

Brief Course Description

Course code	Course Name	Brief Course Description
0200100	Biology	This course provides an understanding of fundamental biological concepts with emphasis on function and relevance to humans. Topics include inheritance, evolution, ecology, behavior, ecosystem health
0201100	Chemistry	Explores modern theories of atomic and molecular structure, chemical bonding and periodic relations, chemical reactions and stoichiometry, states of matter, solutions, chemical thermodynamics and chemical kinetics
0203131	Fundamentals of Nutrition	This course is a preface to food and nutrition as a healthy life style component as well as acknowledges the student about the basic principles of essential nutrients, including, their sources, absorption, functions, and their requirements. Issues of food safety as part of nutritional concern will also be exposed.
0201210	Organic Chemistry	Covers hydrocarbons; stereochemistry; arenas; alkyl halides; nucleophilic substitution and elimination reactions, aromaticity; electrophilic and nucleophilic aromatic substitution reactions; ethers, epoxides, carboxylic acids and their functional derivatives; aldehydes; ketones; amines; phenols and mechanisms of organic reactions.
0201120	Analytical Chemistry	This course covers preparation of solutions, indicators for determining ends, potentiometric determination of end points, acid- base reactions, precipitation reactions, redox reactions, complexation reactions, acid-base reactions, nonaqueous solvents, gravimetric analysis, spectrometry, geometric analysis, volumetric measurements, optic rotation, and other new instrumental analysis methods.
0200110	Human Physiology	This course covers the macro and micro structure of major body systems, cell physiology, molecular aspects of cell biology, and the functions of major body systems: integumentary, muscular skeletal, cardiovascular, lymphatic, respiratory, digestive, nervous, endocrine, urinary, and reproductive systems, body fluid and electrolytes, along with homeostatic mechanism maintaining normal function of the body, with demonstrations of relevant measurements
0201240	Biochemistry	This course covers chemistry of proteins, lipids, carbohydrates and DNA, enzymology, bioenergetics, and metabolic pathways of energy utilization, mitochondrial respiration and oxidative

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		phosphorylation, active transport, phosphate pathway and Krebs cycle, nucleic acid, carbohydrates, fats, amino acids, and hormones metabolism.
0203232	Nutrition in Life Span	Principles of nutrition applied to meeting dietary needs of individuals throughout their life cycle. Study of relationship among nutrition, growth, development, and maturity with emphasis on physical and psychosocial considerations affecting food intake
0200240	Food Microbiology	This course covers advances in several areas of food processing technologies as well as HACCP implementation for ensuring the safety of the food supply. The course will provide knowledge on the effects and significance of the presence and growth of microorganisms in foods. Students will understand the relationship of microorganisms to food safety and quality, food borne illness and intoxication and food preservation and bioprocessing. It will identify the major microbes involved in foodborne illnesses.
0203233	Nutrition & Metabolism	Nutrition is intimately linked with body metabolism. The goal of this course is to give you an understanding of what the body does with the food we eat. We begin with a detailed study of enzymes including the importance of vitamins and minerals. We then examine metabolic reactions used to obtain energy from carbohydrates, protein and fat as well as reactions used to rid our body of wastes such as urea and uric acid. The key role of the liver in metabolism will be emphasized throughout the course. Other topics will include digestive hormones, production of lactic acid, lipid carriers and the effects of low carbohydrate diets, including the effect on insulin/glucagon ratio, gluconeogenesis, ketosis and more.
0203228	Pharmacology for Dietitians	This course provides an integrated approach to the biochemical functions and nutritional metabolism and drug-nutrient interactions of fat-soluble and water-soluble vitamins. The course will emphasize on the comprehensive study of terms used by health care practitioners to describe laboratory, radiology, pathology procedures and pharmacological products by body systems. Other topics covered are, pharmacokinetics, pharmacodynamics, bioavailability and biotransformation of drugs, drug-nutrient interactions of antibiotics, antiviral drugs, IV and TPN fluids, anesthetics, anti-histamine, autonomic, cardiovascular, central nervous system,

