**I. CLASS I. HALF (FALL SEMESTER)**

**OZ101 TURKISH LANGUAGE I (2T+0U) 2 CREDITS 2AKTS**

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| **Course**  **Content** | Turkish Language courses allow students to show the characteristics of the Turkish language and my working rules with examples; gain the ability and habit of accurately and effectively explaining their emotions, thoughts, design, impressions, observations, lives with words and writing; to develop their vocabularies through written and oral texts; learn the rules of accurately understand the texts they read or the programs they listen to; it is aiming to improve language skills, which are the basis of communication between people and masses. |

**OZ103 ATATURK PRINCIPLES AND HISTORY OF INKILAP I (2T+0U) 2 CREDITS 2AKTS**

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| **Course**  **Content** | General concepts on the subject, the reasons for the fall of the Ottoman Empire, preparations for the National Struggle, congresses, Sevr  Treaty, wars, opening of the Parliament, Mudanya Ceasefire  The treaty discusses issues related to the Treaty of Lausanne. |

**OZ163YABANCI LANGUAGE I (2T+0U) 2 CREDITS 2AKTS**

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| **Course**  **Content** | Students take the basic characteristics of English grammar, gain the necessary vocabulary and have the ability to express themselves through writing-speech practices, bringing their knowledge to life. The ability to understand what you are reading and listening to is also obtained within the scope of this course. In this course, students will be able to read and interpret academic reading pieces and use English correctly in verbal communication. |

**TG101 MEDICAL IMAGING I (3T+1U) 3 CREDITS 5AKTS**

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| **Course**  **Content** | In this course, it is aimed to gain the skills related to obtaining radiography. Radioactivity, Electromagnetic Radiation, X-ray formation and properties, Conventional and Digital Radiography, Radiographic Imaging Techniques, Bathing Techniques, Preparations for radiographic examination, Head radiography, Facial radiography, Vertebra radiography, Torso radiography, Upper extremity radiography, Lower extremity radiography, Lung, heart radiography Preparations for radiographic examination, Head radiography, Facial radiography, Vertebra radiography, Body radiography, Upper Body radiography |
|  | extremity radiography, Lower extremity radiography, Lung, heart radiography. |

**TG103 MEDICAL IMAGING and UYG. I (0T+4U) 4 CREDITS 5AKTS**

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| **Course**  **Content** | In this course, it is carried out to gain the skills related to obtaining radiography, to make preparations for radiographic examination, head radiography, facial radiography, vertebra radiography, toraks and superspic radiography, upper extremity radiography, lower extremity radiography, lung, heart radiography, preparing for film printing, film printing, radiography and quality control of the dark room.  In this course, applications related to radiographic (X-ray) examination devices will be made at the Medical Faculty Research and Application Hospital. |

**TG105 PROFESSIONAL MATHEMATICS (2T+0U) 2 CREDITS 2AKTS**

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| **Course**  **Content** | Identifies, Equations and Inequalities, Coordinate Plane, Accurate and Parabol Equation, Functions, Limit and Continuity, Derivative Concept, Derivative Applications, Supersection and Logarithmic Functions, Ambiguous Integral, Specific Integrals and Applications, Linear Equation Systems, Matrices, Determinants, Linear Programming Multi-Variable Functions |

**TG107 BASIC PHYSICAL (2T+1U) 2 CREDITS 4AKTS**

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| **Course**  **Content** | The main objective of this course is to provide an understanding of the basic concepts and principles of physics, in particular to enable radiology students to better understand vocational courses and to increase knowledge in both theoretical and practical courses. Physics, Sub-branches of Physics, Measurement and unit systems, scaler and vector quantity, mechanical, Newton's laws of motion, electrostatic, electrical charge, coulomb law, conductors and insulators, electrical forces and fields, electric field and potential difference, electric current, resistance and circuit elements, Ohm Law, Kirchoff Laws, statin, power and electrical heat, direct current circuits, solution of circuit problems, magnetic properties of matter, alternating current, transformers. |

**TG109 ANATOMY (2T+0U) 2 CREDITS 3AKTS**

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| **Course**  **Content** | In anatomy class; it is aimed to gain knowledge and skills related to the basic structure of the body and the anatomical properties of the structures and organs that make up the systems. Basic terms and concepts related to anatomy, structure and types of cells, skeletal system, musculoskeletal system, blood and fluid-electrolytes, anatomical features of the heart and vascular structures, anatomical structures of the upper and lower respiratory tract, structure of the upper and lower respiratory tract, anatomical structures of the central nervous system, anatomical structures of the peripheral nervous system, sensory organs, pituitary gland and other endocrine system structures, digestive organs and structures of organs and glands that help digestion , urogenital system and male and male reproductive system structures. |

