

Medicine

Bachelor

TR-NQF-HE: Level 7

QF-EHEA: Second Cycle

EQF-LLL: Level 7

Course Introduction and Application Information

Course Code:	TIP301			
Course Name:	3rd Panel			
Semester:	Spring			
Course Credits:	ECTS 52			
Language of instruction:				
Course Condition:	TIP201 - 2. Kurul			
Does the Course Require Work Experience?:	No			
Type of course:	Compulsory Courses			
Course Level:	Bachelor	TR-NQF-HE:7. Master's Degree	QF-EHEA:Second Cycle	EQF-LLL:7. Master's Degree
Mode of Delivery:	E-Learning			
Course Coordinator:	Prof. Dr. HIKMET KOÇAK			
Course Lecturer(s):	Prof. Dr. M. Tekin Akpolat, Asst. Prof. İlhami Güllüoğlu, Asst. Prof. Cüneyd Sevinç, Asst. Prof. Çiğdem Pulatoğlu, Assoc. Prof. Çiğdem Usul Afşar, Prof. Dr. Muammer Kendirci, Asst. Prof. Berk Bulut, Assoc. Prof. Ziya Kalem, Prof. Dr. Bülent Hacıhamdioğlu, Prof. Mustafa Erinç Sitar, Assoc. Prof. Çiğdem Usul Afşar, Prof. Dr. Gül Nihal Özdemir, Prof. Dr. Yakup Krespi, Asst. Prof. İsmail Gönen, Dr. Heval Can Bilek, Prof. Dr. Nebil Yıldız, Asst. Prof. Hakan Kına, Assoc. Prof. Muhittin Emre Altunrende, Prof. Dr. Mustafa Kemal Hamamcıoğlu, Prof. Dr. Ertuğrul Uzar, Prof. Dr. Vedat Kaya, Assoc. Prof. Denizhan Dizdar, Assoc. Prof. Haluk Çabuk, Asst. Prof. Kaya Turan, Prof. Dr. Şenol Kobak, Dr. Aylin Sarı, Assoc. Prof. Salih Aydın, Asst. Prof. Kaya Turan, Prof. Dr. Erden Ertüner, Assoc. Prof. Pınar Yurdakul Mesutoğlu, Prof. Dr. Çağatay Öztürk, Asst. Prof. Deniz Akkaya, Assoc. Prof. Çiğdem Usul Afşar, Prof. Dr. Ayhan Karaköse, Prof. Dr. Ozan Özkaya, Asst. Prof. Gökçer Eskikurt, Asst. Prof. Denizhan Karış, Asst. Prof. Duygu Koyuncu Irmak, Prof. Dr. Ferda Kaleağasioğlu, Prof. Dr. Yeşim Gürbüz, Asst. Prof. Sibel Şensu Saka, Asst. Prof. Lora Ateş, Prof. Dr. G. İmadoğlu Yetkin, Assoc. Prof. Özlem Büyüktanır Yaş, Assoc. Prof. Pınar Yurdakul Mesutoğlu Asst. Prof. Ayhan Abulaila, Asst. Prof. Beril Uğurnal, Dr. Nazlı Yanık, Asst. Prof. Tayyibe Bardakçı, Asst. Prof. Burçin Ataseven, Prof. Dr. Mehmet Sait Buğdacı, Prof. Dr. Tekin Akpolat., Assoc. Prof. İtir Şirinoğlu Demiriz, Prof. Dr. Ceyhan Bozkurt, Prof. Dr. Gül Nihal Özdemir, Prof. Dr. Bülent Hacıhamdioğlu, Assoc. Prof. Ayşenur Kaya, Asst. Prof. İsmail Gönen, Asst. Prof. Fatih Atik, Prof. Dr. Hasan Turhan, Prof. Dr. Alp Burak Çatakoğlu, Prof. Dr. Yelda Tayyareci, Assoc. Prof. T. Kemaçoğlu Öz, Assoc. Prof. Ali Sabri Seyis, Prof. Dr. İsmet Tamer, Asst. Prof. Muradiye Acar, Prof. Dr. Bülent Ertuğrul, Prof. Dr. Servet Kayhan, Dr. Fuat Nurili, Assoc. Prof. Ziya Kalem, Asst. Prof. Çiğdem Pulatoğlu			
Course Assistants:				

Course Objective and Content

Course Objectives:	In these committees; it is aimed to comprehend basic semiology, blood and its elements, the functioning of the immune system, cardiovascular system and respiratory system diseases and tumor pathogenesis, to evaluate its pathology, and to associate microbiological diagnosis with microorganism characteristics. In addition, this information has been supported by laboratory studies. In these committees; it is aimed to comprehend the semiology of the digestive system, nervous system, locomotor and sensory system, urogenital system, metabolism and endocrine issues, to understand the pathogenesis of diseases, to evaluate their pathology, and to associate microbiological diagnosis with microorganism characteristics. In addition, this information has been supported by laboratory studies.
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Course	Theoretical courses in pediatric health and diseases, internal diseases, pathology, chest diseases, cardiology, radiology, microbiology, pharmacology, infectious diseases, general surgery, family medicine, public health, medical genetics, basic statistics, medical ethics, gynecology and obstetrics and medical biochemistry, laboratory courses in pathology, microbiology, elective courses
Content:	Theoretical courses in pediatric health and diseases, internal diseases, pathology, neurology, neurosurgery, orthopedics, ear-nose-throat, radiology, dermatology, ophthalmology, microbiology, pharmacology, infectious diseases, physical therapy and rehabilitation, general surgery, medical genetics, clinical statistics, gynecology and obstetrics, urology and medical biochemistry, laboratory courses in pathology, microbiology, elective courses

Learning Outcomes

The students who have succeeded in this course;

