AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Eukaryotic Gene Expression and Regulation								
Course Code	BİO645		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	7	Workload	176 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The goal of the course is to teach mechanism that involve eukaryotic gene expression and regulation								
Course Content	This course provides a brief overview of the various levels of regulation of gene expression and the basics of transcriptional regulation in eukaryotes.								
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	Gene Control (2010) David S. Latchman (ISBN-10: 0815365136 | ISBN-13: 978-0815365136)

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to Gene Expression
2	Theoretical	Levels of Gene Control
3	Theoretical	Structure of Chromatin
4	Theoretical	The Process of Transcription
5	Theoretical	Transcription Factors and Transcriptional Control
6	Theoretical	Post-transcriptional Processes
7	Theoretical	Post-transcriptional Regulation
8	Theoretical	Gene Control and Cellular Signaling Pathways
9	Theoretical	Gene Control in Embryonic Development
10	Theoretical	Control of Cell-type-specific Gene Expression
11	Theoretical	Cancer
12	Intermediate Exam	Midterm Exam
13	Theoretical	Gene Regulation and Cancer
14	Theoretical	Gene Regulation and Human Disease I
15	Theoretical	Gene Regulation and Human Disease II
16	Theoretical	Overview and Future Perspective
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	30	1	31
Final Examination	1	30	1	31
			Total Workload (Hours)	176
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Understanding of chromatin and histone organization

2	Understanding of transcription
3	Understanding of cell specific gene expression
4	Understanding of embryonic development and gene expression
5	Understanding of relation between cancer and gene expression

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
P13	5	5	5	5	5
P14	5	5	5	5	5
P15	4	4	4	4	4