**TG115 WORKER HEALTH AND SAFETY (2T+0U) 2 CREDITS 2AKTS**

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| **Course**  **Content** | First aid training, first aid supplies, providing personal safety, ensuring employee safety, ensuring work environment and environmental safety |

**TG113 BASIC COMPUTER SINGLE. KUL. (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | Internet and Internet Browser, E-mail Management, NewsGroups / Forums, Web-Based Learning, Personal Website Preparation, Electronic Commerce, Resume in Word Processor Program, Internet And Career, Job Interview Preparation, Action Table, Formulas and Functions, Graphics, Presentation Preparation, Introductive Material Preparation |

**TG111 MEDICAL AND RADIOJIC TERMINOLOGY (2T+0U) 2KREDi 3AKTS**

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| **Course**  **Content** | The purpose of this course is;**to provide the necessary knowledge, skills and** suffaes for distinguishing, correctly pronouncing, writing and using medical and radiological terms related to the movement system, respiratory system, gastrointestinal tract, central nervous system, circulatory system, Urogenital system and other organs. Current terms related to the pandemic,**medical terms related to human anatomy, medical terms related to movement and nervous system and psychiatric diseases, medical terms related to movement and nervous system and psychiatric diseases, medical terms related to respiratory and digestive system, medical terms related to the cardiovascular system and blood and blood-making organs, Medical terms related to the cardiovascular system and blood and blood-making organs include medical terms related to urinary, genital and endocrine system, medical terms related to eye, ear-nose-throat and skin, radiography, ultrasonography, mammoth, fluoroscopy and contrast materials, angiography, computed tomography, magnetic resonance, nuclear medicine and radiotherapy.** |

**I. CLASS II . HALF (SPRING SEMESTER)**

**OZ102 TURKISH LANGUAGE II (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | The aim is for students to explain the characteristics of Turkish and the rules of process with examples; It is their example of the spelling and n speaking characteristics of Turkish. Understanding students  (listening/reading/monitoring coma) and telling (oral and written narration) skills and establishing relationships with Turkish and world cultures and literatures. |

**OZ104 ATATURK Principles and INKILÂP TAR. II (2T+0U) 2KREDi 2AKTS**

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| **Course**  **Content** | The abolition of the rule and the proclamation of the Republic, the strategy and importance of the Turkish republic, the violations made in the field of law, economic, political, educational culture and social, the attempts to implement multiparty life, the Turkish foreign policy of the Ataturk period, the principles of Ataturk. |

**OZ164 FOREIGN LANGUAGE II (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | Speech sections (names, pronations, adjectives, etc.), name-setters, being, having, there are, names, adjectives, quantity specifiers, verbs, times (simple, present, past, future, etc.), edilgen structures, indirect structures, examples, types of sentences (simple, compound). |

**TG102 MEDICAL IMAGING II (3T+1U) 3KREDI 4AKTS**

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| **Course**  **Content** | The purpose of this course is; Fluoroscopic Imaging in classroom and hospital environments, Contrast Substances in Fluoroscopic Examinations, Digestive System Fluoroscopic Imaging, Biligioscopic Imaging, Uregenital System Fluoroscopic Imaging Mammography Devices, Mammographic Examinations, Angiography in Coronary Angiography, Coronary Angiography, Angiography in Stend Applications, Angiography in Abdominal Applications, Sraks Applications  Angiography, Angiography in Upper Extremity Applications, Other |
|  | Angiography Applications. |

**TG104 MEDICAL IMAGING AND UYG. II (0T+4U) 4KREDI 6AKTS**

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| **Course**  **Content** | The purpose of this course is; to gain knowledge and skills related to fluoroscopic, mammographic and angiographic imaging techniques in classroom and hospital environments. Fluoroscopic imaging, contrast materials in fluoroscopic examinations, digestive system fluoroscopic imaging, digestive system fluoroscopic imaging, biligeal system fluoroscopic imaging, uregenital system fluoroscopic imaging, mammograph devices, mammographic examinations, angiography devices, coronary angiography, cerebral angiography, angiography in stend applications, angiography in abdominal applications, angiography in toraks applications, angiography in upper extremity applications, lower extremity  angiography in applications, other angiography applications  In this course, applications related to radiographic (Tomography) examination devices will be made at the Medical Faculty Research and Application Hospital. |

