REPUBLIC OF TÜRKİYE
ISTANBUL YENI YUZYIL UNIVERSITY
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF NUTRITION AND DIETETICS

COURSE CONTENTS

The headlines referring: Course Code Course Name (hours of theoretic course, hours of practice, credit, ECTS)

1ST SEMESTER

NUT103 Nutrition Principles and Practices I (3, 2, 4, 6)
This course examines the fundamental principles of nutrition within the framework of Nutrition Science with the aim of supporting individuals' lifelong health, and features content that reinforces theoretical knowledge through practical application. The course examines firstly the food groups and their nutrient content in detail, then the functions of macronutrients and micronutrients, energy balance, the principles of adequate and balanced nutrition, and the nutritional needs of different age groups; in the practical section, students develop their food preparation and evaluation skills through various analyses and hands-on exercises that demonstrate how the nutritional content and functions of foods change depending on cooking, storage, and processing methods.

NUT105 General Chemistry (3, 2, 4, 4)
Introductory chemistry is taught in General Chemistry, a one-semester course intended primarily for nutrition and dietetics majors, science majors, and health sciences majors. This course designed 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.

NUT107 Biology of Nutrition (3, 0, 3, 4)
This course aims to provide a comprehensive understanding of the fundamental principles of nutrition biology by exploring biomolecules, cell structure and function, the extracellular matrix, adhesion molecules, and membrane transport mechanisms. It further examines how these components contribute to energy metabolism and the regulation of physiological processes. The roles of hormones, vitamins, and minerals are discussed in detail, emphasizing their importance in maintaining homeostasis and supporting overall health. From a nutrition and dietetics perspective, the course also highlights the relationship between these biological systems and dietary intake, enabling students to understand how nutrients influence cellular functions and metabolic pathways, and to apply this knowledge in the development of evidence-based nutritional strategies for health promotion and disease prevention.

NUT109 Anatomy and Physiology I (3, 0, 3, 3)
This course includes information about human anatomy, skeletal-muscle, the central system, the anatomy of the circulatory and digestive system. The course examines the principles of human anatomy; neuromuskuloskeletal system, especially the provision on the human body working; structures based on the evaluation of the relationship between normal function; neuroanatomy, endocrine, cardiovascular, respiratory, digestive, urinary and reproductive systems, structures and functions.

TRD151 Türk Dili 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). Descriptipn 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 Atatürk İlkeleri ve İnkılap Tarihi 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.

NUT111 Medical Terminology (2, 0, 2, 3)
This course aims to introduce the language of medicine and health 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 to identify the basic structure of medical words including prefixes, suffixes, roots, combining forms, and plurals. They will also be able to identify medical terminology as it relates to the anatomy and physiology of the human body. In addition to medical terms, common abbreviations applicable to each system will be interpreted.

NUT113 Nutrition Ecology (2, 0, 2, 3)
This course examines the reciprocal relationship between nutrition and the environment from the perspective of Nutrition Ecology and Sustainability. The course examines the environmental impacts of food production and consumption processes, sustainable nutrition models, food waste, natural resource use, the relationship between climate change and nutrition, and the concept of the ecological footprint; it also presents strategies and practical examples for developing environmentally friendly nutrition habits at both the individual and societal levels.

NUT115 Community Nutrition and Education (2, 0, 2, 3)
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.

NUT123 Mathematics (2, 0, 2, 3)
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.

2ND SEMESTER

NUT104 Nutrition Principles and Practices II (3, 2, 4, 6)
This course aims to provide a detailed understanding of nutrition and to establish connections between nutrition and other fields such as sports and age, while teaching students to identify and solve nutrition-related problems through topic discussions and case studies. Instruction is delivered through lectures and laboratory practices, and assessment is based on midterm and final examinations. The course covers topics including food, nutrition, and health; vitamins; minerals; energy balance; healthy nutrition; dietary guidelines; nutrition in special conditions; eating disorders; and the relationship between physical activity and nutrition, with integrated case studies to reinforce learning. Laboratory sessions provide hands-on experience in food preservation methods, bread-making with different flours, low-calorie meal preparation, vegetarian/vegan meals, ketogenic diet meals, and iron-enriched dishes.

