

School	School of Arts & Science
Major	Nutrition and Dietetics

Major Requirements		
Code	Title	Credits
NUTR490	Nutrition Seminar	
Presentation of clinical case report or a published research work under the supervision of a faculty member. Written report is a must.		
NUTR475	Inborn Errors of Metabolism	
Deals with congenital defects that require special diet planning and manipulation. Metabolic pathways and food chemical composition in relation to the inborn errors are discussed. Prerequisite: Senior Standing		
NUTR450	Community Nutrition	
Application of the science of nutrition to the population benefit. It promotes good health through nutrition and prevention of diet-related illness in communities through application of nutrition principles to the planning, funding, implementation, monitoring and evaluation of community nutrition programs and activities. Practical experience with community nutrition programs is recommended. Prerequisite: NUTR 300		
NUTR411	Therapeutic Nutrition	
This course merges the pathophysiology of diseases with nutritional sciences and provides an insight into therapeutic nutrition principles for the treatment of common diet-related health conditions. The student will relate diseases to nutrition, and therefore will know the appropriate nutritional care provided for specific cases. This course aims to teach the student how to manage different diseases through nutrition therapy		
NUTR400	Nutrition Through Life Span	
Role of nutrients and diets in growth, development, maturation, and aging throughout the state of life from pre-conception through old age. Nutrients' requirements throughout the different age groups are discussed. Prerequisites: NUTR 300		
NUTR315	Human Nutrition and Metabolism	
The course will focus on the essential nutrients with emphasis on structure, function metabolism and factors affecting utilization. The role of nutrients in the biochemical processes and symptoms of deficiency and excess will be covered.		
FDSC460	Food Service Management	
It discusses techniques of management of functional operation of food service: Purchasing, budgets, and control management. It will focus on the development of small and large scale cooking skills, menu planning and standard recipe manipulation in keeping with dietary modifications. It will also develop the necessary skills and knowledge base to assist in and manage the provision of meals via an institutional food service. Aspects of organizational design, leadership, motivation, negotiation, resource management, marketing, production, safety and sanitation issues are discussed. Prerequisites: Management of organizations (Principles of management, introduction to management), NUTR 250, BMGT200		
NUTR250	Basic Nutrition	
"Introduction to the science of nutrition. Study of the principles of nutrition and their application within the concepts of wellness, fitness and health, personal food choices, food groups and guides, choice of nutritionally balanced diets and diet planning, basic information about nutrients and energy and their sources, identifying truths and untruths among advertised claims of food products, in addition to the current controversial issues about supplementation and popular diets are discussed."		
NUTR351	Nutritional Assessment and Counseling	

The aim of the course is to familiarize the students with the methods available to assess the nutritional status of individuals. It focuses on the ABCDs of nutrition assessment, which are anthropometry, biochemical, clinical and dietary. The course also has a counseling component, where the student will learn the various counseling techniques. In addition to the theoretical part, the course has a practical component as well. The student will learn to apply the theories they learn in class using various tools and techniques.

NUTR485	Selected Topics in Clinical Nutrition	
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In this course selected topics of some clinical cases in which medical nutrition therapy plays a major role in their prevention and treatment are being discussed. Cases include: cancer, trauma and burns, pulmonary diseases, and anemia. Also nutrition support and functional foods are covered.

NUTR440	Obesity & Regulation of Body Weight	
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This course is a multidisciplinary discussion of the causes, effects, and treatments of human obesity. Topics include the biopsychology of eating behavior, the genetics of obesity, the role of activity and energy metabolism, the psychosocial determinants of obesity, anorexia nervosa, Bulimia, therapy and its effectiveness, and social discrimination. Prerequisites: Senior Standing, Course in Psychology & Course in Sociology

Core Requirements

Code	Title	Credits
FDSC425L	Food Processing Lab	

This course involves laboratory exercises in food preservation and processing. Field trips to food plants to see the different procedures will be organized.

FDSC420	Food Processing	
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Industrial methods to prepare and preserve food are studied. It provides the students with different methods for food preservation and technology to improve chemical and physical properties of raw food. The effect of food processing on nutritional value, microbiological safety, chemical and physical qualities of food is discussed. It includes traditional basic food technology (drying, fermentation and pickling), thermal treatments (pasteurization, sterilization, canning, cooling, freezing, and dehydration), irradiation, and microwave technology. Field trips to food plants to see the different procedures are recommended. Prerequisites: FDSC 300, FDSC370

BMED445	Pathophysiology	
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This course studies the mechanisms, etiologies, risk factors and complications of diseases processes. It emphasizes on the clinical signs and symptoms, history, prognosis and epidemiology of diseases. Study of pathological imbalances including cellular adaptation and injury, fluid compartment exchanges with edema and dehydration, electrolyte functions, control and imbalances, acidosis and alkalosis, nervous system injuries and responses, sensory imbalances, skeletal system injury and repair, soft tissue injury and repair, and muscle injury and dysfunction. Prerequisites: BIOL 345 & BIOL 385

MATH245	Statistics for Health Sciences	
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General introduction to statistical methods used in the health, biological, biomedical sciences, pharmacy and medical sciences. Topics include research methods and design, descriptive statistics, performance characteristics of diagnostic tests, graphical methods, probability, estimation, hypothesis testing, p-values, regression and correlation, and clinical trials. Prerequisite: ENGL 150

BIOL385	Microbiology	
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Characteristics of microorganisms and parasites - emphasizing mechanisms by which they cause disease in humans. Prerequisites: BIOL 200

BIOL385L	Microbiology Lab	
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Sterile techniques, media preparation, streaking, identification, isolation and purification of different bacterial strains are performed. Co-requisites: BIOL 385

FDSC300	Technology of Food Products	
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Introduction to the different technologies involved in food production from raw materials to the end product. Application of biotechnology to the production of raw materials, as well as to the production, processing, storage, packaging, preparation of food products is briefly discussed. Different chemical, microbiological, and physical changes that occur to food are introduced. Prerequisites: ENGL 150

CHEM255L

Basic Organic Chemistry Lab

The laboratory work involves hands-on-experience in organic chemistry. Experiments include basic organic synthesis, alcohol dehydration, hydrocarbon crystallization and purification as well as characterization of organic functional groups.