- 1) To be able to explain basic biostatistical concepts and give examples
- 2) To be able to comprehend medical ethical values, to gain behavioral skills
- 3) To be able to acquire basic history taking and physical examination skills in the pediatric patient, To be able to make the first evaluation of the newborn, To be able to explain the important problems that can be seen in the newborn
- 4) To be able to explain the concept of premature and its problems, To be able to explain the importance of breast milk
- 5) To be able to gain basic history taking and physical examination skills in adult patients
- 6) To be able to explain the changes in important stages of life (pregnancy, newborn, infant, adolescence menopause) and to define the problems seen in these stages
- 7) To be able to explain the pathogenesis and pathologies of hematopoietic system diseases
- 8) To be able to explain the components of the natural and acquired immune system and to define the pathological conditions related to them
- 9) To be able to explain tumor pathology
- 10) To be able to explain the pathogenesis and pathologies of circulatory system diseases
- 11) To be able to explain the pathogenesis and pathologies of respiratory system diseases
- 12) To be able to explain the approach of all these diseases in primary health care
- 13) To be able to explain the concept of preventive medicine
- 14) To be able to explain the mechanism of action, spectrum and side effect profile of drugs used in hematopoietic system, respiratory and circulatory system diseases
- 15) To be able to explain and to give examples of radiological diagnostic methods used in hematopoietic system, respiratory and circulatory system diseases
- 16) To be able to explain the mechanisms of microbiological and biochemical tests used in hematopoietic system, respiratory and circulatory system diseases
- 17) To be able to explain the semiology of the gastrointestinal system
- 18) To be able to explain the pathology of oral cavity diseases
- 19) To be able to explain the pathogenesis and pathology of esophageal diseases
- 20) To be able to explain the pathogenesis and pathology of gastro-duodenal diseases
- 21) To be able to explain the pathogenesis and pathology of small and large intestine diseases
- 22) To be able to explain the pathogenesis and pathology of liver diseases
- 23) To be able to explain the pathogenesis and pathology of spleen and gall bladder diseases
- 24) To be able to explain the diarrhea mechanism with the related microorganisms
- 25) To be able to explain the concepts of clinical biostatistics and to give examples
- 26) To be able to learn the approach to the patient with acute abdomen, To be able to define wound healing and its stages
- 27) To be able to explain calcium metabolism, To be able to define metabolic bone diseases, To be able to explain lipoprotein metabolism, disorders and approach to obesity
- 28) To be able to explain the central nervous system semiology, To be able to explain the pathogenesis and pathology of CNS diseases
- 29) To be able to explain the head traumas and to manage the emergency, To be able to explain fractures and dislocations and to manage their emergency. To be able to explain the approach to dizziness
- 30) To be able to explain the pathogenesis and pathology of bone-joint diseases, To be able to explain the pathogenesis and pathology of skin diseases
- 31) To be able to explain hearing loss and make emergency management. To be able to explain the eye relationship with systemic diseases
- 32) To be able to explain the semiology of the urogenital and endocrine system, To be able to explain the pathogenesis and pathology of urinary system diseases
- 33) To be able to explain the pathogenesis and pathology of female genital system diseases, To be able to know the approach to pregnancy complications, To be able to explain the pathogenesis and pathology of male genital system diseases
- 34) To be able to explain the pathogenesis and pathology of endocrine system diseases
- 35) To be able to explain the mechanism of action, spectrum of action and side effect profile of drugs used in gastrointestinal system, CNS, urogenital system and endocrine diseases
- 36) To be able to explain and to give examples of radiological diagnostic methods used in gastrointestinal system, CNS, urogenital system and endocrine diseases
- 37) To be able to explain the mechanisms of microbiological and biochemical tests used in gastrointestinal system, CNS, urogenital system and endocrine diseases

Course Flow Plan

Week	Subject	Related Preparation
1)	COMMITTEE PRESENTATION- Introduction Pathological Sciences – III and Stages of Life – II Good Presentation Techniques-I; Good Presentation Techniques-II PHARMACOLOGY- Introduction to Antibiotics; Combined and Prophylactic Antibiotic Usage; Beta-Lactam Antibiotics I (Classification, Penicillins); Beta-Lactam Antibiotics II (Cephalosporins, Monobactams); Beta-Lactam Antibiotics III (Carbapenems, Inhibitors of Beta-Lactamase); Macrolides, Ketolides, Lincosamides, and Tetracyclines; Chloramphenicol, Streptogramins, Sulphonamides and Trimetoprim- Sulfamethoxazole INTERNAL DISEASES- Taking History in Gastrointestinal Diseases; Taking History, Signs and Symptoms in Kidney Diseases CARDIOLOGY- Taking History in Cardiovascular Diseases; Physical Examination in Cardiovascular Diseases FAMILY MEDICINE- Introduction to Preventive Health Services; Periodic Health Examinations and Screening Tests; Chronic Disease Management PEDIATRIC HEALTH AND DISEASES- History Taking in Children; Vital Signs Assessment in Children; Head and Neck Assessment CHEST DISEASES- Respiratory System Diseases History Taking and Symptoms; Physical Examination in Respiratory System Diseases INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Importance of Hospital Infections and Isolation Methods; Safety of Healthcare Professionals; Infectious Diseases Epidemiological History and General Symptoms; Approach to the Patient With Fever ELECTIVES	

