**T.C  
USKUDAR UNIVERSITY FACULTY OF MEDICINE COURSE CONTENTS  
SECOND CLASS  
I. SEMESTER (FALL)**

**MDC209 Committee Courses 2A: Musculoskeletal System, Digestive System and Metabolism and Circulatory System Committee (15+6) 18 ECTS: 22**

**Musculoskeletal System**

The aim of this committee is to have information about the properties of muscle, cartilage and bone tissues, the development and functions of the musculoskeletal system in humans. In this course, the anatomical formations, structure and functions of the movement system are introduced. General information about the bones, muscles and joints in our body, their anatomical locations and functions, the cells of these structures and their properties, the embryological development of the musculoskeletal system are explained. Histological and biochemical properties of muscle, bone and cartilage tissue, calcium metabolism, contractile proteins, structural properties and functions of contractile components in muscle cells, muscle fiber types and physiological properties, contractile mechanisms, neuromuscular junction and influencing factors, transport through cell membrane and body fluids, exchange of substances and ions between body fluids and genetic diseases of the musculoskeletal system are explained, and the basic subjects of medical microbiology are given.

**Circulatory System**

The aim of this committee is to provide knowledge and skills about the circulatory system, blood tissue and the anatomical and histological structure, embryological development, physiological characteristics and functions of the cells, tissues and organs that make up these systems. General features of the circulatory system, anatomical features of the heart, pleura and mediastinum are explained in this course board. Histology and embryology of the circulatory system; Information on the development and developmental anomalies of the circulatory system is given. Cardiac cycle, heart sounds, cardiac output, capillary circulation, electrocardiogram, features of venous, lymphatic, coronary and pulmonary circulations, blood pressure and regulation are explained. Structural features of blood tissue, production of blood cells, functions, histological and biochemical properties, blood groups and hemostasis mechanisms are explained.

**Respiratory System**

The aim of this board is to provide basic knowledge about the respiratory system. Anatomical features of respiratory muscles, heart, lungs, mediastinum, nose, diaphragm, pharynx, larynx and trachea are explained to students. Histological and physiological information about the respiratory system; The normal structure, development and functions of the respiratory system are explained. Basic topics of medical microbiology are given.

Content of MDC209 Medical Committee Courses (Com 2A):

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| --- | --- | --- | --- |
| **Committee Courses** | **Theoretical Hours** | **Total Lab Hours (without repetition)** | **Total Theoretical + Lab hours** |
| Anatomy | 55 | 28 | 83 |
| Biochemistry | 20 | 2 | 22 |
| Histology and Embryology | 32 | 14 | 46 |
| Physiology | 42 | 8 | 50 |
| Medical Microbiology | 26 | 8 | 0 |
| ***Total Hours*** | ***175*** | ***60*** | ***201*** |

**RPRE104 Entrepreneurship and Project Culture (Theoric: 32 hours) (2+0) 2 ECTS: 3**

The aim of the course is to increase the entrepreneurship and innovation performance of young people by supporting the R&D and Innovation culture, to support them in realizing commercial and social projects, and to provide them with the necessary equipment for entrepreneurship. In this course, in cooperation with Üsküdar University, GOSB Technopark and GOSB Technopark companies, the program covers the topics of marketing in entrepreneurship, human resources in entrepreneurship, financing management in entrepreneurship, production management in entrepreneurship, technology management in entrepreneurship, patent law in entrepreneurship, R&D and innovation in entrepreneurship.

**MED203 Effective Speaking and Communication Techniques (Theoric: 32 hours) (2+0) 2 ECTS: 3**

The aim of this course is to provide students verbal and nonverbal communication skills; to give basic information about the problems encountered in the communication process, to comprehend interpersonal and intrapersonal communication processes, communication conflicts, problem solving skills, to enable students to learn the characteristics of effective communication and to gain empathic communication and thinking skills. The concept of communication, communication models, the concept of effective communication, aims of effective communication, functions of effective communication, effective verbal and nonverbal communication, basic skills in effective communication, effective communication techniques, the concept of obstacles and noise in the communication process, effective speaking, effective listening, secrets of effective speech ( prepared/unprepared), developing solutions to communication problems, basic ınformation of communication psychology, empathic communication, effective listening and feedback are main topics.

