



**T.C.**

**İSTANBUL YENİ YÜZYIL UNIVERSITY**

**FACULTY OF HEALTH SCIENCES**

**DEPARTMENT of NUTRITION and DIETETICS**

**COURSE CONTENTS**

**1st YEAR**

**1st Semester**

**NUT101 Introduction to Nutrition and Dietetics (3, 0, 3) 5**

This course includes information about introduction to nutrition and dietetics, professional ethics and deontology, introduction to course content, the definition of food and nutrition, food and nutrition in the process of history, nutrition culture.

**FHS119 General Chemistry (3, 2, 4) 6**

Introductory chemistry is taught in FHS 119 General Chemistry, a one-semester course intended primarily for nutrition and dietetics majors, science majors, health sciences majors and other interested students. We have designed the course as an introduction to general chemistry that integrates laboratory explorations with the development of the analytical tools necessary to understand and guide those explorations. Our goal is to help students share our excitement and the wonder of science, to challenge to excel, to give them a sense of empowerment about science, and to encourage them to continue study in their major and apply chemistry. We intend to focus especially on what are the core ideas of chemistry. The

laboratory part of the course will let you see first-hand chemical principles and processes in action. It will also give you experience with some of the methods scientists use to do chemical research.

### **TRD151 Turkish I (2, 0, 2) 2**

This course aims to provide information about the basic features of written language and written communication, the main differences between written language and spoken language. Expression: written and oral expression; subjective expression, objective expression, paragraph, paragraph types (introductory, developmental and conclusion). Description of text and text types (informative texts, literary texts); conditions to be texts (coherence, consistency, purposeful, acceptable, situated, informative, relationships between texts). Written communication (free writing, pre-planned writing); planned stages of writing (subject, topic, purpose, point of view, the main and sub ideas, outlining, margins); informative texts (petitions, letters, news, decision, announcement / advertisement, record, report, official letters, scientific articles) on the theoretical information, studies on samples, and writing exercises, summarizing and outlining a text, written work, and correcting of expression mistakes.

### **ATA151 History of Turkish Revolution I (2, 0, 2) 2**

This course aims to provide information about concepts, definitions, definition of teaching methods and resources, the Industrial Revolution and the French Revolution, Distribution of Ottoman Empire (XIX. Century), administrative reforms, I. and II. Monarchy, Tripoli and the Balkan Wars, World War I, Armistice Armistice, Wilson's Principles, Paris Conference, M. Kemal landed at Samsun and Situation of Anatolia, Amasya Circular Order, the National Congress, Opening of the Assembly of Deputies, Parliament Foundation and Uprisings, Programming Languages Act, Structured, I. Inonu, II. Inonu, Kutahya-Eskisehir, Sakarya War and The Great Raid, Treaties during the War of Independence, the Treaty of Lausanne, abolition of the sultanate.

### **FHS113 Mathematics (3, 0, 3) 4**

This course include information about real numbers, absolute value, number axis, intervals, the plane coordinates; functions: elementary functions, graphs and transformations, linear functions, quadratic functions, polynomials and rational functions: asymptotes, exponential functions, logarithmic functions, compound interest, limit: the rate of change, slope,

derivatives and differentiation rules: chapter derivatives, chain rule, increasing - decreasing functions, L'Hospital rule, the first and second derivative tests, the graphics drawing; derivatives of logarithmic and exponential functions, the maximum - minimum problems, linear equations, matrices: addition of a matrix, Gauss-Jordan elimination method, the basic operations, square inverse of the matrix, the matrix equations, two-variable linear inequality systems: two-dimensional linear programming, geometric approach; applications.

#### **FHS121 Anatomy and Physiology I (3, 0, 3) 4**

This course include information about human anatomy, skeletal-muscle, the central system, the anatomy of the circulatory and digestive system. Examine the principles of human anatomy. Neuromuskuloskeletal system, especially the provision on the human body works. Structures based on the evaluation of the relationship between normal function. Neuroanatomy, endocrine, cardiovascular, respiratory, digestive, urinary and reproductive systems, structures and functions.

