

# T.C ÜSKÜDAR UNIVERSITY

## VOCATIONAL SCHOOL OF HEALTH SERVICES DIALYSIS PROGRAM COURSE CONTENTS

**2022-2023**

### **1st YEAR FALL SEMESTER**

#### **MYO101 BASIC ANATOMY and PHYSIOLOGY      THEORY 3 PRACTICE 0 CREDIT 3 ECTS 4**

1. Introduction to Anatomy and Physiology and short terminology, Axes, planes, Terms indicating location and direction; general information
2. Cell Theory, Structural features, Cell organelles, Cell division; Substance exchange, Metabolism
3. Locomotor System Anatomy and Physiology - Osteology
4. Locomotor System; arthrology; General information, joint types, movements. myology; Anatomy, Contraction mechanism, Striated muscles, cardiac muscle, physiology of smooth muscles.
5. Respiratory system Anatomy and Physiology. Nose, Paranasal sinuses, Larynx, trachea, Lungs. Physiology of Respiratory, ventilation, diffusion, Perfusion, Respiratory Regulation.
6. Heart-Circulatory system Anatomy and Physiology. Blood: functions, components, formed elements of blood, Blood groups. Metabolism of the heart, heart sounds. Heart cavities, Veins.
7. Digestive system Anatomy and Physiology I. Oral anatomy, Chewing muscles, Pharynx, Oesophagus, Stomach, Small-large intestines, Kc. Gallbladder, Pancreas, Digestive glands.
8. Digestive System II. Digestion in the mouth, stomach, digestion in the small and large intestines. KC. functions, CHO digestion, Digestion of fat-proteins. Vitamin-Mineral-Electrolyte functions.
9. Urinary System Anatomy and Physiology I Function of the kidneys, nephron, urin formation, fluid-electrolyte balance. Distribution of water in the organism, Electrolytes-acid-base balance. Renin-angiotensin system.
10. Urinary System Anatomy and Physiology II Functions of the kidneys, nephron, urine formation, fluid-electrolyte balance. Distribution of water in the organism, Electrolytes-acid-base balance. Renin-angiotensin system.
11. Genital organs-reproductive physiology. Female and male genital organs. Hormonal control of the reproductive system, hypothalamus, pituitary, gonadotropic hormones. Ovarian hormones, reproductive cycle.
12. Endocrine system anatomy and physiology. Endocrine glands, their functions. Physiological functions of hormones, classification. Hormones and target cells.
13. Nervous system Anatomy and Physiology. Development of nervous tissue, neuron, neuron types, functions, synapse, neuroglia cells. FAQ and PSS
14. Sense organs, Anatomy and Physiology. Ways of seeing, ways of hearing and balance.

**MIK101 BASIC MICROBIOLOGY (BSEÇ)****THEORY 2 PRACTICE 0 CREDIT 2 ECTS 2**

1. Introduction to Medical Microbiology
2. Medical Bacteriology and Morphological Characteristics of Bacteria
3. Bacterial Metabolism and Reproduction
4. Bacterial Genetics
5. Bacterial Virulence Factors
6. Antimicrobial Agents
7. Medical Bacteriology
8. Medical Virology
9. Medical Parasitology
10. Medical Mycology
11. Relationship Between Microorganisms and Microorganism Human Relationship
12. Sterilization, Disinfection and Antisepsis
13. Basic Immunology
14. General Principles of Laboratory Diagnosis

**DYL103 PATIENT CARE PRINCIPLES (BZSEÇ)****THEORY 2 PRACTICE 2 CREDIT 3 ECTS 8**

1. Basic Concepts in Patient Care
2. Concepts of Health and Disease, Safe Hospital Environment
3. Vital Signs; Monitoring of Fever, Pulse, Arterial Blood Pressure, Respiratory and Vital Findings
4. Vital Signs; Monitoring of Fever, Pulse, Arterial Blood Pressure, Respiratory and Vital Findings
5. Hot-Cold Applications
6. Hospital Infections, Individual hygiene and care
7. Isolation-Asepsis-Antisepsis-Sterilization-Disinfection
8. Decubut (Bed/Pressure Sores) Formation and Treatment
9. Definition, Measurement and Diabetes of Blood Sugar
10. Excretory System and Its Problems
11. Drug Administration Methods and Drug Preparation
12. Parenteral Drug Administration
13. Intravenous Fluid Therapy
14. Care of the Chronic Disease and Terminal Patient

