



INTRODUCTION TO HUMAN SYSTEM DISORDERS (2019-2020)

INTRODUCTION OF THE COURSE

COURSE PERIOD	: Year 2 – Semester 1
COURSE CODE	: MED 213
COURSE DURATION	: 6 weeks
NATIONAL CREDIT	: 7
ECTS CREDIT	: 9
COURSE COORDINATORS	: Prof. G. İřtar DOLAPÇI
COURSE SECRETARY	: Buket ADIŐANLI, Bahadır ÇEVİRİM
COURSE DATES	: 14.10.2019 – 22.11.2019
TRAINING LOCATIONS	: Prof. Dr. Zeki Faik Ural Classroom, Prof. Dr. Kazım Türker Classroom, Ridvan Ege Laboratory, Medical Skills Laboratory

COORDINATING DEPARTMENTS

Medical Genetics
Medical Microbiology & Parasitology
Medical Pathology
Medical Pharmacology

CONTRIBUTING DEPARTMENTS

Biophysics
Internal Medicine
Medical Education & Informatics
Medical Oncology
Physiopathology
Radiology

TEACHING STAFF

Prof. Gülay ARAL AKARSU	Prof. Mehmet MELLİ	Assoc. Prof. Ebru EVREN
Prof. Koray CEYHAN	Prof. Ongun ONARAN	Assoc. Prof. H. Burak KANDİLCİ
Prof. Emine DEMİREL YILMAZ	Prof. Berna SAVAŐ	Assoc. Prof. Duygu KANKAYA
Prof. Ahmet DEMİRKAZIK	Prof. Fikret ŐAHİN	Assoc. Prof. Çağlar UZUN
Prof. Serpil DİZBAY SAK	Prof. Özlem UĞUR	Assoc. Prof. Yüksel ÜRÜN
Prof. G. İřtar DOLAPÇI	Prof. Ebru US	Assoc. Prof. Evren ÜSTÜNER
Prof. Hakan ERGÜN	Prof. Nuray YAZIHAN	Assist. Prof. İpek GÖNÜLLÜ
Prof. Devran GERÇEKER	Assoc. Prof. Ebru DÜŐÜNCELİ ATMAN	Assist. Prof. Timur TUNCALI
Prof. İřınsu KUZU		

AIM OF THE COURSE

To gain knowledge about basic microbiology, basic and clinical pharmacology, processes of tissue damage, repair and regeneration, and basic oncology. In addition, to gain skills of history taking and physical examination.

LEARNING OBJECTIVES OF THE COURSE

Describes the importance of medical microbiology, classification of microorganisms (bacteria, fungi, viruses, parasites) and their morphological structures.

Defines proliferation and identification properties, transmission routes, disease forming mechanisms and protection methods of the microorganisms.

Explains the host response to infectious agents.

Describes the methods of sterilization and disinfection.

Applies the methods for microbiologic diagnosis.

Defines the drug, and lists the forms and administration routes of drugs.

Describes the basic pharmacological concepts.

Describes the concepts of pharmacokinetic and pharmacodynamic, and explains the drug interactions at the pharmacodynamic and pharmacokinetic level.

Lists the stages of drug development.

Describes the clinical pharmacological concepts.

Explains the drug targets in autonomic system, drugs acting this system and their action mechanisms.

Describes the drug targets in autacoid system, classifies the drugs acting on this system, and explains their mechanism of action.

Explains the cellular adaptation to the damage and the types and mechanisms of adaptation.

Defines the types of cell damage, and explains their causes, mechanisms and morphological findings.

Explains the cellular aging and its mechanisms.

Explains the regulation of cell growth and differentiation.

Defines the inflammation, and explains its types, developmental mechanisms, morphological and clinical features and results.

Classifies the adhesion molecules and mediators involved in inflammation, and describes their general properties.

Explains the healing by tissue repair (scar formation or fibrosis).