CHEM255

Basic Organic Chemistry

This course is designed for non-majors. It provide an introduction to the structure, isomerism and chemistry of alkanes, alkenes and some representative functional groups such as alcohols, ethers, aldehydes, ketones, carboxylic acids, amines and amides. Prerequisite: CHEM 200.

CHEM200L

General Chemistry Lab

The laboratory work involves hands-on experience with chemical systems. Experiments include basic calorimetry, a limited qualitative and quantitative analysis scheme, properties of gases, acid-base and redox titrations. Co-requisites: CHEM 200

CHEM200

General Chemistry

Basic principles of chemistry, electronic structure of the atom, chemical periodicity, molecular structure and bonding, acids and bases and the states of matter, rates of chemical reactions, and chemical equilibrium are covered in this course. Prerequisites: ENGL 150; CHEM, or S grade on the Chemistry Placement Test Prerequisites: CHEM160, ENGL101. Co-requisites: CHEM200L.

BMGT200

Introduction to Business Management

The course focuses on how organizations operate in an era of rapid change, and the factors which determine how managers can operate effectively. Topics include the management function; the genesis of modern management; the development of management theory; the context in which managers operate; and managing organizations. The course integrates classical and modern concepts with a rich collection of contemporary real-world examples and cases. The course covers six major themes that guide the progress through the fascinating world of management, namely: Change, Skill development, Global economy, the Internet revolution, Diversity, and Ethics.

BIOL360

Human Physiology & Anatomy

Studies the structure and function of the following body systems: blood, lymphatic, cardiovascular, respiratory, digestive, urinary, and reproductive. Prerequisites: BIOL200

BIOL200L

General Biology I Lab

This lab course introduces principles of microscopy with emphasis on viewing different animal tissues and cells. A detailed study of the animal kingdom including evolution, classification, and anatomical morphology. Co-requisites: BIOL 200

BIOL200

General Biology I

An introductory level course to energy transfer through living organisms, cell biology, membrane transportations, genetics, human physiology, evolution, and morphology and physiology of organ systems, understanding diversity with emphasis on the animal kingdom and evolution. Protozoans are also studied. Prerequisites: ENGL 150; BIOL 150, or S grade on the Biology Placement Test

BIOC310

Medical Biochemistry

Medical Biochemistry is designed to present the basics of biochemistry, thus including a study of structure of amino acids, carbohydrates, lipids, proteins, enzymes, and nucleotides, in addition to their metabolism, bioenergetics, membranes and signaling systems, integration and regulation of the major metabolic pathways, nitrogen metabolism, myoglobin, hemoglobin, and hemostasis, with emphasis on the biochemical basis of human disease. Prerequisite: BIOL 200 & CHEM 250

FDSC300L

Technology of Food Products Lab

Application of laboratory methods to the chemical, physical, instrumental, and sensory analytical techniques in the analysis of nutrients and chemicals in Foods. The course covers the use of spectrophotometry, visible UV, IR, Chromatography (HPLC, GLC), and mechanical texture analysis.

General Education Requirements

Code	Title	Credits
ENGL251	Communication Skills	
<p>The objectives of this course are to improve students' writing skills for academic purposes by developing effective use of grammatical structures; analytical and critical reading skills; a sensitivity to rhetorical situation, style, and level of diction in academic reading and writing; and competence in using various methods of organization used in formal writing.</p>		
ENGL201	Composition and Research Skills	
<p>This course focuses on the development of writing skills appropriate to specific academic and professional purposes; the analysis and practice of various methods of organization and rhetorical patterns used in formal expository and persuasive writing; the refinement of critical reading strategies and library research techniques; and the completion of an academically acceptable library research paper. Prerequisites: ENGL150, ENGL151.</p>		
CULT200	Introduction to Arab - Islamic Civilization	
<p>The purpose of this course is to acquaint students with the history and achievements of the Islamic civilization. Themes will include patterns of the political and spiritual leadership; cultural, artistic, and intellectual accomplishments Prerequisites: ENGL051, ENGL101, ENGL151.</p>		
CSCI200	Introduction to Computers	
<p>The course aims at making students competent in computer-related skills. It is supposed to develop basic computer knowledge by providing an overview of the computer hardware and basic components as well as hands-on practice on common software applications such as Word, Excel, Power Point, Internet and Email. The student will learn how to use the new features of Microsoft Office 2010 mainly Word documents, Excel spreadsheets and PowerPoint presentations. On the surface, MS Office 2010 looks a lot different than previous versions (no more menus or toolbars!), but by learning to understand the dramatically changed, Ribbon-based interface, you'll quickly get back on the road to productivity.</p>		
ARAB200	Arabic Language and Literature	
<p>This course is a comprehensive review of Arabic Grammar, Syntax, major literature and poetry styles, formal and business letters.</p>		