#### **FHS115 Biology of Nutrition (3, 0, 3) 5**

This course aims to provide information about biomolecules, cell structure and function, energy metabolism, cell division, structure, synthesis and functions of DNA and RNA, genetic code, protein synthesis, lipid synthesis, mutation.

#### **FHS 165 University Culture (2, 0, 2) 2**

Students are informed about project writing and management. By using this knowledge and observing their environment, they determine their own project issues, write their projects and prepare a report; Presentations, posters or conferences. Guidance and support are provided to the students during this process of building their own experiences.

#### **FHS167 Pilates (1, 2, 2) 3**

Pilates Class is an exercise system based on body control and body awareness, and Matwork Pilates consists of beginner and intermediate level cushion movements. The aim of this course is to work the whole body equally and correctly throughout the course and to support it with correct breathing techniques.

#### **FHS163 Academic Writing (2, 0, 2) 3**

Academic Writing is designed to develop and sharpen your academic and professional writing skills and strategies in English. Our global aims encompass cultivating selected print and digital literacies necessary for successful written communication in academic, professional, and workplace settings where you may interact with fellow experts in medicine and related scientific disciplines. Although the primary aim of this course involves helping you build your proficiency and confidence as a writer of English, we will also devote time and effort to improving your reading, critical reasoning, and research skills.

### **2nd Semester**

#### **NUT120 Aspects of Nutrition (3, 0, 3) 5**

The objective of the course is to introduce aspects of nutrition beyond the main concepts and principles of human nutrition. The course will discuss eating disorders, taste and gastronomy, world nutrition and hunger, food safety, sports nutrition, nutrition supplements, and an introduction of nutrition in various life stages. Upon completion of the course the student should be able to develop an understanding of other aspects of nutrition beyond basic nutrition and how physiological, psychological or social factors may exert an impact on the nutrition status of individuals or populations.

#### **FHS120 Organic Chemistry (3, 2, 4) 5**

This course include information about acids, bases, alcohols, ethers, aldehydes, ketones, esters, carboxylic acids and their derivatives, amines, amides, carbohydrates, proteins, and lipids.

#### **FHS116 Physiology of Nutrition (4, 0, 4) 6**

This course aims to provide information about cell and blood physiology, nutrition and metabolism, the nervous system, excretory, respiratory, digestive, endocrine, and reproductive physiology of systems.

#### **TRD152 Turkish II (2,0, 2) 2**

This course aims to provide information about the basic characteristics of oral language and oral communication. Oral expression; basic features of speaking skill (using natural language and body language), the basic principles of a good speech, the basic characteristics of a good

speaker (stress, intonation, pause, diction, etc.).. Unprepared and prepared speech, prepared speech (selecting a topic, purpose, point of view, the main and supporting ideas, planning, writing the text presentation of the speech). Types of speech: (dialog, conversation, introducing yourself, answering questions, celebrate an important event such as new year, birthday, to, festival, etc., giving directions, talking on the phone, asking for a job, interview, radio and television speech, culture, participate in arts programs as a speaker, etc.). Unprepared speech on different topics, studies on samples of speech and oral expression practices, correcting of speech and expression mistakes.

### **FHS114 Introduction to Biochemistry (3, 0, 3) 5**

This course aims to provide the students with an understanding of the key concepts and aspects of biochemistry. The organization of life, biomolecules, the DNA, DNA replication and cell division, transcription, translation, protein synthesis will be discussed. Students should know the various structures and processes involving the DNA, RNA, cellular organelles. Particularly they need to know and understand how DNA replication, cell division, transcription, translation, protein synthesis occur and how are these processes regulated.

### **FHS110 Medical Biology and Genetics (2, 0, 2) 2**

The purpose of medical biology and genetics is to educate people who can understand the association between biologic cases and the molecular mechanisms of diseases as well as use this knowledge in diagnosis and treatment; and scientists who can perform basic/applied scientific research.

### **FHS124 Anatomy and Physiology II (3, 0, 3) 4**

Anatomy and Physiology II is the second part of a two course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive.