2)	PHARMACOLOGY- Aminoglycosides, Quinolones and Agents for Urinary Tract Infections; Narrow-Spectrum Antistaphylococals; Antiprotozoal Drugs; Chemotherapy of Tuberculosis PATHOLOGY- Digital Pathology and Artificial Intelligence in Pathology I; Digital Pathology and Artificial Intelligence in Pathology II; Placenta Pathology FAMILY MEDICINE- Healthcare Services for Elderly; Home-Care Health Services; Palliative Care Principles PEDIATRIC HEALTH AND DISEASES- Gender Differentiation Disorders; Neonatal Care in the Delivery Room; Initial Examination of the Newborn INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Infectious Diseases Epidemiological History and General Symptoms; Approach to the Patient With Fever MEDICAL GENETICS- Chromosomal Diseases GYNECOLOGY AND OBSTETRICS- Nutrition During Pregnancy, Pregnancy Nausea and Vomiting, Hyperemesis Gravidarum; Diabetes and Endocrin Diseases in Pregnancy; Preeclampsia-Eclampsia; Multiple Pregnancies; Preterm Birth and Premature Rupture of Membranes; Birth Difficulties (Dystocia), Presentation Abnormalities; Postpartum Hemorrhages and Puerperal Infections ELECTIVES	
3)	PHARMACOLOGY- Antifungal Drugs; Anthelmintic Drugs; Antiviral Drugs –I; Antiviral Drugs –II FAMILY MEDICINE- Management of Family Health Center; Maternal Health Services; Monitoring Growth and Development in Childhood; Protective and Preventive Approaches in Adolescent Health; School Health Services PEDIATRIC HEALTH AND DISEASES- Premature Baby Disorders; Screening Tests of Newborn; Newborn Nutrition and Properties of Breast Milk; Common Disorders in Infancy; Normal Growth; Factors Affecting Growth; Gender Differentiation Disorders; Anthropometric Measurements and Assessment of Nutritional Status in Children; Pubertal Development; Abnormal Puberty MEDICAL GENETICS- Congenital Malformations; Approach to Newborn With Congenital Anomaly GYNECOLOGY AND OBSTETRICS- Menstrual Cycle Abnormalities ELECTIVES	
4)	FAMILY MEDICINE-Public Health Practices in Extraordinary Situations; Health Legislation; International Health Organizations PEDIATRIC HEALTH AND DISEASES- Environmental Accidents and Emergencies in Children PHARMACOLOGY- Disinfectants, Antiseptics and Sterilants; Q&A with the lecturer INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Q&A with the lecturer ELECTIVES	
5)	FAMILY MEDICINE- The Concept of District in Health Services and District Health Management STUDENT SEMINAR ELECTIVES COMMITTEE EXAM	
6)	COMMITTEE PRESENTATION- Blood-Immun System – Tumor Committee PHARMACOLOGY- Drugs Used in the Treatment of Anemias PATHOLOGY- Bone Marrow Diseases; Pathology of Spleen MEDICAL BIOCHEMISTRY- Laboratory Diagnosis of Anemia MEDICAL ETHICS- Introduction to Philosophy, Ethics, Biomedical Ethics; Normative Ethical Theories BASIC STATISTICS- Scientific Research and the Definition of Statistics, Measurement and Main Measurement Scales; Summarization of Data, Frequency Distributions and Graphics INTERNAL DISEASES- Hematopoietic System History Taking and Examination; Hematopoiesis and Classification of Anemias; Approach to the Patient With Bleeding Tendency; Adult Purpura; Acquired Bleeding Disorders PEDIATRIC HEALTH AND DISEASES- Signs and Symptoms in Hematological Diseases in Children; Evaluation of Complete Blood Count CBC and Bleeding Tests in Childhood; Anemia in Childhood, Physiopathology and Clinical Findings; The Mechanism of Occurrence of Bleeding and Coagulation Disorders in Childhood INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Beta Lactams and Beta Lactamase Inhibitors; The Occurrence Mechanisms of Kalaazar and Other Lashmanias ELECTIVES	
7)	Theoretical: PATHOLOGY- Pathology of Immune System Diseases; Lymphadenopathies; Pathology of Thymus; MEDICAL BIOCHEMISTRY- Laboratory Indicators in Thrombogenesis MICROBIOLOGY- Immunological Diagnostic Methods; Immunological Tolerance and Autoimmunity; Overview of Immune Responses to Microbes; Transplantation Immunology; Hypersensitivity Reactions; Immunological Diagnostic Methods; MEDICAL ETHICS- Introduction to Medical Ethics and Principles of Biomedical Ethics; Physician-Patient Relationship; Ethical Issues at the Beginning of Life; Ethical Issues at the End of Life BASIC STATISTICS- Main Measures of Central Tendency; The Concept of Variability and Main Measures of Dispersion; Introduction to Probability, Main Rules and Applications in Health INTERNAL DISEASES- Approach to A Patient With Adult Lymphadenomegaly PEDIATRIC HEALTH AND DISEASES- Approach to Lymphadenopathies in Childhood Patient; Basic Principles of Vaccination I-II INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Non-Beta Lactam Antibiotics I; Non-Beta Lactam Antibiotics II; Epidemiology of Malaria and Its Occurrence Mechanism; The Occurrence Mechanisms of Kalaazar and Other Lasmanias; Microbiological Diagnosis of Infectious Lymphadenitis; Approach to Patient With Lymphadenopathy; Pathogenesis of Lyme Disease ELECTIVES Laboratory: MICROBIOLOGY- Serological and Molecular Tests	
8)	Theoretical: PHARMACOLOGY- Immunomodulators PATHOLOGY- Introduction to Neoplasia, Nomenclature Epidemiology of Cancer-Carcinogenic Agents; Molecular Basic of Cancer Invasion and Metastasis-Host Defense Against Tumor, Tumor Immunity; General Features of Benign and Malignant Neoplasms-Clinical Features of Tumors Staging and Tumor Markers; Lymphoma Classification MEDICAL BIOCHEMISTRY-Tumour Markers MICROBIOLOGY-Vaccines and Immune Sera MEDICAL ETHICS-Ethics in Pediatrics; Ethics in Psychiatry BASIC STATISTICS-Main Discrete Probability Distributions I; Main Discrete Probability Distributions II; Sampling and Sampling Methods FAMILY MEDICINE- Immunization Programs in Primary Care; Immunization Programs in Primary Care PEDIATRIC HEALTH AND DISEASES- Immune Deficiency in Children: General Information, Pathogenesis, Findings; Immunology of Allergic Diseases I-II; Signs and Symptoms of Oncological Diseases in Children INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Immunity to Tumors; Pathogenesis of Leptospirosis; Sepsis Formation Mechanism; Epidemiological Characteristics and Pathogenesis of Typhoid and Non-Typhoid Salmonellosis; Brucellosis Pathophysiology MEDICAL GENETICS- Oncogenetics ELECTIVES Laboratory: MICROBIOLOGY LAB-Microbiological Diagnosis of Infectious Agents Affecting the Lymphatic System	
9)	Theoretical: PHARMACOLOGY- Pharmacological Basis of Cancer Therapy; Antineoplastic Drugs –I; Antineoplastic Drugs –II; Antineoplastic Drugs –III; Q&A with the lecturer PATHOLOGY- Hodgkin Lymphoma; Non-Hodgkin Lymphomas and Plasma Cell Diseases-I; Non-Hodgkin Lymphomas and Plasma Cell Diseases-II MEDICAL BIOCHEMISTRY-The Laboratory Investigation of Paraproteinaemia MICROBIOLOGY-Q&A with the lecturer MEDICAL ETHICS-Transplantation Ethics; International Declarations and Confidentiality & Privacy in Healthcare; Truth-Telling to the Patient; Infectious Diseases and AIDS-Related Ethical Issues BASIC STATISTICS-Theoretic Sampling Distribution; Determination of Sample Size; Hypothesis Testing, the Definition of Statistical Significance; Estimation of Population Mean and Hypothesis Testing Related to Population Mean, Confidence Intervals, Z Test, Student's T Test; Estimation of Population Proportion and Hypothesis Testing Related to Population Proportion, Confidence Intervals, Z Test; Rank Tests INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- HIV/AIDS Epidemiology and Pathogenesis; Q&A with the lecturer ELECTIVES Laboratory: PATHOLOGY-LAB- Lymphoid Tissue and Bone Marrow Pathology	
10)	Theoretical: PATHOLOGY- Q&A with the lecturer MEDICAL ETHICS- Human Experimentation & Science and Publication Ethics; Towards Posthumanism and the Future of Medicine MEDICAL GENETICS- Oncogenetics STUDENT SEMINAR ELECTIVES COMMITTEE EXAM	
11)	Theoretical: COMMITTEE PRESENTATION-Circulation-Respiratory System Committee PHARMACOLOGY- Introduction to Autonomic Nervous System Pharmacology; Parasympathomimetics; Parasympatholytics; Sympathomimetics-I; Sympathomimetics-II; Sympatholytics-I; Sympatholytics-II	