NUT106 Organic Chemistry (3, 2, 4, 4)
This one-semester course is an integrated lecture and laboratory course designed for nutrition and dietetics students, consisting of theoretical instruction alongside a weekly two-hour laboratory component. It introduces the fundamental principles of organic chemistry, focusing on carbon-containing compounds, including their three-dimensional structures, chemical properties, reaction mechanisms, synthesis, and methods of structural identification. The course emphasizes the relevance of organic chemistry to health by highlighting biologically important molecules and their functions in the human body. Through both lectures and hands-on laboratory experiments, students reinforce core concepts while gaining practical experience in experimental techniques and scientific inquiry. The course also aims to develop problem-solving, critical thinking, and analytical skills, enabling students to apply organic chemistry concepts to real-world and health-related contexts.

NUT108 Medical Biology and Genetics (2, 0, 2, 4)
The aim of this course is to provide students with basic knowledge of molecular biology and genetics and to help them understand the molecular basis of diseases. The course includes the structure and function of DNA and RNA, DNA replication, transcription, translation, and gene expression. It also covers genetic mutations, inheritance patterns, chromosomal abnormalities, and hereditary diseases.

NUT110 Anatomy and Physiology II (3, 0, 3, 3)
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.

TRD152 Türk Dili 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.

ATA152 Atatürk İlkeleri ve İnkılap Tarihi 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.

NUT112 Psychology (2, 0, 2, 3)
This course provides a comprehensive introduction to the core concepts of psychology, including critical thinking and scientific research methods used to understand human behavior and mental processes. It explores life-span development, examining how individuals grow and change from infancy to old age, as well as key principles of learning and personality theory. The course also covers social psychology, focusing on how individuals think, feel, and behave in social contexts. In addition, it addresses topics such as stress and coping mechanisms, health psychology, and the psychological factors influencing physical well-being. Overall, the course aims to help students develop a deeper understanding of human behavior and apply psychological knowledge to everyday life and professional practice.

NUT114 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.

NUT116 Culture of Turkish and World Cuisines (2, 0, 2, 3)
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.

NUT118 Ethics (2, 0, 2, 3)
This course introduces the fundamental concepts of ethics and major ethical theories, with a specific focus on their application in health, nutrition, and dietetics practice. It examines ethical principles such as autonomy, beneficence, non-maleficence, and justice, and how they guide decision-making in clinical and community nutrition settings. The course emphasizes appropriate professional behaviors in nutrition and dietetics education and practice, highlighting the importance of confidentiality, informed consent, cultural sensitivity, and evidence-based recommendations. It also explores dietitians' ethical responsibilities toward society, patients and clients, colleagues, and other healthcare professionals, particularly in promoting public health, preventing disease, and supporting sustainable and equitable food systems. Through case-based discussions, students develop the ability to recognize ethical dilemmas and apply ethical reasoning to ensure responsible, patient-centered, and professional conduct in diverse health and nutrition contexts.

3RD SEMESTER

NUT201 Nutritional Biochemistry I (3, 0, 3, 4)
NUT201 introduces students to the fundamental building blocks of life by examining amino acids and proteins, and how their structures shape their diverse biological roles. The module distinguishes between globular and fibrous proteins, helping learners appreciate how form and function are tightly linked in living systems. Enzyme kinetics and bioenergetics are explored in a practical, intuitive way, setting the stage for understanding how cells manage energy. Core metabolic pathways—including glycolysis, the Krebs cycle, oxidative phosphorylation, gluconeogenesis, and glycogen metabolism—are presented as interconnected processes rather than isolated reactions. The course concludes with an accessible look at how the body handles different carbohydrates, from simple monosaccharides to common dietary disaccharides, grounding students in the essentials of metabolic biochemistry.

NUT203 General Microbiology (2, 2, 3, 4)
This course and laboratory section begins by explaining the fundamental concepts of microbiology, primarily covering the structure, classification, and basic characteristics of microorganisms, and build upon this foundation to explore topics related to nutrition science. While the course examines the characteristics, growth conditions, and metabolism of bacteria, viruses, yeasts, and molds, the laboratory component involves analyses and hands-on experiments focused on the role of microorganisms in food, fermentation processes, and the concepts of probiotics and prebiotics, as well as the microbial evaluation of foods, thereby demonstrating the practical relationship between nutrition and microbiology.