### **ATA152 History of Turkish Revolution II (2, 0, 2) 2**

This course aims to provide information about concepts, definitions, definition of teaching methods and resources, the Industrial Revolution and the French Revolution, Distribution of Ottoman Empire (XIX. Century), administrative reforms, I. and II. Monarchy, Tripoli and the Balkan Wars, World War I, Armistice Armistice, Wilson's Principles, Paris Conference, M. Kemal landed at Samsun and Situation of Anatolia, Amasya Circular Order, the National Congress, Opening of the Assembly of Deputies, Parliament Foundation and Uprisings, Programming Languages Act, Structured, I. Inonu, II. Inonu, Kutahya-Eskisehir, Sakarya War and The Great Raid, Treaties during the War of Independence, the Treaty of Lausanne, abolition of the sultanate.

### **NUT162 Phytotherapy and Functional Foods (2, 0, 2) 3**

This course aims to provide the health benefits of functional foods beyond the basic nutrient requirements. These benefits improve the quality of life by promoting optimal health and reducing the risk of chronic diseases. This course will teach the components of functional foods and highlight key mechanisms that may counteract current health issues and diseases. This course aims to provide knowledge on the utilization of plants as sources of traditional medicines by various indigenous cultures; provide knowledge on popular medicinal plants and their biological effects; provide knowledge on pharmaceuticals derived from plants; provide knowledge on functional foods and herbal supplements used as non-pharmacologic treatments for common self-treatable ailments.

### **FHS126 Nutrition Ecology (2, 0, 2) 3**

The objective of the course is to discuss contemporary issues of nutrition with a special emphasis on the nutrition landscape in Turkey through reading of articles for generally educated audience.

### **FHS164 Medical Terminology (3, 0, 3) 3**

This course aims to introduce the language of medicine to the students. Students will have an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the body as a whole. Students will learn identifying the basic structure of medical words, including prefixes, suffixes, roots, combining forms, and plurals; identifying medical terminology as it relates to the anatomy and physiology of the human

body; identifying the rules of building medical terms and a connection between the term and its relationship to anatomy and physiology. In addition to medical terms, common abbreviations applicable to each system will be interpreted.

### **FHS166 Yoga (0, 2, 2) 2**

The aim of the course is to enable students to learn about the history of yoga, its philosophy, yoga asanas and types of yoga, and to practice yoga.

### **FHS118 Information Technologies and Applications (2, 0, 2) 2**

This course aims to provide information about computer use, spreadsheets, database and presentation programs and new programs.

### **FHS168 Pilates II (1, 2, 2) 3**

Pilates II Class is an exercise system based on body control and body awareness, and Matwork Pilates consists of beginner and intermediate level cushion movements. Specifically, this course offers a basic understanding of the concepts of alignment, centering, breathing, balancing, mobilization and balance.

## **2nd YEAR**

### **3rd Semester**

### **FHS211 General Microbiology (2, 2, 3) 5**

This course aims to provide information about introduction to microbiology, the structure of micro-organisms, cell structure of bacterias, reproduction and development of bacteria, microbial flora, sterilization, disinfection, examination of cultures, introduction of Immunology, serological reactions, hypersensitivity reactions. In this lecture it has been aimed to taught both theoretical and practical information about microorganisms and ability to making synthesis with other lectures. By learning terminology of microbiology, structures of microorganisms and their relations with environment and each other, and the importance of food-borne infectious diseases students will correlate this basic informations with knowledge of food microbiology.

**NUT201 Nutritional Biochemistry I (3, 0, 3) 4**

This course includes information about carbohydrates, proteins, fats, vitamins and minerals in the body functions and metabolisms, biochemical changes of state of deficiency and excess.

**NUT209 Nutrition Training and Consultancy (2, 1, 3) 5**

This course is designed to improve students' nutrition education, communication and presentation skills. Individual learning and behavioral theories, behavioral modification techniques, motivational strategies and analysis, and implementation of cognitive behavioral strategies, which include and discussion about evaluation of individual learning and behavioral theories. Also this course provides information about the development and implementation of nutrition-related brochures and presentations.