**FAR101 PHARMACOLOGY    THEORY 2 PRACTICE 0 CREDIT 2 ECTS 2**

1. Introduction to pharmacology and toxicology, definition and general concepts
2. Ways of drug administration
3. Toxic effects of drugs
4. Autonomic nervous system drugs
5. Cardiovascular system drugs
6. Drugs acting on the central nervous system
7. Analgesic Drugs and anesthetics
8. Drug abuse and addiction
9. Respiratory system medications
10. Gastrointestinal system drugs
11. Autoacoids and drugs effective on the endocrine system
12. Chemotherapeutics

**RPSI209 POSITIVE PSYCHOLOGY AND COMMUNICATION SKILLS (ÜZSEÇ)    THEORY 2 PRACTICE 0  
CREDIT 2 ECTS 3**

1. Definition of Positive Psychology and Learning the Basic Concepts
2. Learning the Theoretical Fundamentals of Positive Psychology
3. Learning the Brain Infrastructure of Social Behaviors
4. Emotional Intelligence, Emotional Intelligence in Adults, Children and Youth, Marriage and Business Life, Emotional Intelligence Principles, Emotional Intelligence Personality Development, Learning the Relationship between Marriage and Business Life
5. Learning the Concepts Related to Self-Knowledge and Awareness
6. Recognizing Others and Learning the Concepts of Empathy
7. Learning Communication Skills
8. Learning Motivation and Planning Skills
9. Learning Problem Solving Skills
10. Learning Anger Control Skills
11. Learning Relationship Management Skills
12. Learning the Concept of Persistence and Impulse Control Skills
13. Learning Healthy Decision-Making Skills
14. Learning the Concepts of Compromise

**TURK101 TURKISH LANGUAGE I    THEORY 2 PRACTICE 0 CREDIT 2 ECTS 3**

1. The connection of language and culture
2. The historical course of the Turkish language
3. Spelling and punctuation rules
4. The use of words in the most appropriate place in oral and written expression
5. Using his ideas and feelings correctly and effectively

**INGU101 ENGLISH I      THEORY 3 PRACTICE 0 CREDIT 3 ECTS 3**

1. Meet, verb to be, subject pronouns
2. Demonstrative pronouns, countable/uncountable nouns, quantitative expressions
3. Simple Present Tense
4. Adverbs of frequency
5. Object pronouns, possessive adjectives, have got/has got
6. - should, - should (must/mustn t) can, can (can/can t)
7. Past Tense (Simple Past Tense)
8. Comprehension and interpretation of listening at the relevant level
9. Vocabulary
10. Present Continuous Tense
11. Conjunctions (and-but-so-because)
12. Comparisons
13. Understanding various English reading passages at intermediate level

**ATA101 ATATURK'S PRINCIPLES AND HISTORY OF TURKISH REVOLUTION I      THEORY 2 PRACTICE 0  
CREDIT 2 ECTS 3**

1. Definitions of concepts, course methods and resources
2. Industrial Revolution and French Revolution
3. The Dissolution of the Ottoman Empire (XIX. Century)
4. Tanzimat and Reform Edict, I. and II. Constitutionalism
5. World War I, Tripoli and Balkan Wars
6. Armistice of Mudros, Wilson Principles, Paris Conference
7. M. Kemal's Departure to Samsun and the Situation in Anatolia
8. Amasya Circular, National Congresses, Opening of the Parliamentary Assembly
9. Establishment of the Turkish Grand National Assembly and Internal Revolts
10. Teşkilat-ı Esasi Law, Establishment of the Regular Army
11. I. - II. Great Offensive with İnönü, Kütahya-Eskişehir and Sakarya Pitched Battles
12. Treaties during the War of Independence
13. Lausanne Peace Treaty
14. Abolition of the Sultanate

**RKUL101 UNIVERSITY CULTURE I (ÜSEÇ)    THEORY 0 PRACTICE 2 CREDIT 1 ECTS 1**

Each semester includes seminars, conferences, panels, workshops and talks to be held for 14 weeks within the framework of a program consisting of the suggestions of the academic units, student council and student clubs at the university.

## **1st CLASS SPRING SEMESTER**

**BIK101 BIOCHEMISTRY    THEORY 2 PRACTICE 0 CREDIT 2 ECTS 2**

1. Definition and Field of Interest of Biochemistry
2. Cell and Biochemical Organization
3. Cell and Biochemical Organization
4. Water, Acid-Base Concept and Buffer Systems
5. Water, Acid-Base Concept and Buffer Systems
6. Water, Acid-Base Concept and Buffer Systems
7. Protein and Amino Acids
8. Protein and Amino Acids
9. Nucleic Acids and Components
10. Carbohydrates
11. Lipids
12. Lipids
13. Enzymes
14. Vitamins and Coenzymes