Understands the tissue regeneration mechanisms and the proliferative activity of tissue.
Explains the importance and the stages of development of normal hemostasis.
Defines the edema, explains its formation mechanisms, and associates them with clinical tables.
Defines the concepts of hyperemia, congestion and hemorrhage and describes the clinical and morphological changes related to them.
Describes the thrombus and its formation mechanisms, and explains clinical and morphological findings related to thrombus.
Describes the disseminated intravascular coagulation.
Describes the embolism, types and clinical outcomes.
Describes the infarction, types and morphological features.
Describes the differences between cytology and histopathology.
Defines the process of obtaining histopathological evidence.
Defines the process of obtaining cytological evidence.
Defines the methods of obtaining immunological and molecular evidence in pathology.
Defines the tumor concept and benign-malignant tumor features.
Denominates the tumors according to tissue where they originate, cell type and malignant or benign nature.
Understands the molecular and genetic mechanisms of tumor development.
Explains the basic features and mechanisms of malign transformation.
Lists the carcinogenic agents, and explains the molecular targets and basic action mechanisms of carcinogens.
Describes the local and hormonal effects of the tumor.
Describes the paraneoplastic syndrome, and explains its differences from local and hormonal effects.
Defines the concepts of stage and grade in tumor, and predicts tumor prognosis.
Describes the local invasion and metastasis.
Describes the epidemiology and risk factors of cancer.
Explains the importance of protection and early diagnosis in cancer.
Classifies the antineoplastic drugs, and explains their mechanisms of action, side effects and places in treatment.
Defines the radiation biophysics, types of radiation and dose concept.
Explains the biological effects of radiation.
Explains the interaction of ionized radiation with substance and biophysical systems.

Describes the basic principles of imaging.

Lists the contrast agents used in radiology, and describes their side effects.

Learns the principles of taking history from patient.

Learns the methods of physical examination.

PROGRAM LEARNING OUTCOMES RELATED WITH COURSE LEARNING OBJECTIVES

COURSE LEARNING OBJECTIVES	PROGRAM LEARNING OUTCOMES
Describes the importance of medical microbiology, classification of micro-organisms (bacteria, fungi, viruses, parasites) and their morphological structures.	LO-1
Defines proliferation and identification properties, transmission routes, disease forming mechanisms and protection methods of the microorganisms.	LO-1
Explains the host response to infectious agents.	LO-1
Describes the methods of sterilization and disinfection.	LO-1
Applies the methods for microbiologic diagnosis.	LO-1
Defines the drug, and lists the forms and administration routes of drugs.	LO-1
Describes the basic pharmacological concepts.	LO-1
Describes the concepts of pharmacokinetic and pharmacodynamic, and explains the drug interactions at the pharmacodynamic and pharmacokinetic level.	LO-1
Lists the stages of drug development.	LO-1
Describes the clinical pharmacological concepts.	LO-1
Explains the drug targets in autonomic system, drugs acting this system and their action mechanisms.	LO-1
Describes the drug targets in autacoid system, classifies the drugs acting on this system, and explains their mechanism of action.	LO-1
Explains the cellular adaptation to the damage and the types and mechanisms of adaptation.	LO-1
Defines the types of cell damage, and explains their causes, mechanisms and morphological findings.	LO-1
Explains the cellular aging and its mechanisms.	LO-1
Explains the regulation of cell growth and differentiation.	LO-1
Defines the inflammation, and explains its types, developmental mechanisms, morphological and clinical features and results.	LO-1
Classifies the adhesion molecules and mediators involved in inflammation, and describes their general properties.	LO-1
Explains the healing by tissue repair (scar formation or fibrosis).	LO-1