	PATHOLOGY- Atherosclerosis, Myocardial Infarction and Hypertensive Heart Disease-I; Atherosclerosis, Myocardial Infarction and Hypertensive Heart Disease-II CARDIOLOGY- Circulation Physiology and Hemodynamics; Atherosclerosis Pathophysiology; The Pathogenesis of Hypertension; Hypertension: Basics PEDIATRIC HEALTH AND DISEASES- Circulatory Physiology and Hemodynamics in Children; Pediatric Cardiology Symptoms, History Taking; Cardiovascular System Evaluation; Types and Pathophysiology of Shock in Children INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Viral Hemorrhagic Fever Classification and Pathogenesis ELECTIVES	
12)	Theoretical: PHARMACOLOGY- Principles of Hypertension Treatment & Antihypertensives-I; Principles of Hypertension Treatment & Antihypertensives-II; Principles of Hypertension Treatment & Antihypertensives-III; Autacoids in Peptide Structure; Drugs Used to Treat Heart Failure-I; Drugs Used to Treat Heart Failure-II; Autacoids in Gas Structure; Drugs Used to Treat Dyslipidemias; Antiarrhythmic Drugs -I; Antiarrhythmic Drugs -II PATHOLOGY- Pathology of Valvular Heart Diseases; Pathology of Aorta Dissections and Aneurysms; Vasculitis and Venous/ Lymphatic Diseases-I; Vasculitis and Venous/ Lymphatic Diseases-II CARDIOLOGY- Basic ECG; Heart Failure Pathophysiology I-II; Clinical ECG PEDIATRIC HEALTH AND DISEASES- Congestive Heart Failure Etiopathogenesis in Children INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Non-Beta Lactam Antibiotics-III; Infective Endocarditis Epidemiology and Diagnostic Approach MEDICAL GENETICS- Cardiovascular Diseases Genetics RADIOLOGY- Cardiovascular System Radiology ELECTIVES Laboratory: PATHOLOGY-LAB- Heart and Valvular Diseases	
13)	Theoretical: PHARMACOLOGY- Antianginal Drugs & Peripheral Vasodilators; Anticoagulant, Antiplatelet and Fibrinolytic Drugs; Treatment of Bleeding PATHOLOGY- Upper Respiratory System and Larynx Pathology MEDICAL BIOCHEMISTRY- Laboratory Tests in Anticoagulant Treatment Monitoring; Cardiac Markers PEDIATRIC HEALTH AND DISEASES- Evaluation of Respiratory System; Signs and Symptoms of Respiratory Diseases in Children INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Epidemiological Features and Pathogenesis of SARS-MERSCOV-COVID 19 ELECTIVES	
14)	Theoretical: PHARMACOLOGY- Drugs Used to Treat Diseases of Respiratory System -I; Drugs Used to Treat Diseases of Respiratory System -II PATHOLOGY- Pathology of Obstructive and Restrictive Lung Diseases; Pathology of Pneumonia; Respiratory System Malformations; Pneumoconiosis and Non-Tbc Granulomatous Diseases; Pathology of Pleura and Mediastinum-I; Pathology of Pleura and Mediastinum-II; Pathology of Pulmonary Neoplasia MICROBIOLOGY- Microbiological Diagnosis of Respiratory Tract Infections MEDICAL BIOCHEMISTRY- Blood Gases FAMILY MEDICINE- Counseling for Smoking and Substance Cessation CHEST DISEASES- Airway Diseases Clinical Physiopathology; Pathogenesis of Pleural Diseases; Respiratory Failure Etiopathogenesis INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- General Approach to Upper Respiratory Tract Infections and Their Pathogenesis; Mechanisms of Occurrence of Pneumonia RADIOLOGY- Respiratory System Radiology INTEGRATED SESSION - Tuberculosis (Family Medicine, Chest Diseases, Pathology, Infec. Diseases and Clin. Microbiology, Pathology ELECTIVES Laboratory: MICROBIOLOGY-LAB- Microbiological Diagnosis of Infectious Agents Affecting the Respiratory Tract -1	
15)	Theoretical: PHARMACOLOGY-Q&A with the lecturer PATHOLOGY- Pulmonary Diseases of Vascular Origin; Q&A with the lecturer MICROBIOLOGY- Q&A with the lecturer INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY- Q&A with the lecturer RADIOLOGY- Respiratory System Radiology STUDENT SEMINAR ELECTIVES Laboratory: PATHOLOGY-LAB- Respiratory Non-Neoplastic and Neoplastic Diseases COMMITTEE EXAM	
17)	I.MIDTERM EXAM	
20)	COMMITTEE PRESENTATION-Gastrointestinal - Metabolism Committee PHARMACOLOGY-Autacoids in amine structure I-II; Autacoids in fatty acid structure; An overview of medicines associated with eicosanoids; Drugs used to treat peptic ulcer PATHOLOGY-Oral pathology, neoplastic and non-neoplastic diseases of salivary glands; Esophageal pathology; Nonneoplastic gastric diseases; Gastric tumors I-II; Malabsorption and nonnecrotizing enterocolitis I-II CLINICAL STATISTICS-Types of research, clinic experiment levels; Randomness, Blindness; Sample Size in Clinics Researches I-II GENERAL SURGERY-Semiology of esophageal diseases; Semiology of upper and lower gastrointestinal bleeding; Semiology of gastro-duodenal-small intestine diseases INTERNAL DISEASES-Dysphagia, heartburn, regurgitation PEDIATRIC HEALTH AND DISEASES-Evaluation of the gastrointestinal system I-II MEDICAL GENETICS-GIT genetics	
21)	Theoretical: INTERNAL DISEASES-Approach to abdominal pain; Diarrhea-physiopathology; Constipation- etiology and approach; GENERAL SURGERY- Semiology of acute abdomen; Semiology and diseases of colorectal disorders PEDIATRIC HEALTH AND DISEASES-Approach to the child with abdominal pain; Malabsorption; Approach to the child with nausea and vomiting CLINICAL STATISTICS-Evaluation of diagnosis tests, sensitivity, specificity, positive and negative predictive values; ROC Analysis; Risk criteria, incidence, odds ratios, relative risk, attributed risk; Hypothesis testing about the comparison of more than two population means, variance analysis PATHOLOGY-Chronic inflammatory bowel diseases; Intestinal tumors I-II; Mesentery, periton and appendix pathology I-II INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Classification of infectious diarrhea and its occurrence mechanisms-I-II PHARMACOLOGY-Antiemetics; Antidiarrheal & digestive drugs; Laxative and purgative drugs RADIOLOGY-Gastrointestinal System Radiology MICROBIOLOGY-Microbiological diagnosis of gastrointestinal tract infections Laboratory: PATHOLOGY LAB: Upper and lower GIS, neoplastic and nonneoplastic diseases I-II-III MICROBIOLOGY LAB: Microbiological diagnosis of infectious agents affecting the gastrointestinal system	
22)	Theoretical: MEDICAL BIOCHEMISTRY-Laboratory tests in the malabsorption PHARMACOLOGY-Rational prescribing; Pharmacovigilance: drug safety monitoring PATHOLOGY-Introduction to liver pathology; Inflammatory hepatic diseases I-II; Cholestatic hepatic diseases; Toxic, metabolic hepatic diseases I-II INTERNAL DISEASES-Ascites- etiology and approach; Jaundice- etiology and approach; Chronic liver disease GENERAL SURGERY- Semiology of liver and biliary tract diseases; Semiology of pancreatic diseases; Semiology and diseases of spleen CLINICAL STATISTICS-Chi Square Tests I-II	
23)	Theoretical: INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Approach to the patient with jaundice PATHOLOGY-Gall bladder pathology; Hepatic tumors MICROBIOLOGY-Microbiological diagnosis of liver and gallbladder diseases MEDICAL BIOCHEMISTRY-Liver function tests RADIOLOGY-Liver, biliary tract and pancreatic radiology INTERNAL DISEASES-Obesity-physiopathology; Calcium metabolism; Metabolic bone diseases GENERAL SURGERY-Obesity; Wound healing and incisional hernias in surgery PHARMACOLOGY- Drugs used to treat obesity PEDIATRIC HEALTH AND DISEASES-Lipoprotein metabolism and disorders CLINICAL STATISTICS-Coefficient of correlation and regression analysis I-II Laboratory: MICROBIOLOGY LAB: Microbiological diagnosis of infectious agents affecting the liver and gallbladder PATHOLOGY LAB: Liver and gall bladder pathology	
24)	Theoretical: STUDENT SEMINAR PATHOLOGY-Questions and answers with the lecturer PHARMACOLOGY-Questions and answers with the lecturer CLINICAL STATISTICS-Survival Analysis I-II INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Questions and answers with the lecturer THE	

