

PHARMACOGENETIC

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| 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 |
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| 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 - Efflux 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) |
|---|------------------------------------|---|--|-----------------|------------------------|
| 22 | Theoretical | | 34 | 2.00 | 28.00 |
| | Textbooks, References and/or Other | | - Basic and Clinical Pharmacology 15th Edition. Bertram | | |
| | Practicals/Labs | | 0 | 0.00 | 0.00 |
| 23 | Self study and preparation | | 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 |
| | Quiz | 0 | 0.00 | 0.00 | 0.00 |
| | Midterm exams | | 0 | 0.00 | 0.00 |
| | Others | | 0 | 0.00 | 0.00 |
| | Final Exams | 1 | 5.00 | 5.00 | 5.00 |
| Total Work Load | | | | | 153.00 |
| Contribution of Term (Year) Learning Activities to Total Work Load/ 30 hr | | | 40.00 | | 5.10 |
| ECTS Credit of the Course | | | | | 5.00 |
| 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. | | |

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| 24 | ECTS / WORK LOAD TABLE |
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| 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 |

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|---|------------|---|---|-------|---|---|----------|---|---|--------|---|---|-------------|---|---|---|
| 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 | | | |