Understands the tissue regeneration mechanisms and the proliferative activity of tissue.	LO-1
Explains the importance and the stages of development of normal hemostasis.	LO-1
Defines the edema, explains its formation mechanisms, and associates them with clinical tables.	LO-1
Defines the concepts of hyperemia, congestion and hemorrhage and describes the clinical and morphological changes related to them.	LO-1
Describes the thrombus and its formation mechanisms, and explains clinical and morphological findings related to thrombus.	LO-1
Describes the disseminated intravascular coagulation.	LO-1
Describes the embolism, types and clinical outcomes.	LO-1
Describes the infarction, types and morphological features.	LO-1
Describes the differences between cytology and histopathology.	LO-1
Defines the process of obtaining histopathological evidence.	LO-1
Defines the process of obtaining cytological evidence.	LO-1
Defines the methods of obtaining immunological and molecular evidence in pathology.	LO-1
Defines the tumor concept and benign-malignant tumor features.	LO-1
Denominates the tumors according to tissue where they originate, cell type and malignant or benign nature.	LO-1
Understands the molecular and genetic mechanisms of tumor development.	LO-1
Explains the basic features and mechanisms of malign transformation.	LO-1
Lists the carcinogenic agents, and explains the molecular targets and basic action mechanisms of carcinogens.	LO-1
Describes the local and hormonal effects of the tumor.	LO-1
Describes the paraneoplastic syndrome, and explains its differences from local and hormonal effects.	LO-1
Defines the concepts of stage and grade in tumor, and predicts tumor prognosis.	LO-1
Describes the local invasion and metastasis.	LO-1
Describes the epidemiology and risk factors of cancer.	LO-1
Explains the importance of protection and early diagnosis in cancer.	LO-1, LO-19
Classifies the antineoplastic drugs, and explains their mechanisms of action, side effects and places in treatment.	LO-1
Defines the radiation biophysics, types of radiation and dose concept.	LO-1

Explains the biological effects of radiation.	LO-1
Explains the interaction of ionized radiation with substance and biophysical systems.	LO-1
Describes the basic principles of imaging.	LO-1
Lists the contrast agents used in radiology, and describes their side effects.	LO-1
Learns the principles of taking history from patient.	LO-1, LO-2
Learns the methods of physical examination.	LO-1, LO-2

ASSESSMENT AND EVALUATION

ASSESSMENT SYSTEM

MID-TERM EXAM	Quiz
PRACTICAL EXAM AT THE END OF COURSE	<ul style="list-style-type: none">• Objectively structured clinical exam for medical skills (10%)• Objectively structured practical exam (20%)
WRITTEN EXAM AT THE END OF COURSE	Written exam consisting of multiple-choice questions
CALCULATION OF COURSE FINAL SCORE	Mid-term exam : 30% Practical exam at the end of course : 30% Written exam at the end of course : 50%

PROGRAM EVALUATION

Evaluation at the end of the course is implemented both orally and electronically using structured evaluation forms.

SUMMARY OF THE COURSE

	Lecture	Panel	Lab Practice	Clinical Skills	Total
Biophysics	4	1			5
Medical Genetics	6				6
Medical Microbiology & Parasitology	14		6		20
Medical Oncology	2				2
Medical Pathology	20		8		28
Medical Pharmacology	34				34
Physiopathology	1				1
Radiology	2	1			3
Medical Education & Informatics	4			6	10
TOTAL	87	1	14	6	108

COURSE PROGRAM

WEEK-1

MONDAY (14.10.2019)

08.30-09:15	Introduction of the course	Prof. G. İřtar DOLAPÇI
09:30-10:15	Introduction to microbiology and classification of microorganisms	Prof. Devran GERÇEKER
10:30-11:15	Cell structure of bacteria	Prof. G. İřtar DOLAPÇI
11:30-12:15	Classification of bacteria	Prof. G. İřtar DOLAPÇI
12:15-13:30	Lunch Break	
13:30-14:15	Drug: Definition, history and contemporary meaning	Prof. Ongun ONARAN
14:30-15:15	Introduction to basic pharmacology	Prof. Ongun ONARAN
15:30-16:15	Independent Learning Session	
16:30-17:15		

TUESDAY (15.10.2019)

08.30-09:15	Independent Learning Session	
09:30-10:15	Nutrition, metabolism and growth of bacteria	Assoc. Prof. Ebru EVREN
10:30-11:15	Pharmaceutical forms and administration routes of drugs	Prof. Ongun ONARAN
11:30-12:15	Drug absorption, distribution and elimination	Prof. Ongun ONARAN
12:15-13:30	Lunch Break	
13:30-14:15	Methods of obtaining histopathological evidence	Prof. Serpil DİZBAY SAK
14:30-15:15	Methods of obtaining cytological evidence	Prof. Koray CEYHAN
15:30-16:15	Methods of obtaining immunological and molecular evidence in pathology	Prof. İřinsu KUZU
16:30-17:15	Independent Learning Session	