**DYL116 USE AND MAINTENANCE OF DIALYSIS EQUIPMENT (BSEÇ)    THEORY 2 PRACTICE 2 CREDIT 3 ECTS 6**

1. Dialysis machine recognition
2. Key features of the dialysis machine
3. Setting up the dialysis machine
4. Membrane placement
5. Necessary connections of the dialysis machine
6. Dialysis machine disinfection systems
7. Na and UF profiles

**DYL118 DIALYSIS I      THEORY 2 PRACTICE 2 CREDIT 3 ECTS 6**

1. Sharing the Curriculum, Explaining the Duties, Authorities and Responsibilities of the Dialysis Technician and Sharing the Application Directive
2. Kidney Health
3. Kidneys and Dialysis
4. Liquid-Electrolyte and Acid-Base Balance/Imbalance
5. Introduction to Acute-Chronic Kidney Failure
6. Overview and Physiological Principles of Renal Replacement Therapies
7. Hepatitis and AIDS in Dialysis Patients
8. The Role of Anticoagulation in Dialysis Treatment
9. Dry Weight Concept
10. Vascular Access Routes

**DYL102 NEPHROLOGY      THEORY 3 PRACTICE 0 CREDIT 3 ECTS 5**

1. Anatomy and physiology of the kidneys - the role of the kidney in the healthy body
2. Methods of evaluation of kidney functions and their use in daily life
3. How to evaluate the kidneys and in which cases the kidney patient will come to us
4. Acute renal failure (ARF) definition, causes, diagnosis, pathophysiology and prevention
5. Development, clinic, diagnosis and treatment approach of glomerular diseases
6. Definition of chronic renal failure (CKD), causes, diagnostic methods, complications, treatment and preventive approach strategies
7. Patient communication, anamnesis and physical examination features for the resolution of nephrological problems
8. How to evaluate normal compositions of urine and abnormalities
9. Body acid-base balance and fluid-electrolyte levels
10. The link between blood potassium level and kidney diseases
11. Cardiovascular problems and infectious diseases in CRF
12. Hematological, neurological and other system abnormalities in CRF
13. Renal replacement therapies
14. Kidney transplant and dialysis

**MET101 PROFESSIONAL ETHICS (BSEÇ)    THEORY 2 PRACTICE 0 CREDIT 2 ECTS 2**

1. What is Ethics? / A Look at Ethical Theories / Basic Concepts: Responsibility, Accountability and Obligation / Ethical Analysis
2. Society and Information Ethics: The Two Way Relationship Between Society and Technology Effects of Information Technologies; Optimistic, Pessimistic, Contextual Views Why Computing Ethics? The Mission of Informatics Ethics
3. Addiction, Health Problems, Unemployment, Social Relationships
4. Security, Abuse and Cybercrime
5. Human rights and Patient rights
6. Hospital ethics committees
7. Principles of medical professional ethics and deontology
8. Principles of medical professional ethics and deontology - presentation
9. Ethical case study - student presentation
10. Bioethics
11. Ethical issues and ethical decision making, medical ethical dilemmas
12. Principles of ethical behavior
13. Privacy
14. Case discussion

**TURK102 TURKISH LANGUAGE II    THEORY 2 PRACTICE 0 CREDIT 2 ECTS 3**

1. To gain the ability to use the mother tongue correctly; Punctuation marks and spelling rules, composition rules, writing types are discussed with examples and writing activities are carried out in this course, in which students who have acquired this skill and come to university are based on generating ideas and writing their thoughts in order to improve their abilities in this field.
2. In addition, various novels, poetry books and theater works are read and studied. A reading theater is made in the classroom and applied emphasis and intonation lessons are given with various diction techniques.

**INGU102 ENGLISH II    THEORY 3 PRACTICE 0 CREDIT 3 ECTS 3**

1. Tenses: Present tense, Present tense, Past tense
2. Future tense structures; Modes: Might, Could, Can, Must, May
3. Adverbs: Place, Direction, Purpose, State adverbs
4. Adjectives: Order of adjectives, Comparison, Superlative structures
5. Passive Structure: Passive structure in Present, Large, Past, Future tense

6. Conditional Clauses, Adjective Clauses, Transfer Clauses

7. Verb Structures: TO, -ING

8. Noun Phrases, Adverb Phrases Karşılaştırmalı Yapılar

**ATA102 ATATURK'S PRINCIPLES AND HISTORY OF TURKISH REVOLUTION II** THEORY 2 PRACTICE 0  
CREDIT 2 ECTS 3

Events, ideas and principles in the birth and development process of modern Turkey; Ataturk Era  
Turkish Foreign Policy, Ataturk's Revolutions, Ataturk's Principles.

**RKUL 102 UNIVERSITY CULTURE II (ÜZSEÇ)** THEORY 0 PRACTICE 2 CREDIT 1 ECTS 1

Each semester includes seminars, conferences, panels, workshops and talks to be held for 14 weeks within the framework of a program consisting of the suggestions of the academic units, student council and student clubs at the university.