NUT205 Physiology of Nutrition (3, 0, 3, 4)
This course aims to provide a comprehensive understanding of the physiological mechanisms underlying human nutrition by examining cell and blood physiology alongside the processes of nutrition and metabolism. It covers the structure and function of major body systems, including the nervous, excretory, respiratory, digestive, endocrine, and reproductive systems, with an emphasis on how these systems interact to maintain homeostasis. The course explores the regulation of food intake, digestion and absorption of nutrients, nutrient transport, and their utilization at the cellular level. Additionally, it highlights the role of hormones and neural control in coordinating metabolic responses to different nutritional states. From a nutrition and dietetics perspective, the course also addresses how physiological functions are influenced by dietary patterns and how disruptions in these systems may contribute to disease, enabling students to better understand the integration of nutrition in health promotion and clinical practice.

NUT207 Food Chemistry and Food Analysis (3, 2, 4, 5)
This course examines the chemical structure of foods in detail within the scope of Food Chemistry, analyzing the structure, function, and interactions of nutrients (carbohydrates, proteins, fats, vitamins, and minerals) individually. The course content evaluates the effects of these components on food quality, flavor, shelf life, and nutritional value; in the practical section, various laboratory techniques are used within the framework of Food Analysis to conduct hands-on exercises involving the quantification of nutrients, the identification of chemical changes, and the analysis of foods.

NUT231 Food Service Systems I (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.

NUT217 Food Preparation and Nutrition (2, 0, 2, 3)
This course focuses on the principles and practices of food preparation in relation to nutritional value, food safety, and health promotion. It covers basic cooking methods, food selection, storage, and processing techniques, emphasizing how these factors influence the nutrient composition and quality of foods. The course explores the effects of different preparation methods on macro- and micronutrients, as well as strategies to preserve nutritional value during cooking. In addition, it addresses food hygiene, sanitation, and safety standards to prevent foodborne illnesses. From a nutrition and dietetics perspective, students learn to plan and prepare balanced, culturally appropriate, and sustainable meals for individuals and groups with varying nutritional needs. The course also highlights practical skills in recipe modification and healthy menu planning to support overall well-being and disease prevention.

NUT225 Life Cycle Nutrition (2, 0, 2, 3)
This course entails a comprehensive study of physiological changes and specific nutritional requirements throughout the human lifecycle. It examines the role of nutrition in supporting growth, development, maintenance, and optimal health during key stages, including pregnancy, lactation, infancy, childhood, adolescence, adulthood, and older age. The course emphasizes how nutrient needs vary across life stages due to changes in metabolism, hormonal balance, and physiological function. It also explores the impact of nutritional status on maternal and child health, growth patterns, cognitive development, and healthy aging. In addition, factors such as lifestyle, culture, socioeconomic conditions, and disease risk are considered in the evaluation of dietary needs. From a nutrition and dietetics perspective, students gain the ability to assess nutritional requirements and develop age-appropriate, evidence-based dietary strategies to promote health and prevent nutrition-related disorders across the lifespan.

NUT227 Chronic Disease Research (2, 0, 2, 3)
This course provides students with a comprehensive understanding of the major chronic diseases, including type II diabetes, hypertension, cancer, kidney and liver diseases, obesity and metabolic syndrome, osteoporosis, Alzheimer's disease and dementia, as well as cardiovascular diseases such as heart disease and atherosclerosis. It explores the etiology, risk factors, and pathophysiological mechanisms underlying these conditions, with a particular emphasis on the role of diet and nutrition in their development, prevention, and management. The course examines current scientific evidence on the relationship between dietary patterns, nutrient intake, and chronic disease outcomes. In addition, students are introduced to fundamental research methods used in nutrition and health sciences, including study design, data interpretation, and critical evaluation of scientific literature. Through a nutrition and dietetics perspective, the course aims to develop students' ability to apply evidence-based knowledge in designing nutritional strategies and interventions to reduce the risk and progression of chronic diseases and to promote long-term health.