WEDNESDAY (16.10.2019)

08.30-09:15	RESEARCH PROJECTS	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	Principles of history taking (lecture)	
14:30-15:15	Principles of history taking (lecture)	

15:30-16:15	Information and Communication Technologies II	e-Learning
16:30-17:15	Information and Communication Technologies II	e-Learning
THURSDAY (17.10.2019)		
08.30-09:15	Genetics of bacteria	Prof. Fikret ŞAHİN
09:30-10:15	Genetics of bacteria	Prof. Fikret ŞAHİN
10:30-11:15	Pharmacokinetics of absorption and distribution	Prof. Ongun ONARAN
11:30-12:15	Pharmacokinetics of elimination	Prof. Ongun ONARAN
12:15-13:30	Lunch Break	
13:30-14:15	Definition, causes and mechanisms of cell damage, necrosis and apoptosis	Prof. Koray CEYHAN
14:30-15:15	Subcellular changes in cell damage, intracellular accumulations and calcification	Prof. Koray CEYHAN
15:30-16:15	Independent Learning Session	
16:30-17:15		
FRIDAY (18.10.2019)		
08.30-09:15	Regulation of cell growth and differentiation	Prof. Koray CEYHAN
09:30-10:15	Mechanisms of bacterial pathogenicity	Prof. G. İştah DOLAPÇI
10:30-11:15	Pharmacokinetics of drug infusion and repeated (quantal dose) administrations	Prof. Ongun ONARAN
11:30-12:15	Drug interactions at pharmacokinetic level	Prof. Ongun ONARAN
12:15-13:30	Lunch Break	
13:30-14:15	Independent Learning Session	
14:30-15:15		
15:30-16:15		
16:30-17:15		

WEEK-2		
MONDAY (21.10.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15	Definition, structure and classification of viruses	Prof. Fikret ŞAHİN
10:30-11:15	Viral replication strategies	Prof. Fikret ŞAHİN
11:30-12:15	Demonstration of computer simulations on pharmacokinetics	Prof. Ongun ONARAN
12:15-13:30	Lunch Break	
13:30-14:15	Lab Practice: Cell pathology	Prof. Koray CEYHAN
14:30-15:15		

15:30-16:15	Independent Learning Session	
16:30-17:15		
TUESDAY (22.10.2019)		
08.30-09:15	Classification, structure and replication of fungi	Assoc. Prof. Ebru EVREN
09:30-10:15	Classification, structure and replication of parasites	Prof. Gülay ARAL AKARSU
10:30-11:15	Introduction to mechanisms of drug action	Prof. Ogun ONARAN
11:30-12:15	Drug targets and receptors	Prof. Ogun ONARAN
12:15-13:30	Lunch Break	
13:30-14:15	Acute inflammation	Assoc. Prof. Duygu KANKAYA
14:30-15:15	General properties and classification of adhesion molecules and mediators involved in inflammation	Assoc. Prof. Duygu KANKAYA
15:30-16:15	Independent Learning Session	
16:30-17:15		
WEDNESDAY (23.10.2019)		
08.30-09:15	RESEARCH PROJECTS	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	Clinical Skills: History taking	Medical Skills Laboratory
14:30-15:15		
15:30-16:15	Information and Communication Technologies II	e-Learning
16:30-17:15	Information and Communication Technologies II	e-Learning
THURSDAY (24.10.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15	Chronic inflammation	Assoc. Prof. Duygu KANKAYA
10:30-11:15	Introduction to mechanisms of drug action	Prof. Ogun ONARAN
11:30-12:15	Drug targets and receptors	Prof. Ogun ONARAN
12:15-13:30	Lunch Break	
13:30-14:15	Lab Practice: Microscopic examination of bacteria and fungi	Prof. Devran GERÇEKER Prof. Ebru US
14:30-15:15		
15:30-16:15	Independent Learning Session	
16:30-17:15		