	END OF COMMITTEE EVALUATION COMMITTEE EXAM	
25)	COMMITTEE PRESENTATION-Nerve – Sense - Locomotor System Committee NEUROLOGY-Introduction to neurology and basic semiological concepts; Primary and secondary head-aches; Symptoms and signs in cranial nerve diseases; Craniofacial neuralgias; Ischemic cerebrovascular diseases PHARMACOLOGY-Introduction to central nervous system pharmacology; Drugs used to treat migraine; Antidepressants I-II PEDIATRIC HEALTH AND DISEASES-Neurological examination in children-I-II; The mechanism of seizure physiopathology in childhood INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Classification of CNS infections and their occurrence mechanisms I-II; Rabies pathogenesis; Pathogenesis of tetanus and botulism PATHOLOGY-CNS infections; CNS tumors; Symptoms and signs in cranial nerve diseases; Hereditary tumor syndromes and phacomatosis; Congenital malformations of nervous system and hydrocephalus; Cerebrovascular diseases and trauma pathology MICROBIOLOGY-Microbiological diagnosis of central nervous system infections NEUROSURGERY-Head injuries I-II RADIOLOGY-Neuroradiology	
26)	Theoretical: PATHOLOGY-Degenerative, metabolic and toxic diseases of CNS I-II; Peripheral nervous system pathology; Morphology of neuronal injury and demyelinating diseases I-II NEUROLOGY-Hemorrhagic cerebrovascular diseases; Pathogenesis of multiple sclerosis and other central nervous system demyelinating diseases; Medulla spinalis diseases; Extrapyramidal system diseases I-II; Locomotor system I-II PHARMACOLOGY-Anxiolytics; Sedative and hypnotic drugs; Antipsychotics I-II; Treatment of neurodegenerative diseases (Alzheimer, Parkinson) NEUROSURGERY-Intracranial pressure increase syndrome; Subarachnoid hemorrhage and vasospasm; Intracranial space-occupying formations MEDICAL BIOCHEMISTRY-Biochemical examination of cerebrospinal fluid Laboratory: PATHOLOGY LAB-CNS Pathology I-II	
27)	Theoretical: NEUROLOGY-Myasthenia Gravis / Neuro-muscular junction diseases; Ataxies; Neuromuscular system diseases I-II; Epilepsies I-II OPHTHALMOLOGY-Introduction to the clinic, visual physiology and eye anatomy; Systemic diseases and eye contact; PHARMACOLOGY-Opioid analgesics I-II; General Anesthetics EAR-NOSE-THROAT-Approach to dizziness; Antiepileptics I-II ORTHOPEDICS-Orthopedic terminology and concepts; General evaluation and treatment principles of fractures and dislocations; Child fractures, open fractures and torticollis; Developmental hip dysplasia, clubfoot PATHOLOGY-Fracture and fracture repair; Hereditary and metabolic bone diseases I-II; Ocular (ophtalmic) pathology INTERNAL DISEASES-Introduction to rheumatology-rheumatologic history findings PEDIATRIC HEALTH AND DISEASES-Childhood spasticity physiopathology PHYSICAL MEDICINE AND REHABILITATION-Rehabilitation and physiotherapy concepts Laboratory: MICROBIOLOGY LAB-Microbiological diagnosis of infectious agents affecting the central nervous system	
28)	Theoretical: ORTHOPEDICS-Fracture complications and compartment syndrome; Orthopedic emergencies; Introduction and evaluation of bone and soft tissue tumors; Spine and spinal cord injuries; Spinal deformities EAR-NOSE-THROAT-Approach to hearing loss PHYSICAL MEDICINE AND REHABILITATION-Locomotor system examination; Locomotor system laboratory and imaging PHARMACOLOGY-Local anesthetics; Centrally acting muscle relaxants; CNS stimulants and psychomimetic drugs; Neuromuscular blockers PATHOLOGY-Osteomyelitis and arthritis pathology; Bone and soft tissue tumors I-II RADIOLOGY-Musculoskeletal system radiology NEUROLOGY-Peripheral neuropathies; Physiopathology and clinical findings of dementias MEDICAL BIOCHEMISTRY-Muscle diseases and arthritis diagnostic tests MICROBIOLOGY-Microbiological diagnosis of skeletal and muscle diseases DERMATOLOGY- Basic science of the skin Laboratory: PATHOLOGY-LAB- Bone and muscle pathology MICROBIOLOGY-LAB-Microbiological diagnosis of infectious agents affecting skeleton and muscle diseases	
29)	Theoretical: PHARMACOLOGY-Alcohols; Abuse and addiction of drugs and substances I-II; Nonsteroidal antiinflammatory drugs I-II; Disease modifying antirheumatic agents DERMATOLOGY-Morphology; Dermatologic examination, tools and tests INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Approach to rash diseases; Approach to soft tissue infections MICROBIOLOGY-Microbiological diagnosis of viral infections with rash; Microbiological diagnosis of skin and soft tissue infections PATHOLOGY-Pathology of nontumoral dermatological diseases I-II; Pathology of tumoral dermatological diseases I-II	
30)	INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Questions and answers with the lecturer STUDENT SEMINAR PHARMACOLOGY- Questions and answers with the lecturer PATHOLOGY- Questions and answers with the lecturer THE END OF COMMITTEE EVALUATION COMMITTEE EXAM	
31)	Theoretical: COMMITTEE PRESENTATION-Urogenital – Endocrin Committee UROLOGY-Urination physiology; Urological examination; From symptoms and signs to diagnosis in urology PEDIATRIC HEALTH AND DISEASES-Glomerular injury; Tubular injury; Hematuria in children: Basics; Proteinuria in children: Basics; Signs and symptoms of kidney diseases in children INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Approach to urinary tract infections MICROBIOLOGY-Microbiological diagnosis of urinary tract infections PHARMACOLOGY-Introduction to hormones; Pituitary and hypothalamic hormones; ACTH, mineralocorticoids & inhibitors PATHOLOGY-Pathology of glomerular diseases I-II; Urinary system infections and tubulointerstitial diseases; Chronic kidney disease, urolithiasis, hydronephrosis, cystic diseases; Upper and lower urinary system tumors (Neoplasia of kidney, ureter, urinary bladder, penis) I-II-III; Urinary system malformations; Diseases involving blood vessels; INTERNAL DISEASES-Kidney failure: The basics; Kidney function tests; Liquid electrolyte balance Laboratory: MICROBIOLOGY-LAB-Microbiological diagnosis of infectious agents affecting the urinary tract	
32)	Theoretical: INFECTIOUS DISEASES AND CLINICAL MICROBIOLOGY-Approach to Sexually Transmitted Infections; UROLOGY-Reproductive and erection physiology PATHOLOGY-Cervix carcinoma; Non-neoplastic diseases of uterus and tuba; Non-neoplastic and benign neoplastic ovarian diseases; Malignant ovarian tumors I-II; Benign and malignant tumors of uterus I-II GYNECOLOGY AND OBSTETRICS-Benign tumors of the genital system I-II; Premalignant-malignant lesions of the genital system I-II; Pelvic inflammatory disease; Chronic pelvic pain and endometriosis I-II; Polycystic ovary syndrome; Obstetric examination PHARMACOLOGY-Oral contraceptives; Oxytocic drugs; Androgens, anabolic steroids and antiandrogens MEDICAL BIOCHEMISTRY-Laboratory diagnosis in adrenal disorders INTERNAL DISEASES-Endocrine system semiology and examination RADIOLOGY-Introduction to endocrine system radiology	
33)	Theoretical: RADIOLOGY-Urinary system radiology MEDICAL BIOCHEMISTRY-Urine analysis and kidney function tests; UROLOGY- Basic principles in urooncology GYNECOLOGY AND OBSTETRICS-Gynecological examination PATHOLOGY-Pathology of vulva, vagina and cervix diseases; Pituitary pathology PHARMACOLOGY-Glucocorticoids; Estrogens and their antagonists; Progestins & their antagonists INTERNAL DISEASES-Pituitary hypothalamus adrenal axis Laboratory: PATHOLOGY-LAB-Non-neoplastic and neoplastic kidney diseases and urinary bladder pathology I-II	
34)	Theoretical: PATHOLOGY-Benign and malignant diseases of prostate I-II; Benign and malignant diseases of testis I-II; Benign and malignant diseases of	