NUT229 Nutrigenetics (2, 0, 2, 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

4TH SEMESTER

NUT206 Nutritional Biochemistry II (3, 0, 3, 4)
NUT206 looks at how the body handles lipids, amino acids, and nucleotides, paying attention to the real-world situations in which these pathways speed up, slow down, or shift direction. The module highlights how hormones such as insulin and glucagon guide these metabolic choices and how the fed–fast cycle shapes everyday physiology. Students explore the biochemical roots of conditions like diabetes and obesity, connecting molecular events to clinical outcomes in a clear and intuitive way. The essential roles of vitamins are discussed with a focus on how deficiencies or excesses disrupt metabolic balance. Throughout the term, learners work with case discussions and practice questions that help them make sense of metabolism as a living, integrated system rather than a set of isolated pathways.

NUT220 Food Microbiology and Food Safety (3, 2, 4, 5)
This course comprehensively examines the relationship between food safety and food quality by addressing the types of microorganisms found in food, their growth conditions, and their effects on human health from the perspectives of Food Microbiology and Nutrition Science. Instruction is delivered through lectures and laboratory practices, and assessment is based on midterm and final examinations. The course details the sources of microorganisms (soil, water, air, humans, and equipment), routes of contamination in food, cross-contamination, pathogenic microorganisms, and foodborne illnesses; it also addresses the impact of hygiene, sanitation, and proper storage conditions on the preservation of nutritional value. In the practical section, students develop practical skills in microbiological analysis techniques, identifying contamination risks, sampling methods, and ensuring safe food consumption.

NUT240 Kitchen Training in Nutrition Science (2, 2, 3, 4)
Food groups and their main properties, nutrients foud in these food groups, changes occuring 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.

NUT230 Food Technology (3, 0, 3, 4)
This course provides fundamental knowledge of food as a material for nutrition, with a focus on the relationship between nutrition and food science and technology. It introduces students to the physical and chemical properties of foods, including water activity, and examines how these properties influence food quality, safety, and functionality. The course explores key food processing techniques such as thermal processing, preservation methods (both chemical and non-thermal), and packaging systems. In addition, students gain insight into the differences between raw materials and processed foods, as well as the principles of food science underlying these transformations. The course also covers major sectors of the food industry, including dairy, cereals (bread and pasta), fruits and vegetables, meat, poultry and fish, beverages (including juices and fermented drinks), fats and oils, and confectionery products such as chocolate, jam, and tea. Emphasis is placed on understanding processing technologies, product characteristics, and their applications within the food industry.

NUT232 Food Service Systems II (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.

NUT234 Functional Foods (2, 0, 2, 3)
This course provides a comprehensive overview of functional foods, nutraceuticals, and natural health products, focusing on their roles in promoting health and preventing disease. It introduces the concept of functional foods with an emphasis on the efficacy and safety of bioactive ingredients, alongside the regulatory frameworks and standards of evidence required for health claims. The course covers a wide range of topics including dietary supplements and their health benefits; bioactive components such as carbohydrates, peptides, fats, and micronutrients; and the role of probiotics, prebiotics, and synbiotics. Students will also explore the health-promoting properties of fruits, vegetables, spices, and bee products, as well as various examples of functional foods and their applications. Additionally, the course highlights the importance of clinical evidence in establishing ingredient–disease relationships and examines key market determinants shaping the functional food industry.

NUT264 Nutrition and Cancer (2, 0, 2, 3)
This course provides an in-depth exploration of the relationship between nutrition and cancer, focusing on how dietary factors influence cancer risk, development, progression, and patient outcomes. It examines the role of macronutrients, micronutrients, bioactive compounds, and dietary patterns in carcinogenesis and tumor growth, as well as mechanisms such as oxidative stress, inflammation, and hormone regulation. The course also addresses the nutritional challenges faced by cancer patients, including malnutrition, treatment-related side effects, altered metabolism, and immune system support. From a nutrition and dietetics perspective, students learn to assess nutritional status, develop individualized dietary interventions, and implement evidence-based strategies for cancer prevention and supportive care. Additionally, the course highlights current research findings, clinical guidelines, and practical approaches for promoting optimal nutrition before, during, and after cancer treatment, emphasizing the integration of nutrition into comprehensive cancer care.

NUT236 Pharmacology and Toxicology (2, 0, 2, 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.