FRIDAY (25.10.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15	Normal microbial flora of humans	Prof. Ebru US
10:30-11:15	Pharmacodynamic theory of receptor action	Prof. Ongun ONARAN
11:30-12:15	Pharmacodynamic theory of receptor action	Prof. Ongun ONARAN
12:15-13:30	Lunch Break	
13:30-14:15	Physical examination methods (lecture)	
14:30-15:15	Physical examination methods (lecture)	
15:30-16:15	What have we learned so far?	
16:30-17:15		

WEEK-3		
MONDAY (28.10.2019)		
08.30-09:15	FREE TIME	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	REPUBLIC DAY	
14:30-15:15		
15:30-16:15		
16:30-17:15		
TUESDAY (29.10.2019)		
08.30-09:15	REPUBLIC DAY	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30		
13:30-14:15		
14:30-15:15		
15:30-16:15		
16:30-17:15		
WEDNESDAY (30.10.2019)		
08.30-09:15	RESEARCH PROJECTS	
09:30-10:15		

10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	Clinical Skills: Head and neck examination	Medical Skills Laboratory
14:30-15:15		
15:30-16:15	Information and Communication Technologies II	e-Learning
16:30-17:15	Information and Communication Technologies II	e-Learning
THURSDAY (31.10.2019)		
08.30-09:15	Tissue repair and fibrosis	Assoc. Prof. Duygu KANKAYA
09:30-10:15	Regeneration	Assoc. Prof. Duygu KANKAYA
10:30-11:15	Autonomic receptors and basic principles of drug action in autonomic nervous system	Prof. Özlem UĞUR
11:30-12:15	Autonomic receptors and basic principles of drug action in autonomic nervous system	Prof. Özlem UĞUR
12:15-13:30	Lunch Break	
13:30-14:15	Lab Practice: Growth of bacteria	Prof. Devran GERÇEKER Assoc. Prof. Ebru EVREN
14:30-15:15		
15:30-16:15	Independent Learning Session	
16:30-17:15		
FRIDAY (01.11.2019)		
08.30-09:15	Sterilization, disinfection and antisepsis	Assoc. Prof. Ebru EVREN
09:30-10:15	Sterilization, disinfection and antisepsis	Assoc. Prof. Ebru EVREN
10:30-11:15	Adrenergic system as a drug target: Sympathomimetic and sympatholytic drugs	Prof. Özlem UĞUR
11:30-12:15	Adrenergic system as a drug target: Sympathomimetic and sympatholytic drugs	Prof. Özlem UĞUR
12:15-13:30	Lunch Break	
13:30-14:15	MID-TERM EXAM	
14:30-15:15		
15:30-16:15	Independent Learning Session	
16:30-17:15		

WEEK-4

MONDAY (04.11.2019)

08.30-09:15	Action mechanisms of cholinergic and anti-cholinergic drugs	Prof. Özlem UĞUR
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09:30-10:15	Action mechanisms of cholinergic and anti-cholinergic drugs	Prof. Özlem UĞUR
10:30-11:15	Lab Practice: Morphological features of human parasites	Prof. Gülay ARAL AKARUSU
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	Lab Practice: Inflammation and repair	Assoc. Prof. Duygu KANKAYA
14:30-15:15		
15:30-16:15	Independent Learning Session	
16:30-17:15		
TUESDAY (05.11.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15	Associating the mechanisms of hemodynamic disorders with morphology	Assoc. Prof. Duygu KANKAYA
10:30-11:15	Associating the mechanisms of hemodynamic disorders with morphology	Assoc. Prof. Duygu KANKAYA
11:30-12:15	Drug targets in the system of local hormones	Prof. Emine DEMİREL YILMAZ
12:15-13:30	Lunch Break	
13:30-14:15	Introduction to radiation biophysics, types of radiation and dose concept	Assoc. Prof. H. Burak KANDİLCİ
14:30-15:15	Interaction of ionizing radiation with the substance and biophysical systems	Assoc. Prof. H. Burak KANDİLCİ
15:30-16:15	Independent Learning Session	
16:30-17:15		
WEDNESDAY (06.11.2019)		
08.30-09:15	RESEARCH PROJECTS	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	Clinical Skills: Respiratory and circulatory systems examination	Medical Skills Laboratory
14:30-15:15		
15:30-16:15	Information and Communication Technologies II	e-Learning
16:30-17:15	Information and Communication Technologies II	e-Learning
THURSDAY (07.11.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15	Panel: Biological effects of radiation	Assoc. Prof. H. Burak KANDİLCİ Assoc. Prof. Evren ÜSTÜNER

