1. SEMESTER

MED 101 – MOLECULAR AND CELLULAR MEDICAL SCIENCES I (8 AKTS)

An introduction into the basic structures and functions of the human cell: membrane systems, membrane signalling and the other organelles of the cell.

MED 103 - MOLECULAR AND CELLULAR MEDICAL SCIENCES II (7 AKTS)

An introduction into intercellular interaction including: Cell biology, basic biochemical reactions, biomolecules and their structures.

2. SEMESTER

MED 104 - MOLECULAR AND CELLULAR MEDICAL SCIENCES III (7 AKTS)

The structures and functions of the molecules carrying genetic information. Hereditary and inter-family transmission of genetic information, chromosomes, the interaction of genetic material with other molecules, protein synthesis and the relation between hereditary disorders and genetic transmission.

MED 106 - MOLECULAR AND CELLULAR MEDICAL SCIENCES IV (7 AKTS)

Basic determinants of health, classification and definition of disease-causing mechanisms, good medical practice and basic medical skills, doctor patient communication.

3. SEMESTER

MED 205 – TISSUE, SKELETAL SYSTEM AND PERIPHERAL NERVOUS SYSTEM (8 AKTS)

This course connects cellular functions and structures to organs and bodily systems. Basic definitions and terminology in anatomy and histology. The bone structures making up the human skeleton, histological and biochemical characteristics of epitels and connective tissues. The embryiological formation of muscles and the peripheral nervous system, the anatomy and histology of movement and the neurological systems coordinating movement. The biochemical and physiological mechanisms of movement.

MED 207 - CIRCULATORY, BLOOD AND RESPIRATORY SYSTEMS (8 AKTS)

The anatomy and histology of the circulatory and respiratory systems, their structure and functions. The structure and hemodynamics of blood. The physiology of respiration.
MED 209 – DIGESTIVE SYSTEM AND METABOLISM (7 AKTS)

The structure and functions of the digestive system. The anatomy and histology of organs making up the digestive system. The physiology of digestion, the effects of anatomical malformations on the digestive system. Human metabolism and biochemical pathways.

4. SEMESTER

MED 204 – NERVOUS SYSTEM (8 AKTS)

The structure and functions of the nervous system. The anatomy and histology of the nervous system. The physiological and biochemical mechanisms of the nervous system.

MED 208 – ENDOCRINE AND REPRODUCTIVE SYSTEMS (7 AKTS)

Understanding the structure and functions of the endocrine system. The anatomical, histological and physiological characteristics of hormon secreting organs and tissues, the biochemical structures and formative stages of hormon secreting organs and tissues, and the responses of the organs and tissues to hormones. The physiology, anatomy, development and histology of the reproductive and the urinary systems.

MED 210 – INTRODUCTION TO CLINICAL MEDICAL SCIENCES (8 AKTS)

Providing an introduction into clinical training, this course focuses on basic concepts of pathology, such as inflammation. The relation between the immunological, biochemical and genetic structures and disorders, with an introduction into drug metabolism, pharmacodynamics and pharmacokinetics.

5. SEMESTER

MED 303 – NEOPLASTIC DISORDERS OF THE HEMATOPOIETIC SYSTEM (6 AKTS)

An introduction into disorders of the blood, the lymph and the immune system. Diagnosis and therapy in oncology; structural changes of tissue; oncological categorization and pathogenesis.

MED 305 – INFECTIOUS DISEASES (6 AKTS)

Infectious diseases: The characteristics of active microorganisms, paths of contagion, effects on bodily tissue. Preventive and therapeutical measures against infectious diseases.
MED 307 – CIRCULATORY AND RESPIRATORY SYSTEM DISEASES (6 AKTS)

Presentation of infectious, degenerative, obstructive and neoplastic diseases. Their clinical, radiological and pathological characteristics, and the pharmacological characteristics of drugs deployed for therapy.

MED 309 – ENDOCRINE AND METABOLIC DISORDERS (5 AKTS)

Disorders of tissues and organs secreting hormones. Their clinical symptoms, emergence, diagnosis and therapy. Malformations in bodily responses to hormones.

6. SEMESTER

MED 304 - UROGENITAL SYSTEM DISORDERS (6 AKTS)

Developmental disorders, infectious and non-infectious diseases of the urogenital system. The clinical and pathological characteristics, diagnosis and therapy of urogenital disorders.

MED 306 - GASTROINTESTINAL PATHOLOGY (6 AKTS)

The clinical and pathological characteristics of diseases occurring in organs and tissues of the gastrointestinal system. Drugs deployed in therapy and their pharmacological interaction.