**SECOND CLASS  
II. SEMESTER (SPRING)**

**MDC210 Committee Courses 2B: Nervous System and Behavior, Digestive System and Metabolism, and Urogenital and Endocrine System Committee Course. (17+6) 20 ECTS: 22**

**Nervous System and Behavior**

The purpose of this committee is to provide the necessary knowledge and skills about the nervous system. The anatomy, histology and embryology of the nervous system in the human body and the functions of the cerebrospinal fluid are taught. Information is given about neurotransmitters and their functions in the central nervous system, parts of the central nervous system, the structure of the spinal cord, descending and ascending pathways, brain stem and its parts; medulla oblongata, pons, mesencephalon, diencephalon, hypothalamus, pituitary, basal ganglia, thalamus, cerebral hemispheres, cerebral cortex, cerebral ventricles, cerebrospinal fluid, vessels of the central nervous system, olfactory tracts, limbic system, rhinencephalon, cranial tracts, optic nerves, eye, , ear and vestibular system, auditory pathways and auditory system are explained. Histological structure of neurons and glial cells in central and peripheral nervous system, development of these organs, histological structure of meninges, structure of blood-brain barrier; The biochemical properties of preventing substances in the blood from entering the CSF and the content of CSF are explained. General organization of the central and peripheral nervous system, senses, learning, memory, limbic system, basal ganglia, spinal cord and definition of reflexes; describe the general organization of peripheral and autonomic nervous system mechanisms.

**Digestive System and Metabolism**

The aim of this board is to comprehend the anatomy, embryology, histology, physiology and biochemistry of the digestive system, to learn the molecular mechanisms of digestion and absorption of nutrients, normal human metabolism and obesity. In this course, the anatomy, histological features and functions of the organs that make up the digestive system (esophagus, stomach, small intestines, large intestines, liver, pancreas and gall bladder) are explained. The locations of the digestive system organs in the abdominal cavity, their neighborhoods, their relations with the peritoneum, their arterial nutrition, venous and lymphatic drainage and nervous innervation are given. Digestive system hormones, metabolism of porphyrin and bile pigments, structure and physiological effects of vitamins are explained. Carbohydrate, protein and lipid metabolism are given and clinical conditions that may arise in case of their disorders are discussed. Energy metabolism, regulation of body temperature, factors affecting metabolism, hunger-satiety and obesity metabolism, detoxification mechanisms, acid-base balance and buffer systems, genetic diseases related to digestion and metabolism are explained.

**Urogenital and Endocrine System**

The aim of this committee is to provide the necessary knowledge and skills about the anatomy of the endocrine and urogenital systems and to provide sufficient information about the histology and embryology of the endocrine and urogenital systems in the human body. Information is given about the endocrine system, biochemistry, body fluids and electrolytes, acid-base balance and kidney functions. Some bacteria and fungi that cause disease in humans are described. Anatomy of kidney and ureters, bladder and urethra, pelvis and perineum, female and male genital organs, adrenal glands, thymus, thyroid gland, parathyroid gland is explained. The main functions of the kidneys; glomerular filtration, the role of the kidneys in water-electrolyte and acid-base balance and tubular physiology are explained, and the abnormalities in kidney functions in diabetes are discussed. General features of the endocrine system, development of endocrine glands, histological and functional features, mechanisms of hormones; production, storage, release, metabolism and effects, clinical findings that occur in cases of excess and deficiency of hormones are described. In addition, male and female reproductive organs, reproductive physiology and basic urological mechanisms are explained.

Content of MDC210 Medical Committee Courses (Com 2B):

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| --- | --- | --- | --- |
| **Committee Courses** | **Theoretical Hours** | **Total Lab Hours (without repetition)** | **Total Theoretical + Lab hours** |
| Anatomy | 63 | 22 | 85 |
| Biochemistry | 35 | 4 | 39 |
| Histology and Embryology | 39 | 14 | 53 |
| Physiology | 56 | 10 | 66 |
| Medical Microbiology | 27 | 6 | 33 |
| ***Total Hours*** | ***220*** | ***56*** | ***276*** |

**MED202 Health Sociology and Anthropology (Theoric: 32 hours) (2+0) 2 ECTS: 3**

By examining the relationship between health and society, the sociology of health course aims to reveal the connection of the concept of health with the cultural, economic, historical, political structures and characteristics of the society, the effects of social changes on health, and the change in the perception of health and illness according to various social factors. At the same time, the reflections of the interaction between the individual and society in the field of health are evaluated. The components of health planning and the issues to be considered in the planning of health services will be discussed by understanding the health planning preference based on these components.

**MED208 Volunteering Work (Theoric+practical: 32 hours) (1+2) 2 ECTS: 4**

To strengthen the ties between the university and the society by using the knowledge, skills and experience that students have acquired throughout their education life; humanitarian, social, economic, etc. to raise awareness about problems and various issues and problems in society, especially about migration and disasters, the disabled, and disadvantaged groups; To ensure the development of human, social, cultural, moral values ​​and skills through some volunteering activities that they will participate in and carry out. Management and organization concepts; The concept of volunteering and volunteer management; Basic volunteering areas (disaster and emergency, environment, education and culture, sports, health and social services, etc.); Developing projects related to volunteer work and participating in volunteer work in the field; Ethical, moral, religious, traditional values ​​and principles in volunteer work; Participation in voluntary work in public institutions, local governments and non-governmental organizations (NGOs); Risk groups and volunteering in society; Immigrants and volunteering.