**FHS217 Introduction to Psychology (2, 0, 2) 4**

This course provides information about critical thinking, research methods, life-long development, learning, personality, social psychology, stress, health psychology, abnormal behavior.

**NUT211 Food Chemistry and Food Analysis (3, 2, 4) 6**

This is an integrated lecture/lab course applying theories of molecular reactivity to model food systems. Lectures focus on the molecular bases of chemical phenomena that dictate the behavior of foods. Laboratories and recitations provide opportunities for students to observe, manipulate, and explore model food systems. The emphasis is on the major food components (water, lipids, proteins, and carbohydrates) and their behavior under conditions of particular relevance to food processing.

**NUT219 Nutrigenetics (3, 0, 3) 3**

This course focuses on nutrigenomics, the effect of diet on gene expression, and nutrigenetics, how genetic differences affect nutrient uptake and metabolism. It combines instructor and student led presentations focused on how diet and underlying genetics interact to affect molecular phenotypes and ultimately susceptibility to disease. Besides, it is designed to provide the student with an understanding of the fundamental concepts involved in how nutrients regulate gene expression (nutrigenomics) and how an individual's genotype influences their nutrient requirements (nutrigenetics). Upon completion of this course, the



student should be able to integrate and discuss the role of macro and micronutrients in the regulation of gene expression, analyze how an individual's genotype may influence their nutritional requirements and be involved in the development of chronic disease and synthesize the multiple roles that dietary.

#### **NUT221 Chronic Disease Research (2, 0, 2) 2**

The students will acquire basic knowledge on the main chronic diseases (type II diabetes, hypertension, cancer, kidney disease, liver disease, obesity and metabolic syndrome, osteoporosis, Alzheimer's disease and dementia, heart disease and atherosclerosis), the relation of diet and nutrition with chronic diseases, as well as related research.

#### **FHS215 Statistics (2, 0, 2) 2**

This course designed to improve understanding how economy and business problems can be solved by probability and basic statistics concepts. Students get ability for edit data, control variables, sort results and investigate events with using istatistics methods.

#### **FHS267 Advanced Pilates (1, 2, 2) 3**

Advanced Pilates Class is an exercise system based on body control and body awareness, and Matwork Pilates consists of beginner and intermediate level cushion movements. Specifically, this course offers a basic understanding of the concepts of alignment, centering, breathing, balancing, mobilization and balance.

### **4th Semester**

#### **NUT202 Food Microbiology and Food Safety (3, 2, 4) 6**

This course include information about bacteria and other microorganisms, microbial flora, disinfection, sterilization, diseases that occur through the food, preparing food and beverages and the importance of microorganisms in the production, HACCP.

### **NUT206 Nutritional Biochemistry II (3, 0, 3) 4**

This course aims to provide information about Water and electrolyte balance, hormones, metabolic changes during fasting and satiety. Examines the biochemical and physiological bases of human nutritional requirements. Uses an integrated approach to cover the digestion and metabolism of nutrients following the ones that covered during nutritional biochemistry I (ie: vitamins, and minerals). Metabolic and chronic diseases related to nutrition are discussed throughout the semester. Discussion sections and problem sets provide an opportunity to examine in greater depth selected topics from lecture.

### **NUT218 Menu Planning (3, 0, 3) 4**

This course aims to introduce main issues such as food and beverage management, and gastronomy, and the definition of the concept of the menu, menu types, age groups and occupations unique to the menu planning, menu planning for disease, characteristics of the menu cards, content of menu, place of business enterprises of menu cards and content and pricing for the menus.

### **NUT228 Food Service Management (3, 0, 3) 4**

This course aims to provide information about the classification of enterprises in food and beverage services, department organization of food and beverage, food procurement, acceptance, storage and manufacturing, service methods of food and beverage, the new catering systems, food and beverage cost control.

### **NUT226 Kitchen Training in Nutrition Science (2, 2, 3) 5**

Food groups and their main properties, nutrients found in these food groups, changes occurring during preparation and cooking in carbohydrates, protein, fats and vitamins, national and international terms used in food preparation and cooking, manners in serving and eating foods, dishes made by meat group, milk group, vegetables and fruits group, and cereals and their basic cooking principles.

