PHARMACOGENETIC

1	Course Title:	PHARMACOGENETIC	
2	Course Code:	TTIP6006	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	2.00	
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. MUSTAFA SERTAÇ YILMAZ	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	sertacyilmaz@uludag.edu.tr +90 224 295 3566 Uludağ Üniversitesi Tıp Fakültesi Tıbbi Farmakoloji Anabilim Dalı, Görükle, Bursa 16059	
17	Website:		
18	Objective of the Course:	This course focuses on principles of general pharmacology and pharmacogenetics which may affect the drug metabolism and action.	
19	Contribution of the Course to Professional Development:	Administration of the proper drug to the suitable patient via personal drug metabolism that acquired from pharmacogenetic info will decrease side effects and improve health economy.	
20	Learning Outcomes:		
		1	To be able to define general information and concepts about pharmacogenetics and to describe the genetic changes in the enzymes responsible for the metabolism of drugs;
		2	To understand the mechanisms that change the effects and bioavailability of drugs at the molecular level;
		3	To be able to evaluate and differentiate genetic characteristics that change the effects of drugs used for diagnosis and treatment;
		4	To be able to define the molecules that mediate the side effects of drugs and to establish their relationship with pharmacogenetics, if any.
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21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1	Introduction to Pharmacology Definition and Basic Concepts	
2	Definition of Pharmacogenetics, Pharmacogenomics and Basic Concepts	
3	Individual Treatments and Pharmacogenetics	
4	Changes in Drug Pharmacokinetics Due to Genetic Factors - Phase I Enzymes	
5	Changes in Drug Pharmacokinetics Due to Genetic Factors - Phase I Enzymes	
6	Changes in Drug Pharmacokinetics Due to Genetic Factors - Phase II Enzymes	
7	Changes in Drug Pharmacokinetics Due to Genetic Factors - Phase II Enzymes	
8	Drug Pharmacokinetics with Case Examples	
9	Pharmacogenetics of Transportor Molecules Carrying Drugs - Eflux Transporters	
10	Pharmacogenetics of Transportor Molecules Carrying Drugs - Uptake Transporters	
11	Pharmacogenetics of Transportor Molecules Carrying Drugs with Case Examples	
12	Changes in Drug Pharmacodynamics Due to Genetic Factors - G6PDH Deficiency	
13	Changes in Drug Pharmacodynamics Due to Genetic Factors - Somatic Gene Variations in	

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	2.00	28.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		15	6.00	90.00
Homeworks		5	6.00	30.00
Projects	R	0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams	0	0	0.00	0.00
Others		0	0.00	0.00
Final Exams	1	1	5.00	5.00
Total Work Load				153.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00		5.10
ECTS Credit of the Course				5.00

22	Textbooks, References and/or Other - Basic and Clinical Pharmacology 15th Edition. Bertram Companies, 2021.
23	Assesment
Quiz	0.00
Final Exam	60.00
Total work load/ 30 hr	
Contribution of Final Exam to Success Grade	60.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	Measurement and evaluation are performed according to the Rules & Regulations of Bursa Uludağ University on Undergraduate Education.
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	5	4	5	5	1	2	1	2	3	1	4	1	0	0	0	0

ÖK2	4	2	3	2	3	4	1	3	2	3	4	1	0	0	0	0
ÖK3	5	3	2	3	2	2	2	2	1	4	5	2	0	0	0	0
ÖK4	5	2	3	2	5	2	3	1	5	2	3	2	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**