	breast I-II; Endocrine and exocrine pancreas pathology; Adrenal gland pathology I-II; Parathyroid pathology; Thyroid pathology I-II GYNECOLOGY AND OBSTETRICS-Abruptio placenta, placenta previa, placental pathologies; Abortion, intrauterine fetal death and recurrent pregnancy loss MEDICAL BIOCHEMISTRY-Prostate diseases and semen analysis; Pancreatic function tests and diabetes mellitus; Laboratory tests for thyroid gland disorders PEDIATRIC HEALTH AND DISEASES-Congenital hypothyroidism; Calcium and Vitamin D metabolism GENERAL SURGERY-Breast examination and benign diseases; Malignant breast diseases of the disease INTERNAL DISEASES-Approach to thyroid diseases; Diabetes mellitus- etiopathogenesis, pathophysiology PHARMACOLOGY-Drugs used to treat erectile dysfunction; Endocrine pancreas and insulin; Oral hypoglycemic agents; Thyroid drugs; Calcitropic drugs Laboratory: PATHOLOGY-LAB-Cervix, uterin corpus, ovary, breast, prostate and testis pathology
35)	Theoretical: PHARMACOLOGY-Questions and answers with the lecturer STUDENT SEMINAR PATHOLOGY-Questions and answers with the lecturer THE END OF COMMITTEE EVALUATION Laboratory: PATHOLOGY-LAB-Endocrine system pathology I-II COMMITTEE EXAM