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		gastrointestinal, hormones and synthetic substitutes, heavy metal antagonists, non-prescription drugs
0203234	Basics of Food Science	The fundamental biological, chemical and physical scientific principles associated with the study of foods; topics include food composition and nutrition, food additives and regulations, food safety and toxicology, food processing, food engineering, food biotechnology, product development and sensory evaluation
0203235	Food Production & Preparation	An introduction to the basic technologies applied to preserve and process of food. Principles and methods of the different food processing technologies, and the chemical, physical, and sensory requirements needed in processed foods as well as the role of processing technology as it applies to different categories of food products will be covered
0203330	Nutrition in Inborn Errors of Metabolism	This course introduces the most commonly encountered inborn errors of metabolism that have nutritional implications. The course will give insight on nutrition in critical care. It will highlight clinical presentation, diagnosis and treatment; mainly, medical nutrition therapy based on evidence, previous and current research.
0203336	Food Chemistry	The course will cover the science and chemistry of food as related to storage and processing of major food commodities including meats and poultry, seafood, fruits and vegetables, cereal grains and baked goods, eggs, dairy, and confectionaries.
0203337	Dietitian Job Shadowing	The course will provide experience beyond the classroom and help students transition from classroom learning to professional application. Students are going to observe a practicing dietitian in the various setting of dietetics to include clinical, community and food service management.
02033210	Biostatistics & Research Methods	The course provides a survey of data and data types. Specific topics include tools for describing central tendency and variability in data; methods for performing inference on population means and proportions via sample data; statistical hypothesis testing and its application to group comparisons; issues of power and sample size in study designs; and random sample and other study types
0203338	Nutritional Assessment	This course provides an introduction for the nutritional assessment as part of nutrition care process. It orients the students to the basic aspects of nutritional assessment systems. It emphasizes on the theoretical

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		<p>knowledge and practical skills regarding different aspects of nutritional assessment: anthropometric, laboratory, clinical, dietary assessments and includes an evaluation of their strengths and limitations. The laboratory sessions utilize active application of tools and techniques used for assessment of nutritional status that is specific for the individualized care of patients/clients. These laboratory-based sessions will include a) nutritional assessment via dietary, biochemical and anthropometric methods, b) statistical analysis & interpretation of dietary assessment and c) clinical examination of a patient.</p>
0203339	Communication in Nutrition	<p>The course will cover communication, behavioral, and counseling theories as they relate to nutrition counseling. Emphasis on development of skills to promote healthy eating behaviors. Examination of eating disorders and obesity, including preventative and therapeutic interventions. The course aims at developing knowledge and understanding of health behavior and learning theories and practices in order to plan and produce nutrition education programs or communication messages, tools and techniques that will contribute to preventing diet-related diseases and promoting health. This course will address nutrition communication and education theories applied to individuals and groups.</p>
02033310	Food Service Systems Management	<p>An overview of the foodservice industry including quantity food production and service, designing physical facilities and administration of foodservice facilities. Topics covered include food and worker safety, menu planning, purchasing, receiving, storage, production, assembly, distribution, service, facility design and equipment, management functions, and financial principles</p>
02033311	Medical Nutrition Therapy I	<p>The course provides detailed information on the role of nutrition in the prevention and treatment of disease. This course covers conditions most seen in dietetic clinics; obesity, diabetes, cardiovascular, upper and lower gastrointestinal, hepatobiliary, pancreatic, endocrine and exocrine diseases. The disease process, related biochemical issues, nutritional assessment, medical nutrition therapy and food and fluid issues are discussed in details for each disease. The practical</p>

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		<p>component will focus on utilizing the nutrition care process to assist in understanding evidence-based assessment practices, diagnosis of nutrition-related problems, the physiology and nutrition interventions for specific diseases and disorders during the acute and chronic setting including nutrition support options, and appropriate monitoring and evaluation techniques during follow up. The diseases and disorders that will be focused on, but not limited to, are inborn errors of metabolism and hyper metabolism in the acute and chronic setting including nutrition support options.</p>
02033312	Community Nutrition	<p>This course will examine the role of nutrition in promoting, maintain and improving health in the community. The course includes an introduction to public health nutrition, food programs, and national nutrition monitoring. It investigates traditional aspects of the emerging health delivery system, as well as entrepreneurial ventures. During the course, students will study the effects of socioeconomic statuses, cultural, legislative, political, scientific and psychological factors on public food choices and community health nutrition. Students will learn how to target populations, deliver effective nutrition interventions in the community and perform a community-based needs assessment. Learning of principles related to nutrition education, program planning, and outcome evaluations will be also discussed.</p>
02033313	Menu planning	<p>This course encompasses the principles and techniques of menu planning for healthy persons. Topics include nutrient needs for optimum health, dietary guidelines, food groups, food portion sizes, and the use of exchange lists for meal planning and client nutrition education in both the English and Arabic languages. In this course, students will master the process of translating the nutrition needs of individuals and groups into food choices and selected menus composed of international, local and Middle Eastern foods.</p>
02033314	Food Quality & Safety	<p>Introduction to food safety from farm-to-fork. Topics include good agricultural practices, good manufacturing practices, food safety regulations, and an overview of Hazard Analysis Critical Control Point</p>