### **NUT212 Lifecycle Nutrition (2, 0, 2) 3**

This course entails the study of physiology and special nutritional needs throughout the lifecycle. Nutritional requirements for growth, development, maintenance and optimal health

during pregnancy, lactation, infancy, childhood, adolescence, adult age and the elderly are discussed accordingly.

### **NUT216 Sports Nutrition (3, 0, 3) 3**

This course presents the foundations for sports nutrition and covers general areas of sports nutrition with an emphasis on energy metabolism during exercise. The role and importance of nutrients and supplements are discussed in the light of physiological demands of exercise. Nutritional goals of athletes during training and competition in various sports and dietary strategies towards these goals are presented.

### **NUT262 Nutrition and Cancer (2, 0, 2) 3**

This course, defined cancer and the food and explained the evolution of food and people. Basic information about the causes of cancer and foods which prevent the cancer. Cancer and cancer formation, clinic, treatment, nutritional applications in cancer patients, nutrient and nutrient element, effects of nutrient components on cancer formation and process, nutritional support products used in cancer patients, nutritional carcinogens.

### **NUT268 GIS Pathology (2, 0, 2) 2**

This course focuses on Gastro Intestinal system to understand structures, biochemical aspects, physiological functions, pathological disorders, microbial, parasitic and viral infections and pharmacological requirements for treatment of gastro-intestinal diseases. In addition, Clinical aspects of gastrointestinal diseases will be introduced to students.

### **NUT224 Culture of Turkish and World Cuisines (2, 2, 3) 4**

This course explores countries and regions, cultures, and ingredients, and describes the crucial role they play in different world cuisines. This comprehensive and engaging course gives students an introductory knowledge of food cultures from five continents. Based on progressive trends, this course is designed to develop and sharpen fundamental knowledge of international cuisines. Emphasis will be on sustainability and how locally grown foods enhance cuisines. This course covers the history and geography of cuisine, and people alongside recipes and cooking techniques. Detailed ingredients lists and culinary glossaries for each country or region discussed.

### **3rd YEAR**

#### **5th Semester**

##### **FHS311 Community and Health (3, 0, 3) 4**

Introduction to course, definition of content and expectations, health promotion and basic principles of health education, the importance of community participation in health programs, determination of community necessities and steps in developing education and training programs, determining the strategies to rise society awareness in general health and nutrition, basic principles in child and adolescent education, basic principles in adult education, educational principles, methods and materials used in education and training, interpersonal communication, empathy and emotional awareness.

##### **NUT301 Medical Nutrition in Adult Disorders I (3, 0, 3) 4**

This course aims to examine the biochemical and physiological bases of human metabolic and other disease conditions. Based on the understanding of the pathophysiology of the disease and the metabolic deregulation the nutritional needs are assessed and diets are designed and proposed. Case studies are used as an application tool. Students should know and understand the main principles of metabolism in the context of diseases. Understanding of key-nodes and the rationale of metabolic regulation and how this changes while under the different disease condition is a goal of the course. Students should based on their knowledge and understanding be able to propose dietary schemes suitable to the patients.

##### **NUT311 Food Sanitation (3, 0, 3) 5**

This course aims to provide information about biological and chemical hazard in food that result from improper processing, packaging, handling and storage; cleaning of food production equipment and facilities including characteristics of soil on equipment surfaces, cleaning compounds, clean-in-place, clean-out-of-place, sanitizers and their characteristics, and GMPs. Also purposes of this course integrate concepts in chemistry, organic chemistry, and biochemistry, with food processing sanitation and safety operations and understand their role in processing of food, gain the ability to think critically about problems and issues in food processing, gain an understanding of food hygiene, sanitation, and safety during food processing.

### **NUT305 Maternal and Child Nutrition (3, 0, 3) 5**

This course discusses adequate and balanced nutritional status and nutritional deficiencies by the mother during childhood. Nutritional requirements for various pediatric diseases and conditions are discussed. Students should be aware of dietary considerations in various pediatric diseases and conditions.