**TG106 RADIOGY PHYSICS (2T+1U) 2KREDI 2AKTS**

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| **Course**  **Content** | The main objective of this course includes basic principles of physics in obtaining X-ray tube and x-rays, physical quantities and definitions for radiological imaging methods, magnetic field and magnetic resonance physics, atom, Bohr atomic model, radiation, radioactivity, radiation and tissue interaction, fluroscopy physics, computed tomography physics, ultrasound physics. |

**TG112 PROFESSIONAL MEAT (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | In this course, it is aimed to gain the competencies related to professional ethics. Ethical and moral concepts, examination of ethical systems, factors that play a role in the formation of morality, professional ethics, occupational corruption and examining the consequences of unethical behaviors in professional life, examining the concept of social responsibility. |

**95104 WORKPLACE APPLICATION AND INTERNSHIP (0T+0U) 0KREDI 8AKTS**

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| **Course**  **Content** | Theaim of the course is to get to know the patient psychologically and physiologically, research and evaluation. Evaluation by examining medical imaging methods. To learn patient positioning by detecting radiation and dose values. Professional application, report preparation, presentation and evaluation for a period of 30**working days in a workplace that the student will see fit for the education he/she receives.** |

**TG108 DISEASES INFORMATION (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | Story Taking and Physical Examination, Cardiovascular Diseases (Functional Anatomy of the Heart, Diagnostic Procedures, Heart, Symptoms in Diseases-  Results Congestive Heart Failure, Acute Myocardic Enfakitis, Angina  Pektoris, Hypertension, Varicose Veins), Respiratory System Diseases (Anatomy diagnosis of the Respiratory System, Symptoms in Respiratory System Diseases), Endocrine system diseases, diagnostic procedures, signs and symptoms in diseases, Hormans, major places of influence, Thyroid diseases, Pituitary diseases, Diabetus mellitus, Oncology (Tumor etiology, diagnostic procedures, signs-findings, treatment methods.), Blood diseases (Blood structure characteristics, blood groups, Anemias), Digestive system diseases (Cynic system, anatomy and physiology, diagnostic procedures, diagnostic procedures , symptoms), Kidney diseases (functional and physiological anatomy of the kidneys, diagnosis of kidney diseases, sistitis, Acute renal failure, Chronic renal failure), Immune system and Allergic diseases (Immune system,diagnostic procedures), Anaflaktic shock, Bronchial asthma, Food allergy, drug allergy, Urticaria, dermatitis |

**HISTORY OF TG110 MEDICAL IMAGING (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | The aim of this course **is the beginning of the historical process of medical imaging, chronological development of generations of medical**imaging devices, generations of medical imaging devices, the life and work of Wilhelm Conrad X-rays and other scientists who contributed to radiology science, the establishment and development of radiology science in Turkey, developments in radiology in the world and Turkey since the discovery of X-rays, technological developments in the history of radiology are listed chronologically and in the **field of medicine.** |
|  | its use in studies and its historical development to date will beexplained. |

**TG114 ELECTRONICS (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | Basic Electrical and Electronics information. Diodes Structure and Types, Working Principles. Chopper Circuits, Complete and Types of Filters, Definition and Types of Regulations, Definition, Structure and Types of Transistor, Use of Transitor as Switching Element, Use of Transistor as Ampliter Element. |

**TG116 RESEARCH METHODS AND TECHNICALS (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | The main objective of this course is to collect data, evaluate data, analyze data with statistical programs, make presentations and prepare research reports. |

**SECOND CLASS I. HALF (FALL SEMESTER)**

**TG201 MEDICAL IMAGING III (3T+0U) 3KREDI 4AKTS**

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| **Course**  **Content** | The aim of this course is to give the student the knowledge and skills related to magnetic resonance and computed tomography imaging in classroom and hospital conditions. Magnetic resonance device, cranial magnetic resonance imaging, neck magnetic resonance imaging, Imaging in the pandemic process, thoraco magnetic resonance imaging, upper abdomen magnetic resonance imaging, lower abdomen magnetic resonance imaging, vertebrae magnetic resonance imaging, upper extremity magnetic resonance imaging, lower extremity magnetic resonance imaging, MR angio imaging, advanced magnetic resonance imaging, computed tomography, head and neck CT imaging, vertebrae CT imaging, thoraco ct imaging and abdomen includes topics such as extremity CT imaging, advanced computed tomography methods. |

