

Courses' Description

Diet Therapy Technology and Dietetics

Course number	Course Name	Credit hours	Pre-requisites
0703111	Fundamentals of Nutrition and Dietetics	1	0300141
<p>This course covers basic concepts of classifications, sources, and functions of nutrients, including macronutrients: water, protein, carbohydrates, fat; and micronutrients: vitamins and minerals. The process of digestion, absorption, transport, utilization, and storage of nutrients in humans and the interaction between diet and health. Also introduces an overview of nutrition and dietetics as a profession, including career opportunities, scope of practice, credentialing, ethics, and collaboration with other disciplines. Self-directed modules on medical, nutritional and dietetic terminologies.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703112	Fundamentals of Nutrition and Dietetics-Practical	2	0703111*
<p>This course covers basic concepts of classifications, sources, and functions of nutrients, including macronutrients: water, protein, carbohydrates, fat; and micronutrients: vitamins and minerals. The process of digestion, absorption, transport, utilization, and storage of nutrients in humans and the interaction between diet and health. Also introduces an overview of nutrition and dietetics as a profession, including career opportunities, scope of practice, credentialing, ethics, and collaboration with other disciplines. Self-directed modules on medical, nutritional and dietetic terminologies.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703121	Principles of Food Science	3	0300141
<p>Introduction to food science. Nutrients : characteristics , sources and its importance, introduction to food processing methods, introduction microorganisms and its importance to food science, factors contribute to spoilage and deterioration of food, food quality, new developments in food Science, food status in Jordan and in the world.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703231	General Microbiology for Nutrition Students	1	0300142
<p>This course is aimed at providing the student with background knowledge of the nature of microorganisms, their structure, physiology, metabolism and reproduction. The role of microorganisms in infection of man and spoilage of matter will be studied. Physical and chemical means of control of microorganisms will also be discussed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703232	General Microbiology for Nutrition Students - Practical	2	0703231*
<p>This course is aimed at providing the student with background knowledge of the nature of microorganisms, their structure, physiology, metabolism and reproduction. The role of microorganisms in infection of man and spoilage of matter will be studied. Physical and chemical means of control of microorganisms will also be discussed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703211	Biochemistry for Nutrition Students	2	0300136
<p>This course studies the chemical properties of living material. It focuses on the chemistry of proteins, amino acids, their purification and their properties, the kinetic energy of enzymes and inhibition, mechanics and regulating enzymes functions, the study of the chemistry of sugars and fats, vitamins, and the accompaniment of enzymes and nucleic acids and their manufacture and the production of proteins and control factors for transcription and translation</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703212	Biochemistry for Nutrition Students- Practical	1	0703211*
<p>This course studies the chemical properties of living material. It focuses on the chemistry of proteins, amino acids, their purification and their properties, the kinetic energy of enzymes and inhibition, mechanics and regulating enzymes functions, the study of the chemistry of sugars and fats, vitamins, and the accompaniment of enzymes and nucleic acids and their manufacture and the production of proteins and control factors for transcription and translation</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703213	Fundamentals of Human Nutrition	2	0703112
<p>This course covers the applied concepts of human nutrition emphasizing the elements of nutritional care process, role of the nutritionist and dietician and concept of dietary guides. Criteria of the healthful diet, dietary standards and methods of their determination under different physiological conditions. Basic nutrients food sources and their body requirements in the different life stages. Malnutrition in individuals and community and its evaluation and management, drug-nutrient interactions, and planning of balanced and healthy diet, local food habits & the world food problems.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703214	Fundamentals of Human Nutrition- Practical	1	0703213*
<p>This course covers the applied concepts of human nutrition emphasizing the elements of nutritional care process, role of the nutritionist and dietician and concept of dietary guides. Criteria of the healthful diet, dietary standards and methods of their determination under different physiological conditions. Basic nutrients food sources and their body requirements in the different life stages. Malnutrition in individuals and community and its evaluation and management, drug-nutrient interactions, and planning of balanced and healthy diet, local food habits & the world food problems.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703221	Food Chemistry and Analysis	2	0703121