### **FHS319 Scientific Research Methodologies and Techniques (3, 0, 3) 5**

The main purpose of this course is to give information about Research Methods and Data Analysis. The course is to introduce students to quantitative and qualitative methods for conducting meaningful inquiry and research. This course will be designed to enable students to meet the following final terminal learning objectives. Act as an educated consumer of data, Prepare a preliminary research design for projects in their subject matter areas Accurately collect, analyze and report data Present complex data or situations clearly Review and analyze research findings that affect their agency.

### **NUT307 Nutritional Assessment (2, 0, 2) 3**

This course entails the study of perform nutritional assessment considering dietary, anthropometric, biochemical, clinical and environmental factors. Also students should be able to assess the nutritional status of an individual, while using appropriate tools, and make appropriate nutritional recommendations.

### **FHS315 General Business (2, 0, 2) 3**

This course aims to provide information about learning general information how to start and manage a company, having information about management functions and departments. Learn how to start and manage a company. Learning outcomes are know relations between business and other sciences, creating new goals for companies, decide new investments and their place. Learn how to plan, organize, lead, coordinate, control a business. Have information about departments of business.

### **FHS317 Entrepreneurship I (3, 0, 3) 3**

This course will provide students with different aspects and methods of entrepreneurship at the local, national, international and sectoral level in entrepreneurship, innovativeness and creativity techniques, leadership behaviors and methods, and use skills.

### **FHS361 Food and Drug Interactions (2, 0, 2) 2**

The aim of this course is to interfere with other drugs or nutrients due to misuse or careless use of medicines used for therapeutic purposes, or to prevent the effects of being more effective than desired. The aim of this course is to provide the students with the definition, types, pharmacokinetics, pharmacodynamics, the mechanisms of interaction of drugs with nutrients, bioactive components in nutrients, nutrients that accelerate / slow down and increase / decrease the activity of the drug and their effects.

### **NUT321 Nutritional Immunology (3, 0, 3) 3**

Student has basic informations about structure and function of immune system and knows its connection with nutrition. Student knows significance of nutrition on immune system as well as on pathologic status caused by incorrect immune function.

## **6th Semester**

### **FHS312 Community Nutrition and Education (3, 0, 3) 4**

The aim of the course; content definitions and expectations, promotion and development of health and the basic principles of health education, the importance of participation in community health programs, the identification of social needs and the development of education and training programs, and the identification of strategies to increase community awareness in general. It also aims at creating health and nutrition, basic principles in child and adolescent education, basic principles in adult education, educational principles, methods and materials used in education and training, interpersonal communication, empathy and emotional awareness.

### **NUT302 Medical Nutrition in Adult Disorders II (3, 0, 3) 4**

This course aims to examine the biochemical and physiological bases of human metabolic and other disease conditions. Based on the understanding of the pathophysiology of the disease and the metabolic deregulation the nutritional needs are assessed and diets are designed and proposed. Case studies are used as an application tool. Students should know and understand the main principles of metabolism in the context of diseases. Understanding of key-nodes and the rationale of metabolic regulation and how this changes while under the different disease

condition is a goal of the course. Students should based on their knowledge and understanding be able to propose dietary schemes suitable to the patients.

### **NUT304 Quality Systems and Legal Regulations About Food (2, 0, 2) 3**

This course include information about methods of quality control and management in food processing; total quality control management, HACCP, ISO 9000 and 14,000 series, OHSAS 18000 series control of raw materials, process and finished products; sampling, evaluation of sensory properties and other factors. Also this course provides to information about the principles of management systems directed towards the control of food quality. Recognize food laws and regulations governing the quality of foods. Develop procedures and approaches to identify food safety hazards in food processing. Apply preventive measures and control methods to minimize microbiological hazards and maintain quality of foods. Identify the wide variety of parameters affecting food quality. Develop quality control strategies.

### **NUT306 Nutrition in Child Disorders (3, 0, 3) 4**

This course entails the study of physiology and special nutritional needs during childhood. Nutritional requirements for various pediatric diseases and conditions are discussed accordingly. Students should become familiar with nutrition considerations in various pediatric diseases and conditions.