**TG203 MEDICAL IMAGING AND UYG. III (0T+8U) 4KREDI 6AKTS**

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| **Course**  **Content** | The aim of this course is to give the student the knowledge and skills related to magnetic resonance and computed tomography imaging in classroom and hospital conditions. Magnetic resonance device, cranial magnetic resonance imaging, neck magnetic resonance imaging, thoraco magnetic resonance imaging, upper abdomen magnetic resonance imaging, lower abdomen magnetic resonance imaging, vertebrae magnetic resonance imaging, upper extremity magnetic resonance imaging, lower extremity magnetic resonance imaging, MR angio imaging, advanced magnetic resonance imaging, computed tomography device, head and neck CT imaging, vertebra ct imaging, thoraco display and abdomen CT |
|  | imaging, extremity CT imaging, advanced computed tomography methods.  In this course, applications related to radiographic (Mammogram) examination devices will be made at the Medical Faculty Research and Application Hospital. |

**TG205 RADIATION GÜV.ve RAD. PROTECTION (2T+0U) 2KREDI 4AKTS**

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| **Course**  **Content** | The purpose of this course is; Biological Effects of Radiation is to gain knowledge, skills and responsibility about basic principles in radiation protection. The structure of the radiology department includes radiation safety, radiation protection methods, legal regulations on radiation safety, duties and responsibilities in emergencies. |

**TG207 BIOPHILIA (2T+0U) 2KREDI 4AKTS**

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| **Course**  **Content** | Physiological systems in the human body include biological signal processing and strengthening, biopotanial converters and amplifiers, system hardware and design in medical electronics, electrical behavior of the heart, ecg measurement schemes, electrical behavior of the brain and eeg measurement patterns, emg measurement patterns, eng-erg measurements, measurements related to blood circulation and pressure, measurements related to the respiratory system, excitability of the heart, radiological methods. |

**TG209 RADIOTHERAPY (2T+0U) 2KREDI 3AKTS**

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| **Course**  **Content** | The aim of this course is to give the student knowledge and skills related to Radiotherapy in classroom and hospital conditions. Radiotherapy includes simulation, immobilization, individual block procedures, treatment planning and implementation of the treatment plan. |

**TG211 PHYSICS (2T+0U) 2KREDI 3AKTS**

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| **Course**  **Content** | In physiology class; it is aimed to gain knowledge and skills related to the basic functions of the body and the physiological properties of the structures and organs that make up the systems. Basic concepts and terms in physiology include the tasks of the cell, respiratory mechanics, transport and functions of oxygen and carbon dioxide in the blood, functions of the heart, blood and lymph circulation, blood and fluid-electrolytes, central nervous system, peripheral system, endocrine system, discharge system, digestive system, sensory organs. |

**TG215 NUCLEAR TYPE (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | Radiation physics, radiation dose units, radiation counting devices, gamma cameras, planning of my laboratories, radioidotopsradyopharmaulytics, methods of protection from radiation hazards, RIA, biological effects of radiation, cleaning of radioactive contamination. Production and use of pharmaceuticals. Student comprehension of SPECT, PET, PET/CT and Computed tomography (CT) imaging types |

**TG217 FIRST AID (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | The basic principles of first aid are basic life support, first aid in injuries, first aid in fractures, dissetules and sprains, and enough for first aid and transport in other emergencies. Basic applications of first and second treatment, first and second assessment, basic life support in adults, basic life support in children and infants, first aid in respiratory obstruction, external and internal bleeding, types of wounds and wounds, first aid in regional injuries, head and spine fractures |

**TG219 GENERAL CHEMICAL (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | Atomic structure, periodic table, bond types, Chemical equations and equalization methods, Gases, liquids and solids, Solutions, Concentrations, Chemical thermodynamics, Pharmaceuticals. |

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

**TG202 MEDICAL IMAGING IV (3T+0U) 3KREDI 4AKTS**

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| **Course**  **Content** | The purpose of this course is; to gain knowledge and skills related to DEXA and US imaging techniques in classroom and hospital environments. The DEXA device includes DEXA scanning methods, ultrasonography device, neck and superficial tissue ultrasonography, abdominal ultrasonographs, toracs ultrasonography and pelvis ultrasonography. |

