

## EPIGENETIC

1	Course Title:	EPIGENETIC
2	Course Code:	BIO6410
3	Type of Course:	Optional
4	Level of Course:	Third Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. FERDA ARI
15	Course Lecturers:	Yok
16	Contact information of the Course Coordinator:	Prof Dr. Ferda ARI Bursa Uludağ Üniversitesi, Fen Edebiyat Fakültesi, Biyoloji Bölümü 16059 Nilüfer/BURSA Tlf: 0 224 294 1822 e-posta: ferdaoz@uludag.edu.tr
17	Website:	
18	Objective of the Course:	Identify and discuss in detail the mechanisms of unexplained changes in DNA sequence and gene function.
19	Contribution of the Course to Professional Development:	This course will provide students with the necessary knowledge about epigenetics in areas such as oncology, molecular biology, and genetics.
20	Learning Outcomes:	
	1	To understand the concept of epigenetics
	2	To be able to evaluate epigenetic mechanisms at the molecular level.
	3	He/she can understand to relationship between DNA methylation and epigenetics
	4	He/she can relative to between histone modification and epigenetics.
	5	He/she can understand to the role of epigenetic mechanisms in the maintenance of gene regulation
	6	He/she can analyse to how the loss of epigenetic control causes human diseases
	7	He/she can evaluate the therapeutic approaches in epigenetic defects.
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21	Course Content:	
	<b>Course Content:</b>	
Week	Theoretical	Practice
1	Introduction to epigenetics	
2	DNA Methylation	

3	DNA methyltransferases	
4	DNA methyl binding proteins, interplay with chromatin dynamics	
5	Histon modifications and epigenetic regulation of genes	
6	Histon modifications and epigenetic regulation of genes	
7	Methods in Epigenetics	
8	Methods in Epigenetics	
9	Repeating courses and midterm exam	
10	Epigenetic factors in developmental biology	
11	Cancer and Epigenetic drugs	
12	Stem cells and epigenetics	
13	Epigenetics in other organisms	
14	Final Exam	

22	Textbooks, References and/or Other Materials:	Current Articles Epigenetics [Paperback] C. David Allis (Author), Thomas Jenuwein (Author), Danny Reinberg (Author), Marie-Laure Caparros (Author) Publisher: Cold Spring Harbor Laboratory Press; 1st edition (October 31, 2007) Language: English ISBN-10: 0879698756
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Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14		
Midterm Exam	1	30.00	3.00	42.00
Practicals/Labs		0	0.00	0.00
Self study and preparation		14		
Home work-project	1	20.00	4.00	56.00
Homeworks		1	28.00	28.00
Projects		1		
Total	3	100.00	20.00	20.00
Field Studies		0	0.00	0.00
Students Exams		1	3.00	3.00
Others		7	4.00	28.00
Final Exams		1		
Total		100.00	3.00	3.00
Total Work Load				183.00
Total work load/ 30 hr				6.00
ECTS Credit of the Course				6.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	5	4	4	2	4	4	3	4	5	4	0	0	0	0	0
ÖK2	4	4	4	3	2	4	4	3	3	4	4	0	0	0	0	0
ÖK3	4	4	4	3	3	4	4	3	3	4	4	0	0	0	0	0
ÖK4	4	4	4	3	3	4	4	3	3	4	4	0	0	0	0	0

ÖK5	3	4	4	3	3	4	4	3	3	4	4	0	0	0	0	0
ÖK6	4	5	4	3	3	4	4	3	4	4	5	0	0	0	0	0
ÖK7	4	5	4	3	3	4	4	3	4	4	5	0	0	0	0	0
LO: Learning Objectives    PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			