MED 308 - NEUROLOGICAL AND PSYCHIATRIC DISORDERS, DISORDERS OF THE MUSCULOSKELETAL SYSTEM (6 AKTS)

The diagnosis, clinical and pathological characteristics, therapy and complications of the central and peripheral nervous system disorders. The diagnosis, categorization and therapy of disorders effecting adult’s and children’s mental health. The formative mechanisms and therapy of pain. The diagnosis and therapy of ophtalmologic diseases and disorders. The diagnosis, categorization and therapy of musculoskeletal tissue and organ disorders. Sports injuries.

MED 310 - PUBLIC HEALTH-FORENSIC MEDICINE-DEONTOLOGY-BIOSTATISTICS (5 AKTS)

Basic determinants of health such as life style, work, genetic factors, nutrition, population density, environment, psychological and cultural factors, and socio-economic status, on the provision of healthcare. Basic principles of public healthcare, responsibilities of healthcare professionals to improve the health of individuals and societies, preventive measures in public health, the compilation and use of epidemiologic, demographic, national and local health data in healthcare practice.
**7. SEMESTER**

**MED401 - INTERNAL MEDICINE**

Comprehensive history-taking (anamnesis) and providing a full physical examination. Good communication skills with the patient and patient’s relatives. Diagnostic approaches in endocrinology, hematology, immunology, and in metabolic, neoplastic and infectious diseases. Developing practical skills through observation in inpatients and ambulatory patients with the guidance of the teaching staff. Developing abilities to direct patients and patient’s relatives in the therapy process.

**MED411 PEDIATRICS**

Clinical diagnosis and follow up in the developmental process of children and adolescents. Working with the sick child. Diagnosis and therapy in the respiratory, circulatory, hematological, immunological, neuromusculetal, metabolic, infectious and neoplastic disorders and diseases of children. Developing practical skills through observation and professional guidance in inpatients and ambulatory patients with the guidance of the teaching staff. Developing abilities to direct patients and patient’s relatives in the therapy process.

**8. SEMESTER**

**MED422 OBSTETRICS AND GYNEACOLOGY**

The presentation of diagnosis and therapy approaches in obstetrics and gynecology. Developing practical skills through observation in inpatients and ambulatory patients with the guidance of the teaching staff. Developing abilities to direct patients and patient’s relatives in the therapy process. The follow up work and analysis of data during pregnancy. Basic approaches of diagnosis and therapy in infertility.

**MED432 GENERAL SURGERY**

Principles of surgical examination. Diagnosis of acute cases in abdomen complications, hemorrhage, shock, trauma, burns and transplantation. Differential diagnosis in surgical cases. Abilities to direct surgical patients. Developing necessary skills under clinical professional guidance for pre-operational and post-operational procedures. Learning basic rules of general and local anesthesiology applied in surgical therapy. Developing skills to apply minor surgical interventions. Learning the principles of surgical emergency.

**MED442 RADIOLOGY**

Basic principles of radiology. Diagnostic and therapeutical procedures in radiology and nuclear medicine. Acquiring skills to choose the correct radiological diagnostic algorithm.

**MED452 ANAESTHESIOLOGY AND REANIMATION**

Learning basic skills in working with patients receiving anesthesia. Acquiring practical experience with the guidance of the teaching staff.
MED462 UROLOGY

Observing procedures of diagnosis, patient examination, laboratory and radiological inquiry in urological diseases in inpatients and ambulatory patients, with the guidance of the teaching staff. Acquiring skills to distinguish emergency cases in urology. Training in urethral catheterization.

9. SEMESTER

MED501 ORTHOPEDICS AND TRAUMATOLOGY

Patient examination, diagnostic and therapeutical approaches in the developmental, infectious, neoplastic and traumatic disorders and diseases of the bone structure in inpatients and ambulatory patients, with the guidance of the teaching staff.

MED511 PHYSICAL MEDICINE AND REHABILITATION

The concept of rehabilitation and measures deployed for determining the quality of life. Diagnostic and therapeutical methods of dealing with muscular and skeletal pain, rheumatic diseases, and the rehabilitation of neurological and orthopedic sequels.

MED521 NEUROLOGY

Acquiring skills to define symptoms of neurological disorders. Methods of taking history and making a neurological examination, localizing neurological symptoms. Categorization and differential diagnosis of neurological disorders, acquiring skills to detect neurological emergency cases, and to develop a therapeutic intervention plan in neurological emergencies.