NUT238 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. Learning outcomes are known relations between business and other sciences, creating new goals for companies; deciding new investments and their place; learning how to plan, organize, lead, coordinate, and control a business; having information about departments of business.

5TH SEMESTER

NUT333 Medical Nutrition in Adult Disorders I (3, 2, 4, 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.

NUT303 Nutritional Problems in Public Health – Epidemiology (3, 0, 3, 4)
This course provides an overview of major nutritional problems within the field of public health and their epidemiological foundations. It covers the historical development, definitions, and core concepts of public and community health, along with behavioral, environmental, and social factors affecting health. Key topics include basic epidemiology, malnutrition, obesity, chronic diseases, geriatric nutrition, oral health, occupational health and safety, and the control of communicable and non-communicable diseases. The course also addresses the roles and responsibilities of community dietitians, health planning and organization, and international health policies, enabling students to understand and manage public health nutrition issues at a population level.

NUT309 Nutritional Assessment (3, 0, 3, 4)
This course provides an in-depth study of methods and principles for assessing nutritional status, incorporating dietary, anthropometric, biochemical, clinical, and environmental factors. Students learn to systematically evaluate nutrient intake, body composition, growth patterns, biochemical markers, clinical signs of nutrient deficiencies or excesses, and the impact of socioeconomic and environmental conditions on nutritional health. The course emphasizes the use of validated tools and techniques for collecting, analyzing, and interpreting nutritional data, including dietary surveys, food frequency questionnaires, 24-hour recalls, anthropometric measurements, and laboratory tests. From a nutrition and dietetics perspective, students gain practical skills in identifying at-risk populations, assessing individual and group nutritional needs, and developing evidence-based dietary recommendations. Additionally, the course highlights the integration of assessment findings into personalized nutrition care plans, public health interventions, and strategies for disease prevention and health promotion. Through case studies and applied exercises, students develop critical thinking and problem-solving skills necessary for accurate nutritional evaluation and professional practice in clinical, community, and research settings.

NUT315 Maternal Child Nutrition (3, 0, 3, 4)
This course provides a comprehensive exploration of nutrition during the maternal and child stages, emphasizing the importance of adequate and balanced nutritional status for both mother and child. It examines how maternal nutrition before, during, and after pregnancy affects fetal growth, birth outcomes, and early childhood development. The course addresses common nutritional deficiencies in mothers and children, their causes, and potential long-term health consequences. It also covers the specific nutritional requirements for infants, children, and adolescents, with attention to growth, development, and prevention of malnutrition. Students learn to assess dietary intake, nutrient adequacy, and nutritional risk factors in pediatric populations, as well as in mothers during pregnancy and lactation. The course highlights dietary considerations in managing various pediatric diseases and conditions, including obesity, malnutrition, metabolic disorders, and food allergies. From a nutrition and dietetics perspective, students develop the skills to create individualized, evidence-based nutrition care plans and interventions, support healthy eating practices, and promote optimal maternal and child health across diverse populations.

NUT317 Nutrition Training and Consultancy (3, 1, 4, 5)
This course is designed to enhance students' skills in nutrition education, communication, and professional consultancy. It provides a thorough understanding of individual learning and behavioral theories, behavioral modification techniques, motivational strategies, and cognitive-behavioral approaches, with emphasis on their application in promoting healthy eating behaviors. Students learn to assess and evaluate individual learning styles and behavioral patterns to design effective nutrition interventions. The course also covers practical skills for developing and delivering nutrition-related educational materials, including brochures, presentations, and workshops, tailored to different audiences. Through both theoretical and applied exercises, students gain the ability to implement evidence-based strategies, communicate nutrition information clearly, and provide professional guidance in clinical, community, and public health settings.

NUT319 Food Additives and Toxicity (2, 0, 2, 3)
This course provides an overview of food additives and toxicity, focusing on the principles of chemical preservation and the functional roles of additives in food systems. It covers different categories of additives, their effects on shelf life, quality, texture, and sensory properties, as well as their use in food processing and packaging. The course also addresses risk assessment, regulatory frameworks, and safety evaluation methods related to food additives and contaminants. Key topics include toxicological aspects of additives, food processing and environmental contaminants, and current issues in food safety. In addition, students develop the ability to interpret ingredient labels, evaluate alternative ingredients, and understand the benefits and limitations of additives in the food supply.