Sources

Course Notes /	Öğretim üyesinin hazırladığı sunumlar/Presentations prepared by the faculty member
Textbooks:	Farmakoloji/Pharmacology Katzung & Trevor Farmakoloji Sınav ve Gözden Geçirme, 14. baskı Lippincott Farmakoloji, 7. baskı Oğuz Kayaalp Akıcı Tedavi Yönünden Tıbbi Farmakoloji 1-2, 13. baskı Katzung's Basic & Clinical Pharmacology
References:	Farmakoloji/ 1-Dipiro Farmakoterapi El Kitabı Çeviri Editörü: Prof. Dr. Turgay Çelik, 10. baskı 2-Oğuz Kayaalp, Mehmet Melli, Şule Oktay, Osman Özdemir (Editörler) TİK-6 Türkiye İlaçla Tedavi Kılavuzu 2011-12 Formülleri, Pelikan Kitabevi 3-Lippincott's Illustrated Reviews: Pharmacology 4-Goodman & Gilman's Pharmacological Basis of Therapeutics Pharmacology : 1-Dipiro Pharmacotherapy Handbook, 11th edition Patoloji: 1-Pocket companion to Robbins and Cotran pathologic basis of disease / Richard N. Mitchell, Vinay Kumar, Abul K. Abbas, Jon C. Aster ; with illustrations by James A. Perkins [İstinye Üniversitesi Merkez Kütüphanesi QZ 39 .M58/P635] 2-Robbins basic pathology / [editors] Vinay Kumar, Abul K. Abbas, Jon C. Aster; artist James A. Perkins [İstinye Üniversitesi Merkez Kütüphanesi QZ 140/.R633] 3-Rosai and Ackerman's surgical pathology / John R. Goldblum, Laura W. Lamps, Jesse McKenney, Jeffrey L. Myers [İstinye Üniversitesi Merkez Kütüphanesi WQ 142.G65/R673] 4-Textbook of pathology / Harsh Mohan, foreword Ivan Damjanov [İstinye Üniversitesi Merkez Kütüphanesi QZ 200 .M64/T498] 5-Anatomic pathology : board review / Jay H. Lefkowitz [İstinye Üniversitesi Merkez Kütüphanesi QZ 18.2 .L44/A538] 6-WHO classification of tumours of endocrine organs / edited Ricardo V. Lloyd, Robert Y. Osamura, Günter Klöppel, Juan Rosai [İstinye Üniversitesi Merkez Kütüphanesi WK 145/.W46] 7-Digestive system tumours : WHO classification of tumours / edited by WHO Classification of Tumours Editorial Board [İstinye Üniversitesi Merkez Kütüphanesi WI 149/.D544] 8-Diagnostic pathology of infectious disease / Richard L. Kradin [İstinye Üniversitesi Merkez Kütüphanesi WC 100 .K73/D534] 9-MacSween's pathology of the liver / Alastair Burt, Portman Bernard, Linda Ferrell [İstinye Üniversitesi Merkez Kütüphanesi WI 700 .B87/M337] 10-Who classification of tumours : breast tumours / editor who classification of tumours editorial board [İstinye Üniversitesi Merkez Kütüphanesi WP 15/.W463] 11-Clinical pathology : board review / Steven L. Spitalnik, Suzanne Arinsburg, Jeffrey Jhang [İstinye Üniversitesi Merkez Kütüphanesi WQ 18.2 .S65/C556] 12-Exam preparatory manual for undergraduates : pathology / Ramadas Nayak, Nayak, Rakshatha [İstinye Üniversitesi Merkez Kütüphanesi QZ 4 .N39/E936] 13-Pathophysiology : the biologic basis for disease in adults and children / Kathryn L. McCance, Sue E. Huether [İstinye Üniversitesi Merkez Kütüphanesi QZ 140 .M33/P384] Mikrobiyoloji: 1- Koneman's Color Atlas And Textbook of Diagnostic Microbiology Türkçe Baskısı-2017 2-Temel Tıbbi Mikrobiyoloji-Murray-2018 3- Tıbbi Mikrobiyoloji-Jawetz-2020 4-Enfeksiyon Hastalıkları ve Mikrobiyolojisi- cilt 1-2-Ayşe Willke Topçu-2017 5-Temel İmmünoloji-İmmün sistemin işlevleri ve bozuklukları-Abbas-2015 6-Roitt's Essential Immunology-2017 (Çeviri) Microbiology: 1- Koneman's Color Atlas And Textbook of Diagnostic Microbiology, 7th edition 2-Basic Medical Microbiology, Patrick R. Murray, 2018 3- Medical Microbiology, Jawetz, 2020 4-Enfeksiyon Hastalıkları ve Mikrobiyolojisi- cilt 1-2-Ayşe Willke Topçu-2017 5- Basic Immunology: Functions and Disorders of the Immune System, Abbas, 2015 6-Roitt's Essential Immunology, 2017