MED531 BRAIN AND NERVE SURGERY

Acquiring knowledge about surgical therapies in the developmental, traumatic and neoplastic disorders of the central and peripheral nervous system, through observations on inpatients and ambulatory patients, with the guidance of the teaching staff.

MED541 MENTAL HEALTH AND PSYCHIATRIC DISORDERS

Acquiring basic skills and knowledge about disease symptoms, diagnosis, differential diagnosis, methods of examination and therapy, in adult psychiatry, through observation and with the guidance of the teaching staff.

MED551 OPHTHALMIC DISORDERS AND DISEASES

Determination and differential diagnosis of ophthalmic disorders and diseases. Clinical evaluation of ophthalmic emergencies, medical and surgical options in the therapy of ophthalmic disorders and diseases. Systemic diseases and the eye. Acquiring skills to use an ophthalmoscope through observation and with the guidance of the teaching staff.
MED561 OTORHINOLARYNGOLOGICAL DISORDERS

Acquiring skills in the examination, diagnostic approaches and therapy in the infectious, developmental and neoplastic diseases of the organs of the upper respiratory tract, through observing the guiding teaching staff. The students will be able to define the principles of surgical emergency care in otorhinolaryngology.

10. SEMESTER

MED502 CARDIOVASCULAR SURGERY

Acquiring basic knowledge about the surgical therapy of cardiovascular diseases. Developing an understanding about the diagnostic and therapeutic methods of arterial/venous system disorders.

MED512 PEDIATRIC SURGERY

Surgical applications and principles in pediatrics. Surgical approaches of therapy in neoplastic, traumatic, developmental and circulatory diseases of the pulmonary and abdominal cavities in children. Students will acquire knowledge about pre-operational and post-operational diagnostic and therapeutic processes through observation and professional guidance.

MED522 RADIATION ONCOLOGY

Students will acquire skills to evaluate patients in the radiation oncology clinic, and develop the abilities to define indications of radiation therapy, and the late and early side effects of therapeutic intervention.

MED532 PLASTIC SURGERY

Students will get acquainted with concepts related to plastic surgery, and develop skills to direct patients with related problems to the right centres at the right time.

MED542 NUCLEAR MEDICINE

Students will gain abilities to use the right methods of diagnosis and therapy deployed in nuclear medicine. They will develop diagnostic skills in using tools of nuclear medicine.

MED552 CARDIOLOGY

Students will become able to diagnose cardiac emergencies, explain diagnostic tests used for differential diagnosis, such as laboratory tests and imaging tests, and learn about therapy approaches through observing guiding teaching staff.

MED562 INFECTIOUS DISORDERS

Students will get acquainted to the mechanisms of action of antimicrobial agents used in the therapy of infectious diseases. They will become able to define resistance mechanisms, learn the fundamentals of interpreting the results of antimicrobial susceptibility tests, and the functions of the microbiology lab in developing strategies for antimicrobial deployment.
**MED572 FORENSIC MEDICINE**

Basic knowledge on forensic medicine and forensic sciences; Forensic practices in Turkey, forensic autopsy, forensic case examination, forensic reporting.

**MED582 DERMATOLOGY**

Students acquire skills about detecting elementary lesions of the skin and the healthy structure of the skin. Information is provided on allergic, vesicular, infectious, genetic, hereditary, immunological, neoplastic and drug-related diseases of the skin in adults and children, as well as perspectives on diagnosis and therapy. Practical skills are acquired through observation and exercises with the guidance of the teaching staff.

**MED592 PUBLIC HEALTH**

Students will develop abilities to provide diagnostic and therapeutic healthcare services with the support of healthcare institutions, cooperate with secondary healthcare services when necessary, and learn preventive measures in public health. They will acquire skills and knowledge to analyse social health problems, carry out an epidemiological survey, analyse, evaluate and report its results and plan health care measures in line with the defined risks and implications.

**MED504 PULMONARY DISORDERS**

Students learn about the epidemiology, pathophysiology, clinical symptoms, diagnosis, therapy and follow-up of the most widespread pulmonary diseases.

**MED514 PULMONARY SURGERY**

Students acquire skills about recognizing pulmonary diseases related to pulmonary surgery, get knowledgeable about practical methods of diagnosis and learn about chest traumas in emergency.

**11. SEMESTER:**

**MED601 CLERKSHIP I**

**12. SEMESTER:**

**MED602 CLERKSHIP II**