**TG204 MEDICAL IMAGING AND UYG.IV (0T+8U) 4KREDI 8AKTS**

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| **Course**  **Content** | The purpose of this course is; to gain knowledge and skills related to DEXA and US imaging techniques in classroom and hospital environments. The DEXA device includes DEXA scanning methods, ultrasonography device, neck and superficial tissue ultrasonography, abdominal ultrasonographs, toracs ultrasonography and pelvis ultrasonography.  In this course, applications related to M-R and Ultrasound examination devices will be made in the Medical Faculty Research and Application Hospital. |

**TG206 RADIOTHERAPY AND TEAM. (2T+0U) 2KREDI 3AKTS**

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| **Course**  **Content** | The aim of this course is to introduce the technical characteristics of the tools and equipment used in radiology departments and to perform the necessary maintenance and to identify and eliminate the failures and |
|  | to gain suffries. Introduction of radiology department, introduction of equipment of rooms using ionizer radiation, darkroom and darkroom materials, film bathroom and printing applications, modern bathroom and civilian day light bath systems, electrical circuits of X-ray device, X-ray device failures and calibration, structure and features of X-ray film, film types, cassettes, ranfansators, film errors and causes, factors affecting quality, tools and equipment used in radiation safety includes radioscopy and mammogram care, angiography and CT care. |

**TG208 COMPUTER PROGRAMMING (1T+1U) 2KREDI 4AKTS**

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| **Course**  **Content** | Python definition, Variable types, Basic processors, Logical processors, Loops, Numbers, Arrays, Lists, Buckets (tuple), dictionary, input-output files, sets (class) |

**TG210 BIOMETICAL SYSTEM TEKN. (2T+0U) 2KREDI 3AKTS**

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| **Course**  **Content** | Overview of biomedical devices in this lesson. Signal measurement, processing and analysis. Biomedical converters: Pressure and force converters. Temperature Converters. Motion converters. Flow converters. Biomedical devices: ECG, Electroencephalography (EEG), Electroneuromyography (EMG), Pulse Oximeter devices and working principles will be processed. |

**TG212 RADIOLOGY PHARMACOLOGY (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | This course includes Introduction to Pharmacology, Absorption, Distribution, Biotransformation and Repulsion of Drugs, Places of Application of Drugs and Pharmaceutical Shapes, Dose-Concentration Relationship, Mechanism of Action of Drugs, Receptors and Drug-Receptor Relationship, Factors That Change Drug Effect, Drug-Drug Activations, Pharmacogenetics, Antibiotics and other Chemoterapetics. |

**TG214 RADIATION ONCOLOGY (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | This course aims to provide basic concepts and examples of radiotherapy application related to oncological therapy, target volumes in radiotherapy and normal tissues for dosimetric calculations and studies. Introduction to radiation oncology, basic concepts, diagnostic methods and staging in cancer, ICRU 50-62, target volumes, risky organ concept and side effects, basic principles in ecsternal RT planning, three-dimensional consurmal RT and density-adjusted RT basic principles and applications, head-neck cancers and RT applications, lung cancer and RT applications, GIS tumors and RT applications, breast cancers and RT applications, gynecological tumors and RT applications , urological tumors and RT applications, MSS tumors, bone soft tissue tumors and RT applications, lymphome and pediatric tumors and RT applications. |

**TG216 BIOSTATICS (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | This course is the introduction of basic concepts for statistical analyses used in the field of health, introducing students to the basic concepts of statistics in the context of health sciences. In order to achieve this goal, students are given statistical skills in data editing, compilation, presenting and analysis, and statistical processes include their understanding of the underlying logic and their application to health sciences research through hypothesis testing. |

**TG218 NEW IMAGING TECHNICALS (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | This course will be taught in light of current developments in current MRI, US, X-ray techniques. |

**TG220 PROFESSION ENGLISH I (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | In this course, the student is told: basic professional concepts and definitions and basic professional grammar qualifications are aimed. It discusses occupational term, concept and terminology, magnetic resonance, conventional X-ray, computed tomography, mammography and angiography. |

**TG222 SAMPLE CASE ANALYSIS (2T+0U) 2KREDI 2AKTS**

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| **Course**  **Content** | In the light of scientific study methods and techniques,**this course will be the basis for analyzing problems with**in-house basic scientific concepts. |