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		(HACCP). Emphasis on control of biological, chemical, and physical hazards to assure food safety
02034315	Medical Nutrition Therapy II	The course provides detailed information on the role of nutrition in the prevention and treatment of disease. This course covers conditions most seen in dietetic clinics; renal, hematological, neurological, pulmonary, metabolic stress, neoplastic diseases and AIDS. The disease process, related biochemical issues, nutritional assessment, medical nutrition therapy and food and fluid issues are discussed in details for each disease. The practical component will focus on utilizing the nutrition care process to assist in understanding evidence-based assessment practices, diagnosis of nutrition-related problems, the physiology and nutrition interventions for specific diseases and disorders during the acute and chronic setting including nutrition support options, and appropriate monitoring and evaluation techniques during follow up. The diseases and disorders that will be focused on, but not limited to, are inborn errors of metabolism, oncology, and hyper metabolism in the acute and chronic setting including nutrition support options.
02034316	Sports and Fitness Nutrition	The main focus of this course is to identify and understand the role of nutrition in fitness and sports. The contents are focused on where nutrition can help maximize muscle strength, endurance, and flexibility; through building muscle and reducing fat. Techniques for guiding athletes in proper nutrition in training, and effective methods to prevent dehydration and sports related injuries due to insufficient nutrient levels will be delivered. Real case studies are examined, exploring leading methods & techniques in optimizing sports performance with proper nutrition.
02034317	Ethics for Healthcare Professionals	The course will cover an overview of the history of ethics, Blanchard & Peale's 3-step model, ecological model, approaches to ethics, applying ethics to the healthcare professionals, confidentiality, medical records, patients' rights and liability in healthcare system.
02034318	Alternative Food & Herbal Therapy	The course content provides students with information about food, botanical or herbal products that allow them to make judgments about clinical effectiveness and potential for adverse consequences in patients. The course explores the various aspects of food, herbs and

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		<p>dietary supplements as part of Complementary, Alternative, and Integrative therapy; and further gives an insight into aspects related to their safety and efficacy. The course includes a variety of in-class activities (lectures and discussions) and active learning via case studies and literature survey of current research.</p>
02034319	Topics in Dietetics Practice	<p>This is a variable-content course. The course explores advanced and hot topics in the areas of nutrition, foods, exercise or health, using higher-order thinking and problem-solving skills. Qualitatively and quantitatively, the course assesses current facts supported by scientific literature, as well as controversial issues with conflicting data.</p>
02034320	Capstone Course	<p>This capstone course equips students with the skills required to use their curriculum-based culminating experience (knowledge, behaviors and skills) in examination of the scientific methods and evidence-based guidelines and protocols and their application to the study of nutrition-based research questions and clinical practice issues - including standards of responsible research conduct and evidence-based practice. Students will develop an understanding of how to conduct a project beginning with the conception of ideas and concluding with depicting written results and discussing them, along with proper citations. The course helps students combine, apply, and practice nutrition/food science knowledge skills acquired throughout their undergraduate courses and to compile a comprehensive report including a literature review, methodology, results, discussions and conclusions.</p>
02034321	Health Promotion for Dietitians	<p>The course will give students a working knowledge of health promotion concepts and methods and their application to health and health behaviors, with a special emphasis on the philosophical and theoretical foundations of health promotion. Also, it identifies and discusses the innovative health campaigns, strategies, and policies being implemented and enacted to improve health behaviors and practices that ultimately improve quality of life.</p>
0203241	Community Practicum	<p>Students will spend 3 weeks of a total of 120 contact hours under the supervision of a qualified and</p>

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		experienced food and nutrition professional in the community setting.
0203342	Dietetic Practicum I in Clinical Setting	Students will spend 3 weeks of a total of 120 contact hours of supervised dietetic practice. The program provides interdisciplinary practicum that will prepare students to attain entry-level competencies in nutrition therapy.
0203443	Dietetic Practicum II in Clinical Setting	Students will spend 3 weeks of a total of 120 contact hours of supervised dietetic practice. The program provides interdisciplinary practicum that will prepare students to attain entry-level competencies in nutrition therapy.
0203444	Dietetic Practicum III in Clinical Setting	Students will spend 4 weeks of a total of 160 contact hours of supervised dietetic practice. The program provides interdisciplinary practicum that will prepare students to attain entry-level competencies in nutrition therapy.