### **FHS314 Public Health Training- Epidemiology (0, 6, 4) 4**

Epidemiology for Public Health is a core course in the MPH program. The course is designed to introduce students to the concepts of epidemiological methods and their practical applications in the understanding of determinants and distributions of health related events. The course will cover basic principles of epidemiology, including disease control and analysis of risk factors. Topics will include the history of epidemiology, types of epidemiologic studies, including cross-sectional, case-control, and cohort studies, and risk estimation and causal inferences. The course will demonstrate the interphase between epidemiology and policy development. Problem sets will provide experience in epidemiologic methods and inferences.

**NUT308 Nutrition Seminar (2, 0, 2) 2**

The main objective of the course is to present the students with a variety of issues and topics in the fields on food and nutrition. Discuss issues including food availability, food politics, non-communicable disease and obesity.

**NUT352 Internship (1, 4, 3) 4**

This course covers the internship of the summer term, observing students in special hospitals, public hospitals, diet consultation centers, clinics, schools and community health centers where dietitian actively takes part. Students gain skills in general and special nutrition.

**FHS318 Entrepreneurship II (3, 0, 3) 3**

This course will provide students with different aspects and methods of entrepreneurship at the local, national, international and sectoral level in entrepreneurship, innovativeness and creativity techniques, leadership behaviors and methods, and use skills.

**NUT316 Ethics (2, 0, 2) 3**

The concept of ethics and existing theories; nutrition and dietetics education and application of appropriate behaviors in ethical rules in practice; dietitians' responsibilities towards society, patients and clients, colleagues and other professional groups, and behaviors deemed to be ethical.

**NUT310 Pharmacology and Toxicology (3, 0, 3) 3**

Overview of drugs, autonomic nervous system drugs, central nervous system drugs, cardiovascular system drugs, respiratory system drugs, histamine and antihistamines, digestive system drugs, vitamins, effective drugs for endocrine system, diuretics and drugs that regulate water-electrolyte balance, antibiotics, antiseptics, antiparasitic medicines, anticancer medicines, drug abuse and drug dependence, acute intoxications and treatment methods. At the same time, toxic compounds that are transmitted to food from outside recognize the nutrients that cause food allergies, the symptoms that the human body shows against toxic compounds, and ways of protecting them from food toxicities.

**NUT364 Medical Nutrition Therapy in Bariatric Surgery (2, 0, 2) 3**



This lecture aims to provide the knowledge and experience in evidence based practice in bariatric surgery, with a focus on nutrition assessment and education, medical nutrition therapy, managing complications and long-term outcomes. Students will gain knowledge about Pre- and post-operative nutrition management; macro- and micro-nutrient concerns and management; specific issues to consider for Adjustable Gastric Band, Sleeve Gastrectomy, Roux-en Y Gastric Bypass, and Omega Loop Gastric Bypass; nutritional care and management of critical illness, and for special populations; nutrition counselling.

### **FHS362 Occupational Health and Safety (2, 0, 2) 3**

This course aims to provide the study of workplace occupational health and safety. The students will have knowledge about safe work practices in offices, companies, hospitals, catering companies, kitchens, food and beverage production areas as well as how to identify and prevent or correct problems associated with occupational safety and health in these locations as well as in the home. This course also required for the internship programs for the students.

## **4th YEAR**

### **7th Semester**

#### **NUT405 Term Project I**

It covers the projects to be prepared during the period. The student acquires skills in research and presentation techniques by conducting clinical research, questionnaire and compilation publication studies in different fields.

#### **NUT407 On-The-Job Training I**

This course covers the professional training of students. Gain experience in patient diagnosis and evaluation, diet planning, patient follow-up, kitchen service management.

## **8th Semester**

### **NUT406 Term Project II**

It covers the projects to be prepared during the period. The student acquires skills in research and presentation techniques by conducting clinical research, questionnaire and compilation publication studies in different fields.

### **NUT408 On-The-Job Training II**

This course covers the professional training of students. Gain experience in patient diagnosis and evaluation, diet planning, patient follow-up, kitchen service management.