NUT323 Food Sanitation (2, 0, 2, 3)
This course aims to help students understand the biological and chemical risks encountered in food production and processing. The course covers hazards arising from improper processing, packaging, storage, and transportation conditions; as well as the cleaning of food production equipment and facilities, the characteristics of contaminants on equipment surfaces, cleaning agents, clean-in-place (CIP) and clean-out-of-place (COP) methods, disinfectants and their characteristics, and good manufacturing practices (GMP). The course integrates knowledge of chemistry, organic chemistry, and biochemistry with food processing and sanitation practices, enabling students to understand food hygiene, safety, and sanitation practices, develop critical thinking skills, and acquire the ability to implement safe and healthy production practices during food processing.

NUT325 Food and Drug Interactions (2, 0, 2, 3)
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.

NUT327 Biostatistics (2, 0, 2, 3)
This course provides fundamental knowledge of biostatistics and its applications, with a particular emphasis on the use of spreadsheet software such as Excel. It introduces basic statistical concepts and techniques used in data analysis, problem solving, and scientific research. The course covers key topics including data types, descriptive statistics, data visualization, probability, distributions, sampling methods, confidence intervals, and hypothesis testing. In addition, students learn advanced analytical methods such as correlation and regression analysis, chi-square tests, analysis of variance (ANOVA), and non-parametric tests. Throughout the course, practical applications using Excel are integrated to enable students to perform statistical analyses and interpret results effectively. Emphasis is placed on understanding the role and importance of statistical methods in health and social sciences, as well as developing skills to apply these techniques in real-world research contexts.

6TH SEMESTER

NUT334 Medical Nutrition in Adult Disorders II (3, 2, 4, 4)
This course provides an in-depth examination of the biochemical and physiological foundations of metabolic and other disease conditions in adults. Students explore the pathophysiology of various diseases and the resulting metabolic disruptions to understand how these changes affect nutritional requirements. Based on this knowledge, students learn to assess nutritional needs, design individualized diets, and propose evidence-based dietary interventions. The course emphasizes the principles of metabolism in the context of disease, highlighting key regulatory points and how metabolic pathways are altered under different pathological conditions. Case studies are used extensively to apply theoretical knowledge in practical scenarios, allowing students to develop critical thinking and problem-solving skills. By the end of the course, students are expected to integrate their understanding of disease metabolism with clinical nutrition principles to design effective, patient-specific dietary plans that support disease management and overall health.

NUT306 Nutrition in Child Disorders (3, 0, 3, 4)
This course provides a comprehensive study of the physiological and nutritional needs of children, with a focus on growth, development, and health maintenance. It explores the specific dietary requirements for children with various diseases and health conditions, emphasizing how nutrition can support treatment, recovery, and overall well-being. Students examine common pediatric disorders, their impact on nutritional status, and the strategies used to manage these conditions through diet. The course also highlights the importance of early intervention, individualized nutrition planning, and evidence-based dietary recommendations. By the end of the course, students are expected to understand the critical role of nutrition in pediatric health and be able to apply this knowledge to assess, plan, and implement appropriate nutritional care for children with diverse medical conditions.

NUT312 Public Health Training (0, 6, 3, 4)
This course, offered as part of the Public Health program, aims to enhance elementary and middle school students' knowledge and awareness of healthy and safe nutrition, while also enabling Nutrition and Dietetics students to actively contribute to public health through fieldwork. The course content covers the importance of nutrition for health, the principles of adequate and balanced nutrition, food groups and their functions, the relationship between food safety and health, and the harms of consuming unhealthy foods; Additionally, the importance of nutrition for children in preschool and school-age periods, common nutritional issues, the causes of chronic diseases related to nutrition, and the role of healthy eating and physical activity in preventing these diseases are conveyed to the students.

NUT314 Scientific Research Methodologies & Techniques (2, 1, 3, 4)
The primary aim of this course is to provide students with a solid foundation in research methods and data analysis. It introduces both quantitative and qualitative approaches for conducting rigorous and meaningful scientific inquiry. The course is designed to equip students with the skills to critically evaluate research, act as informed consumers of data, and develop preliminary research designs relevant to their fields of study. Students learn to accurately collect, analyze, and interpret data, as well as to present complex information clearly and effectively. Additionally, the course emphasizes the ability to review, evaluate, and apply research findings in professional or organizational contexts, enabling students to make evidence-based decisions and contribute to knowledge advancement in their subject areas.