Course - Program Learning Outcome Relationship

Course Learning Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Program Outcomes																														

Course Learning Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1) When Istinye University Faculty of Medicine student is graduated who knows the historical development of medicine, medical practices, and the medical profession and their importance for society.																														
2) knows the normal structure and function of the human body at the level of molecules, cells, tissues, organs and systems.																														
3) is capable of systematically taking an accurate and effective social and medical history from their patients and make a comprehensive physical examination.																														
4) knows the laboratory procedures related to diseases; In primary care, the necessary material (blood, urine, etc.) can be obtained from the patient with appropriate methods and can perform the necessary laboratory procedures for diagnosis and follow-up or request laboratory tests.																														

Course Learning Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
5) can distinguish pathological changes in structure and functions during diseases from physiological changes and can Interpret the patient's history, physical examination, laboratory and imaging findings, and arrive at a pre-diagnosis and diagnosis of the patient's problem.																														
6) knows, plans and applies primary care and emergency medical treatment practices, rehabilitation stages.																														
7) can keep patient records accurately and efficiently, know the importance of confidentiality of patient information and records, and protects this privacy.																														
8) knows the clinical decision-making process, evidence-based medicine practices and current approaches.																														

Course Learning Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
9) knows and applies the basic principles of preventive health measures and the protection of individuals from diseases and improving health, and recognizes the individual and/or society at risk, undertakes the responsibility of the physician in public health problems such as epidemics and pandemics.																														
10) knows the biopsychosocial approach, evaluates the causes of diseases by considering the individual and his / her environment.																														
11) is capable of having effective oral and/or written communication with patients and their relatives, society and colleagues.																														
12) knows the techniques, methods and rules of researching. It contributes to the creation, sharing, implementation and development of new professional knowledge and practices by using science and scientific method within the framework of ethical rules.																														

Course Learning Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
13) can collect health data, analyze them, present them in summary, and prepare forensic reports.																														
14) knows the place of physicians as an educator, administrator and researcher in delivery of health care. It takes responsibility for the professional and personal development of own and colleagues in all interdisciplinary teams established to increase the health level of the society.																														
15) knows employee health, environment and occupational safety issues and takes responsibility when necessary.																														
16) knows health policies and is able to evaluate their effects in the field of application.																														
17) keeps medical knowledge up-to-date within the framework of lifelong learning responsibility.																														

Course Learning Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
18) applies own profession by knowing about ethical obligations and legal responsibilities, prioritizing human values and with self-sacrifice throughout own medical life.																														

Course - Learning Outcome Relationship

No Effect	1 Lowest	2 Average	3 Highest

Program Outcomes	Level of Contribution
1) When Istinye University Faculty of Medicine student is graduated who knows the historical development of medicine, medical practices, and the medical profession and their importance for society.	
2) knows the normal structure and function of the human body at the level of molecules, cells, tissues, organs and systems.	
3) is capable of systematically taking an accurate and effective social and medical history from their patients and make a comprehensive physical examination.	
4) knows the laboratory procedures related to diseases; In primary care, the necessary material (blood, urine, etc.) can be obtained from the patient with appropriate methods and can perform the necessary laboratory procedures for diagnosis and follow-up or request laboratory tests.	
5) can distinguish pathological changes in structure and functions during diseases from physiological changes and can interpret the patient's history, physical examination, laboratory and imaging findings, and arrive at a pre-diagnosis and diagnosis of the patient's problem.	
6) knows, plans and applies primary care and emergency medical treatment practices, rehabilitation stages.	
7) can keep patient records accurately and efficiently, know the importance of confidentiality of patient information and records, and protects this privacy.	
8) knows the clinical decision-making process, evidence-based medicine practices and current approaches.	
9) knows and applies the basic principles of preventive health measures and the protection of individuals from diseases and improving health, and recognizes the individual and/or society at risk, undertakes the responsibility of the physician in public health problems such as epidemics and pandemics.	
10) knows the biopsychosocial approach, evaluates the causes of diseases by considering the individual and his / her environment.	
11) is capable of having effective oral and/or written communication with patients and their relatives, society and colleagues.	
12) knows the techniques, methods and rules of researching. It contributes to the creation, sharing, implementation and development of new professional knowledge and practices by using science and scientific method within the framework of ethical rules.	
13) can collect health data, analyze them, present them in summary, and prepare forensic reports.	
14) knows the place of physicians as an educator, administrator and researcher in delivery of health care. It takes responsibility for the professional and personal development of own and colleagues in all interdisciplinary teams established to increase the health level of the society.	
15) knows employee health, environment and occupational safety issues and takes responsibility when necessary.	
16) knows health policies and is able to evaluate their effects in the field of application.	
17) keeps medical knowledge up-to-date within the framework of lifelong learning responsibility.	
18) applies own profession by knowing about ethical obligations and legal responsibilities, prioritizing human values and with self-sacrifice throughout own medical life.	

Assessment & Grading

Semester Requirements	Number of Activities	Level of Contribution
Application	1	% 10
Presentation	1	% 10
Committee	6	% 40
Final	2	% 40
total		% 100
PERCENTAGE OF SEMESTER WORK		% 60
PERCENTAGE OF FINAL WORK		% 40
total		% 100

Workload and ECTS Credit Calculation

Activities	Number of Activities	Preparation for the Activity	Spent for the Activity Itself	Completing the Activity Requirements	Workload
Course Hours	2	10	64	418	984
Laboratory	1	6	1	30	37
Study Hours Out of Class	2	6	1	70	154
Presentations / Seminar	1	5	1	20	26
Midterms	1	6	6	40	52
Final	2	2	2	60	128
Total Workload					1381