MOLECULAR EVOLUTIONARY GENETICS

1	Course Title:	MOLECULAR EVOLUTIONARY GENETICS	
2	Course Code:	ZTK6303	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	1	
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. CENGİZ ELMACI	
15	Course Lecturers:	-	
16	Contact information of the Course Coordinator:	Prof. Dr. Cengiz ELMACI Bursa Uludağ Üniversitesi, Ziraat Fakültesi Zootekni Bölümü Tel: 0(224)2941554 e-posta:elmaci@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	The course aims to introduce expression of evolution at molecular level and phenotype-genotype interaction at evolutionary processes and the impact of differentiation on molecules of heredity. Detailed information about mutation, genetic drift, notral theory, theory of gene frequency, sub-populations, specification, molecular clock, gene evolution models, adaptation, gene flow, natural selection and chromosome-genome-gen analyses are given.	
19	Contribution of the Course to Professional Development:	By making comments and evaluations about the genotypic, phenotypic variation and evolutionary processes seen in organisms, they will follow the current developments and increase their knowledge and skills on the subject.	
20	Learning Outcomes:		
		1	Gains knowledge of molecular evolution.
		2	Learns the genomic evolution concept.
		3	Gains knowledge of the concept of genetic variation within and between the population.
		4	Learns the concept of DNA polymorphism.
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21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1	Introduction	
2	Evalutionary History of lfe	
3	Genes and mutations	
4	Evalutionary change of amino acid sequence	
5	Evalutionary change of nucleotid sequence	
6	Genomic evalution	
7	Genes in population	
8	Genetic variation within species	
9	Genetic distance between populations	
10	DNA polymorphism within and between populations	
11	DNA polymorphism within and between populations	
12	Phylogenetic trees	
13	Phylogenetic trees	
14	General evaluation	

22	Textbooks, References and/or Other Materials:	
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBE	WEIGHT
Home work-project	0	0.00
Total	2	100.00
Success Grade		
Total		100.00
Course		Bursa Uludag University Rules and Regulations governing graduate studies are used.

24 ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	4.00	56.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	30.00	30.00
Others	0	0.00	0.00
Final Exams	1	52.00	52.00
Total Work Load			180.00
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	3	0	0	3	0	0	4	0	0	0	0	0	0	0	0	0
ÖK2	0	3	0	3	0	4	0	3	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
ÖK4	3	0	4	0	0	0	0	0	0	0	0	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