10:30-11:15	Gaseous mediators in the system of local hormones and drug targets	Prof. Emine DEMİREL YILMAZ
11:30-12:15	Gaseous mediators in the system of local hormones and drug targets	Prof. Emine DEMİREL YILMAZ
12:15-13:30	Lunch Break	
13:30-14:15	Lab Practice: Pathology of hemodynamic disorders	Assoc. Prof. Duygu KANKAYA
14:30-15:15		
15:30-16:15	Independent Learning Session	
16:30-17:15		
FRIDAY (08.11.2019)		
08.30-09:15	Basic principles of imaging: X-rays, properties and usage in imaging	Assoc. Prof. H. Burak KANDİLCİ
09:30-10:15	X-ray imaging (basic principles, history, radiographic image, fluoroscopy)	Assoc. Prof. Ebru D. ATMAN
10:30-11:15	Lipid mediators in the system of local hormones and drug targets	Prof. Emine DEMİREL YILMAZ
11:30-12:15	Lipid mediators in the system of local hormones and drug targets	Prof. Emine DEMİREL YILMAZ
12:15-13:30	Lunch Break	
13:30-14:15	What have we learned so far?	
14:30-15:15		
15:30-16:15		
16:30-17:15		

WEEK-5		
MONDAY (11.11.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	Peptide mediators in the system of local hormones and drug targets	Prof. Emine DEMİREL YILMAZ
14:30-15:15	Peptide mediators in the system of local hormones and drug targets	Prof. Emine DEMİREL YILMAZ
15:30-16:15	Independent Learning Session	
16:30-17:15		

TUESDAY (12.11.2019)		
08.30-09:15	Basic principles of imaging: Basic principles of ultrasonography, MRI and PET	Assoc. Prof. H. Burak KANDİLCİ
09:30-10:15	Contrast agents used in radiology	Assoc. Prof. Çağlar UZUN
10:30-11:15	Cancer epidemiology and risk factors	Assoc. Prof. Yüksel ÜRÜN
11:30-12:15	Nomenclature of tumors	Prof. Berna SAVAŞ
12:15-13:30	Lunch Break	
13:30-14:15	Amine mediators in the system of local hormones and drug targets	Prof. Emine DEMİREL YILMAZ
14:30-15:15	Introduction to clinical pharmacology	Prof. Hakan ERGÜN
15:30-16:15	Independent Learning Session	
16:30-17:15		
WEDNESDAY (13.11.2019)		
08.30-09:15	RESEARCH PROJECTS	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	Clinical Skills: Abdomen examination	Medical Skills Laboratory
14:30-15:15		
15:30-16:15	Information and Communication Technologies II	e-Learning
16:30-17:15	Information and Communication Technologies II	e-Learning
THURSDAY (14.11.2019)		
08.30-09:15	Properties of benign and malignant tumors	Prof. Berna SAVAŞ
09:30-10:15	Effects of tumor on host, terms of tumor stage and grade	Prof. Berna SAVAŞ
10:30-11:15	Introduction to clinical pharmacology	Prof. Hakan ERGÜN
11:30-12:15	Introduction to clinical pharmacology	Prof. Hakan ERGÜN
12:15-13:30	Lunch Break	
13:30-14:15	Oncogene and tumor suppressor genes	Assist. Prof. Timur TUNCALI
14:30-15:15	Biological, chemical and physical agents leading to genetic and epigenetic modification, and mechanisms of action	Assist. Prof. Timur TUNCALI
15:30-16:15	Independent Learning Session	
16:30-17:15		
FRIDAY (15.11.2019)		
08.30-09:15	Molecular basis of cancer	Prof. Berna SAVAŞ
09:30-10:15	Molecular basis of cancer	Prof. Berna SAVAŞ