<p>The course applies basic scientific principles of chemical/ biochemical reactions of carbohydrates, lipids, proteins, and other constituents in fresh and processed foods with respect to food quality. Reaction conditions and processes that affect color, flavor, texture, nutrition, and safety of food are emphasized include activation and control of enzymatic and non- enzymatic browning reactions in fruits and vegetables, and consequences of water migration on food quality; gelatinization-retrogradation in starch-based food and food emulsions. Other food components including enzymes, food additives, flavors, and colorants. The practical part of the course covers the principles, methods, and techniques of qualitative and quantitative physical, chemical and biochemical analyses of foods components including moisture, proteins, fats, carbohydrates, fibers, ash, additives, contaminants, and vitamins, the basic principles of instrumental methods of analysis, including spectroscopy, chromatography, ELISA, and Infra-Red (IR). Criteria for the choice of various analytical methods, sampling plan and methods of treating data will be studied.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703222	Food Chemistry and Analysis- Practical	2	0703221*
<p>The course applies basic scientific principles of chemical/ biochemical reactions of carbohydrates, lipids, proteins, and other constituents in fresh and processed foods with respect to food quality. Reaction conditions and processes that affect color, flavor, texture, nutrition, and safety of food are emphasized include activation and control of enzymatic and non- enzymatic browning reactions in fruits and vegetables, and consequences of water migration on food quality; gelatinization-retrogradation in starch-based food and food emulsions. Other food components including enzymes, food additives, flavors, and colorants. The practical part of the course covers the principles, methods, and techniques of qualitative and quantitative physical, chemical and biochemical analyses of foods components including moisture, proteins, fats, carbohydrates, fibers, ash, additives, contaminants, and vitamins, the basic principles of instrumental methods of analysis, including spectroscopy, chromatography, ELISA, and Infra-Red (IR). Criteria for the choice of various analytical methods, sampling plan and methods of treating data will be studied.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703233	Food microbiology	1	0703231
<p>This course covers the principles of food microbiology: the biology and epidemiology of pathogenic foodborne microorganisms, including bacteria, yeasts, fungi, protozoa and viruses, and food spoilage microorganisms; the microbiology of food preservation and food commodities; fermented foods; principles and methods to examine, enumerate and identify microorganisms associated with foods; microbiological quality control, and quality schemes. The course will comprehend conditions that control microorganisms in foods and be able to apply this understanding to food processing situations.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703234	Food microbiology-Practical	2	0703233*
<p>This course covers the principles of food microbiology: the biology and epidemiology of pathogenic foodborne microorganisms, including bacteria, yeasts, fungi, protozoa and viruses, and food spoilage microorganisms; the microbiology of food preservation and food commodities; fermented foods; principles and methods to examine, enumerate and identify microorganisms associated with foods; microbiological quality control, and quality schemes. The course will comprehend conditions that control microorganisms in foods and be able to apply this understanding to food processing situations.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703321	Food Processing and Preservation	1	0703233
<p>This course covers the quality, safety, and nutritional factors of food and food products, with techniques used to control these factors and prevent food spoilage. Emphasize the general methods of food preservation including application of heat, such as canning, pasteurization, evaporation, sun-drying, dehydration and smoking; application of cold as refrigeration and freezing; use of chemical substances such as salt, sugar, vinegar, benzoic and lactic acids; fermentation as acetic, lactic, alcoholic, etc.; mechanical means as vacuum, filtration and clarification processes.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703322	Food Processing and Preservation-Practical	2	0703321*
<p>This course covers the quality, safety, and nutritional factors of food and food products, with techniques used to control these factors and prevent food spoilage. Emphasize the general methods of food preservation including application of heat, such as canning, pasteurization, evaporation, sun-drying, dehydration and smoking; application of cold as refrigeration and freezing; use of chemical substances such as salt, sugar, vinegar, benzoic and lactic acids; fermentation as acetic, lactic, alcoholic, etc.; mechanical means as vacuum, filtration and clarification processes.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703341	Nutritional Assessment	1	0703111
