GENETIC TOXICOLOGY

1	Course Title:	GENETIC TOXICOLOGY	
2	Course Code:	BIO6200	
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:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. NİLÜFER ÇİNKILIÇ	
15	Course Lecturers:	Prof. Dr. Tolga Çavaş	
16	Contact information of the Course Coordinator:	aydemirn@uludag.edu.tr tcavas@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	To provide detailed information about the methods used in the field of genetic toxicology and risk estimation analysis	
19	Contribution of the Course to Professional Development:	Doctorate student should understand the importance and methods of genetic toxicology well.	
20	Learning Outcomes:		
		1	llustrate physical and chemical genotoxic agents. explain efficiency mechanisms of physical chemical genotoxic agents.
		2	relate genotoxicity and DNA repair mechanisms.explain DNA repair mechanism. relate types of mutation and DNA repair.
		3	propose an genotoxicity test about an environmental agent.define genotoxicity test systems.
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Introduction to Genetic toxicology-History The Application of Structure–Activity Relationships to the Prediction of the Mutagenic Activity of Chemicals	
2	Bacterial Mutagenicity Assays: Test Methods	

3	The Mouse Lymphoma Assay İn vivo mouse chromosome aberration tests	
4	Mammalian Cell HPRT Gene Mutation Assay: Test Methods	
5	The In Vitro Mammalian Chromosome Aberration Test	
6	The Interpretation and Analysis of Cytogenetic Data	
7	The In Vitro Micronucleus Assay	
8	The In Vitro and In Vivo Comet Assays	
9	Assessment of DNA Interstrand Crosslinks Using the Modified Alkaline Comet Assay	
10	Cytogenetic In Vivo Assays in Somatic Cells	
11	Article conversations	
12	The Measurement of Induced Genetic Change in Mammalian Germ Cells	
13	Article conversations	
14	Transgenic Animal Mutation Models: A Review of the Models and How They Function	

22	Textbooks, References and/or Other Materials:	1..Genetic Toxicology Testing 1st Edition A Laboratory Manual Editor: Ray Praudlock Published Date: 26th May 2016 2..Principles of Genetic Toxicology 3.Overview on genetic toxicology TGs: OECD 13 Apr 2017.60 pages. BOOK NUMBER 238. ISBN: https://doi.org/10.1787/9789264274761-en
23	Assesment	

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	3.00	42.00
Homeworks		2	25.00	50.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams	**R**	0	0.00	0.00
Others		0	0.00	0.00
Quiz	0	0.00		
Final Exams		1	50.00	50.00
Total Work Load				184.00
Final Exam	1	80.00		
Total work load/ 30 hr				6.13
ECTS Credit of the Course				6.00

Contribution of Term (Year) Learning Activities to Success Grade	20.00
Contribution of Final Exam to Success Grade	80.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	Interactions with students using projects and homeworks literature searching and translating

24	**ECTS / WORK LOAD TABLE**

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	4	0	4	3	0	4	5	0	0	0	0	0	0	0	0	0
ÖK2	0	3	0	4	4	0	4	3	0	0	0	4	0	0	0	0
ÖK3	4	0	3	0	0	0	0	4	0	0	4	0	0	4	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**			**4 High**			**5 Very High**				