenetics in research and therapeutics.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Lecturer notes
2	Handbook of Epigenetics, Trygve Tollefsbol, (2011)ISBN: 978-0-12-375709-8
3	Gene Control (2010) David S. Latchman (ISBN-10: 0815365136 | ISBN-13: 978-0815365136)

Week	Weekly Detailed Course Contents	
1	Theoretical	Molecular mechanisms of Epigenetics
2	Theoretical	The epigenetics of noncoding RNAs
3	Theoretical	Prions in Epigenetic Inheritance
4	Theoretical	Analysis of gene specific DNA methilation
5	Theoretical	Chromatin modifications
6	Theoretical	Epigenetics of eukaryotic microbes
7	Theoretical	Mouse models of epigenetic Inheritance
8	Theoretical	Epigenetic regulatory mechanisms in plants
9	Theoretical	Metabolism and epigenetics
10	Theoretical	Functions of epigenetics
11	Theoretical	Evolutionary epigenetics
12	Intermediate Exam	Midterm Exam
13	Theoretical	Aging epigenetics
14	Theoretical	Epigenetic epidemiology
15	Theoretical	Epigenetics and human disease
16	Theoretical	Epigenetic therapy
17	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	3	3	90
Assignment	2	10	2	24
Midterm Examination	1	19	1	20
Final Examination	1	34	1	35
			Total Workload (Hours)	169
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Understanding of Epigenetic models
2	Understanding of relation between metabolism and epigenetics
3	Understanding of epigenetic inheritance
4	Understanding of epigenetic epidemiology
5	Understanding of relation between epigenetic and disease

Programme Outcomes *(Biology Doctorate)*	
1	To have enough scientific background knowledge towards a specific study and research area
2	To have an ability to identify, evaluate and develop a solution for a problem on biological aspects
3	To be able to evaluate scientific observations and results of experiments using statistical analysis methods
4	To have basic skills in areas related to field of biological studies
5	To have the ability to develop cooperation with different disciplines with the high level of social communication required for studies
6	To have knowledge of technology and use of methods and means used in biological researches
7	To have an ethical understanding which will be a guide for their investigations and publications
8	For PhD; to have European Language Portfolio C1 general level language skill
9	To be able to present and discuss own research results in accordance with scientific discipline using technological tools in scientific research environments
10	To be able to detect and evaluate economic and social impacts of an own original research results
11	To be equipped with ability of carrying out independent study in biological field
12	To be able to publish at least one an international/national peer reviewed scientific paper and/or produce or interpret an original work related to biology in order to expand the frontiers of knowledge
13	To be able to develop new approaches or adaptations to be used in solving scientific and biological problems
14	To be able to develop new understanding and approaches in order to explain a new phenomenon or a biological event under investigation
15	To have abilities and experience to create new search area through inspiration gained from subject searched

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P4	4	4	4	4	4
P5	4	4	4	4	4
P6	4	4	4	4	4
P8	5	5	5	5	5
P9	5	5	5	5	5
P10			4	4	4
P13	5	5	5	5	5
P14	5	5	5	5	5
P15	5	5	5	5	5