10:30-11:15	Carcinogenic agents (radiation, chemicals and viral)	Prof. Berna SAVAŞ
11:30-12:15	The role of epigenetic mechanisms in cancer development	Assist. Prof. Timur TUNCALI
12:15-13:30	Lunch Break	
13:30-14:15	Independent Learning Session	
14:30-15:15		
15:30-16:15		
16:30-17:15		

WEEK-6		
MONDAY (18.11.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15	Immunity, frequency and susceptibility of the tumor	Prof. Berna SAVAŞ
10:30-11:15	Genetic mechanisms in etiopathogenesis of sporadic and familial cancer	Assist. Prof. Timur TUNCALI
11:30-12:15	Genes and mechanisms involved in the development of solid tissue cancers	Assist. Prof. Timur TUNCALI
12:15-13:30	Lunch Break	
13:30-14:15	Lab Practice: Neoplasia	Prof. Berna SAVAŞ
14:30-15:15		
15:30-16:15	Independent Learning Session	
16:30-17:15		
TUESDAY (19.11.2019)		
08.30-09:15	Independent Learning Session	
09:30-10:15	Physiopathology of weight loss	Prof. Nuray YAZIHAN
10:30-11:15	Protection from cancer and early diagnosis	Prof. Ahmet DEMİRKAZIK
11:30-12:15	Pathways and molecules that play a role in cancer development and being the targets of therapy	Assist. Prof. Timur TUNCALI
12:15-13:30	Lunch Break	
13:30-14:15	Antineoplastic chemotherapeutics (Concepts, general mechanisms of action and their places in cancer therapy)	Prof. Mehmet MELLİ
14:30-15:15	Antineoplastic chemotherapeutics (General adverse effects and classification)	Prof. Mehmet MELLİ
15:30-16:15	Independent Learning Session	
16:30-17:15		

WEDNESDAY (20.11.2019)		
08.30-09:15	RESEARCH PROJECTS	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	CLINICAL SKILLS EXAM (History taking; Physical examination)	Medical Skills Laboratory
14:30-15:15		
15:30-16:15	Information and Communication Technologies II	e-Learning
16:30-17:15	Information and Communication Technologies II	e-Learning
THURSDAY (21.11.2019)		
08.30-09:15	INDEPENDENT STUDY FOR EXAMS	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	INDEPENDENT STUDY FOR EXAMS	
14:30-15:15		
15:30-16:15		
16:30-17:15		
FRIDAY (22.11.2019)		
08.30-09:15	PRACTICAL EXAM AT THE END OF COURSE	
09:30-10:15		
10:30-11:15		
11:30-12:15		
12:15-13:30	Lunch Break	
13:30-14:15	WRITTEN EXAM AT THE END OF COURSE	
14:30-15:15		
15:30-16:15	FEEDBACK SESSION OF THE COURSE	All Faculty Members
16:30-17:15		

READING/STUDYING SOURCES

- Sherris Medical Microbiology (6th Edition); Kenneth Ryan, C. George Ray; McGraw-Hill, New York, 2014.
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- Emery's Elements of Medical Genetics (15th Edition); Peter D. Turnpenny, Sian Ellard; Elsevier, Philadelphia, 2017.
- Thompson & Thompson Genetics in Medicine (8th Edition); Robert L. Nussbaum, Roderick R. McInnes, Huntington F. Willard; Elsevier, Philadelphia, 2016.
- Robbins Basic Pathology (9th Edition); Vinay Kumar, Abul K. Abbas, Jon C. Aster; Elsevier Saunders, Philadelphia, 2013.
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- Molecular and Cellular Biophysics; Meyer B. Jackson; Cambridge University Press, Cambridge, 2006.
- Introduction to Diagnostic Radiology (1st Edition); Khaled M. Elsayes, Sandra A. A. Oldham; McGraw-Hill, 2014.
- The Medical Interview: Mastering Skills for Clinical Practice (5th Edition); John L. Coulehan, Marian L. Block; F. A. Davis Company, Philadelphia, 2006.
- Bates' Guide to Physical Examination and History Taking (12th Edition); Lynn S. Bickley; Wolters Kluwer, 2017.