## 2nd YEAR FALL SEMESTER

**DYL211 DIALYSIS II** THEORY 2 PRACTICE 0 CREDIT 2 ECTS 8

1. Acute-Chronic Kidney Failure
2. General Renal Replacement Therapies and Place of Dialysis
3. Education of the Patient and His Family
4. Description of the Hemodialysis Process
5. Devices Used in Hemodialysis Process
6. Water Systems in Hemodialysis
7. Vascular Access Routes in Hemodialysis Application
8. Acute Complications in Hemodialysis-1
9. Acute Complications in Hemodialysis-2
10. Chronic Complications in Hemodialysis-1
11. Chronic Complications in Hemodialysis-2
12. Description of the Peritoneal Dialysis Procedure
13. Acute Complications in Peritoneal Dialysis



**DYL215 DIALYSIS APPLICATIONS I    THEORY 0 PRACTICE 8 CREDIT 4 ECTS 15**

It covers the 14-week practice period in which the students can reinforce their theoretical knowledge and the lessons continue for 16 hours each week.

**ILK101 FIRST AID (BSEÇ)    THEORY 2 PRACTICE 0 CREDIT 2 ECTS 3**

1. Basic principles of first aid
2. The human body
3. Evaluation of the patient/injured and crime scene
4. Basic life support
5. First aid in respiratory tract obstructions
6. First aid for bleeding, shock, injuries
7. First aid for burns, frostbite and heat stroke
8. First aid in unconsciousness
9. First aid for poisoning
10. First aid for animal bites
11. First aid in case of foreign body getting into eyes, ears, nose
12. First aid for choking u
13. First aid for fractures, dislocations and sprains
14. Techniques for transporting the sick and injured

**SAH101 HEALTH LAW (BSEÇ)    THEORY 2 PRACTICE 0 CREDIT 2 ECTS 3**

1. Introduction to Health Law
2. Basic Concepts and Institutions of Health Law
3. Patient Rights and Concepts
4. Physician Rights and Concepts
5. Privacy in Medical Interventions
6. Clarification and Consent
7. Unlawfulness of Medical Intervention
8. Interventions Without Medical Indication
9. Relationship Between Hospital and Patient and Its Legal Qualification
10. Legal Nature of the Relationship Between Private Hospitals and Patients

11. Legal Nature of the Relationship Between Public Hospitals and Patients

12. Malpractice and Compensation Issues

## **2nd CLASS SPRING SEMESTER**

### **DYL206 REHABILITATION IN DIALYSIS PATIENTS THEORY 2 PRACTICE 0 CREDIT 2 ECTS 5**

1. Concepts of health, illness, chronic illness
2. Basic concepts of Mental Health and basic mental health problems
3. Relationship between Situational Crises, Traumatic Life Experiences and illness
4. Mental reactions to physical health problems and adaptation process-
5. The psychological effects of chronic diseases on the patient and his family
6. Mental problems and diseases in dialysis patients
7. Psychosocial approaches to dialysis patients and their families
8. The organ donation process and its psychological effects in terms of psychosocial
9. The process of organ transplantation and its psychological effects in terms of psychosocial
10. Psychosocial care
11. Case study

### **DYL200 DIALYSIS APPLICATIONS II THEORY 0 PRACTICE 8 CREDIT 4 ECTS 15**

It covers the 14-week practice period in which the students can reinforce their theoretical knowledge and the lessons continue for 16 hours each week.

### **BES101 NUTRITIONAL PRINCIPLES THEORY 2 PRACTICE 0 CREDIT 2 ECTS 3**

1. Introduction to Nutrition
2. Nutritional Problems and Causes in Society
3. Nutrients – Carbohydrates
4. Nutrients – Proteins
5. Nutrients - Fats
6. Nutrients - Vitamins
7. Nutrients - Minerals
8. General Summary

9. Food Groups
10. Functional Nutrients
11. Methods of Cooking and Storing Foods
12. Energy Requirement and Energy Imbalance Issues
13. Nutrition in Special Situations
14. General Review and Discussion

**HSB100 DISEASES INFORMATION THEORY 3 PRACTICE 0 CREDIT 3 ECTS 6**

1. Basic Concepts of Health and Disease
2. General Introduction to Human Body Systems
3. Diseases of the Respiratory System
4. Diseases of the Digestive System
5. Nervous System Diseases
6. Diseases of the Circulatory System
7. Diseases of the Circulatory System
8. Diseases of the Excretory System
9. Endocrine System Diseases
10. Blood Diseases
11. Joint Diseases
12. Skin Diseases