NUT354 Traineeship (1, 4, 3, 5)
This course covers students' professional field training in nutrition and dietetics. It is designed to provide practical experience in approved internship settings under the supervision of field professionals and course instructors. During the traineeship, students are expected to observe and participate in professional dietetics practices, adapt to the workplace, and gain experience in potential areas of employment. The course also emphasizes professional ethics, effective communication, self-management, leadership, and the application of theoretical knowledge in practice.

NUT318 Quality Systems and Legal Regulations About Food (2, 0, 2, 3)
This course addresses the fundamental principles of ensuring quality assurance and legal compliance in the food industry within the framework of Food Science. The course covers food quality management systems, risk analysis, and the Hazard Analysis and Critical Control Points (HACCP) approach, as well as good manufacturing and hygiene practices, national and international food regulations such as ISO 9000 through 22000 series, labeling rules, and inspection processes; it also provides theoretical knowledge and practical examples related to the protection of consumer health, the sustainability of food safety, and the understanding of legal responsibilities.

NUT320 Sports Nutrition (2, 0, 2, 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.

NUT322 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.

NUT324 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, and 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.

7TH SEMESTER

NUT405 Term Project I (1, 3, 3, 6)
This course introduces students to the initial stages of conducting a research project in nutrition and dietetics. Students select a research topic, review relevant literature, and formulate research questions. They learn to design their study methodology and prepare an ethics committee application to ensure compliance with ethical standards in research involving human subjects. Emphasis is placed on understanding research principles, critically evaluating sources, and developing a structured research plan. By the end of the course, students are expected to have a well-defined research proposal ready for implementation, demonstrating foundational skills in scientific inquiry and professional research preparation.

NUT409 On-the-job Training I (0, 24, 12, 21)
This course provides hands-on professional training for students in nutrition and dietetics by placing them physically in relevant hospitals, clinics, or community health institutions throughout the term. Students participate in the internship four days per week, gaining practical experience in patient assessment, diagnosis, diet planning, monitoring of patient progress, and management of kitchen services. Full-time attendance is mandatory, and the training sites evaluate students' performance as part of the course assessment. The internship offers diverse learning outcomes, including the development of clinical reasoning, application of evidence-based nutrition practices, effective communication with patients and healthcare teams, and practical skills in food service management. By engaging in real-world settings, students enhance their professional competence, understand institutional workflows, and prepare for independent practice as future dietitians.

NUT411 Nutrition Seminar I (2, 0, 2, 3)
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.

8TH SEMESTER

NUT406 Term Project II (1, 3, 3, 6)
This course focuses on the implementation and completion of the research project initiated in Term Project I. Students conduct surveys or collects data according to their approved methodology, analyze the results using appropriate statistical or qualitative techniques, and interpret the findings in the context of nutrition and dietetics. The course also guides students in preparing a comprehensive thesis or final report, as well as delivering an effective oral or poster presentation. Ethical considerations, data integrity, and professional communication are emphasized throughout. By the end of the course, students are expected to demonstrate the ability to complete an independent research project, draw evidence-based conclusions, and present their findings clearly to academic or professional audiences.

NUT410 On-the-job Training II (0, 24, 12, 21)
Building on the first term, this course continues the professional internship experience with increased responsibility and autonomy. Students actively participate in advanced patient care, including comprehensive nutritional assessments, individualized diet planning, follow-up of complex cases, and management of nutrition-related programs within the institution. Full-time attendance is required, and performance is assessed by the internship sites, focusing on professional conduct, technical skills, and problem-solving abilities. The course allows students to refine their clinical reasoning, integrate evidence-based guidelines into practice, and develop leadership and teamwork skills in a multidisciplinary environment. By the end of the term, students are expected to demonstrate advanced practical competence, independent decision-making, and readiness for professional roles in clinical and community nutrition settings.

NUT412 Nutrition Seminar II (2, 0, 2, 3)
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.