<p>This course covers definition and importance of nutritional assessment; methods, tools, and interpretation of data in assessing the nutritional status of groups and individuals including dietary, anthropometric, biochemical, body composition and clinical assessment, as well as other health measurements in individuals and community. It covers limitations of the various methods used for collecting dietary information; dietary analysis and evaluation using both qualitative and quantitative methodology, and techniques to measure energy expenditure and biochemical assessment.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703342	Nutritional Assessment-Practical	2	0703341*
<p>This course covers definition and importance of nutritional assessment; methods, tools, and interpretation of data in assessing the nutritional status of groups and individuals including dietary, anthropometric, biochemical, body composition and clinical assessment, as well as other health measurements in individuals and community. It covers limitations of the various methods used for collecting dietary information; dietary analysis and evaluation using both qualitative and quantitative methodology, and techniques to measure energy expenditure and biochemical assessment.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703343	Medical Diet Therapy (1)	1	0703213
<p>This course covers the role of medical nutrition therapy in the prevention and treatment of clinical diseases and disorders. It aims to develop clinical knowledge, problem solving skills, and clinical reasoning relevant to nutrition disorders, including etiology & pathophysiology, as well as the nutrition care process including assessment, diagnosis, nutrition intervention planning, intervention evaluation and outcome management of hepatobiliary disease; inflammatory bowel diseases, ulcers; GIT diseases, renal disease; eating disorders; aged care & nutrition support in clinical settings.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703344	Medical Diet Therapy (1)-Practical	2	0703343*
<p>This course covers the role of medical nutrition therapy in the prevention and treatment of clinical diseases and disorders. It aims to develop clinical knowledge, problem solving skills, and clinical reasoning relevant to nutrition disorders, including etiology & pathophysiology, as well as the nutrition care process including assessment, diagnosis, nutrition intervention planning, intervention evaluation and outcome management of hepatobiliary disease; inflammatory bowel diseases, ulcers; GIT diseases, renal disease; eating disorders; aged care & nutrition support in clinical settings.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703345	Medical Diet Therapy (2)	1	0703343
<p>This course covers the role of medical nutrition therapy in the prevention and treatment of clinical diseases and disorders. This course aims to develop clinical knowledge, problem solving skills, and clinical reasoning relevant to nutrition disorders, including etiology & pathophysiology, the nutrition care process including assessment, diagnosis, nutrition intervention planning, intervention evaluation and outcome management of food allergies and intolerances, diabetes mellitus, anemia, cardiovascular diseases, hypertension, osteoporosis, critically ill, trauma, burns, and after surgery.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703346	Medical Diet Therapy (2)-Practical	2	0703345*
<p>This course covers the role of medical nutrition therapy in the prevention and treatment of clinical diseases and disorders. This course aims to develop clinical knowledge, problem solving skills, and clinical reasoning relevant to nutrition disorders, including etiology & pathophysiology, the nutrition care process including assessment, diagnosis, nutrition intervention planning, intervention evaluation and outcome management of food allergies and intolerances, diabetes mellitus, anemia, cardiovascular diseases, hypertension, osteoporosis, critically ill, trauma, burns, and after surgery.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703347	Nutrition of Metabolic Disorders and Persons with Special Needs	2	0703343
<p>This course covers the metabolic diseases most of which can be described in biochemical terms, including lactose intolerance, celiac disease, PKU, and galactosemia...etc. The attention is focused on the mechanism(s) thought to participate in disease development, the affected metabolic pathways, the clinical manifestations that lead to disease symptoms and the role of nutrition in prevention of disease development and as part of the therapeutic strategy to alleviate symptoms. The nutritional requirements of special needs person will be also addressed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703351	Meal Preparation & Management	2	0703343
<p>This course covers the principles of food science and meal planning and preparation with emphases on demonstration techniques, quality evaluation, and styles of service. Understand of economic, social, and physiological factors affecting food consumption. Apply principles of food selection, preparation, storage, and services required to meet the needs of individuals of varying socioeconomic levels and stages in life. Apply scientific principles during food preparation to maintain a safe and sanitary work environment for food preparation; and apply of management principles in planning, purchasing, preparing, and serving foods.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703352	Meal Preparation & Management-Practical	1	0703351*
<p>This course covers the principles of food science and meal planning and preparation with emphases on demonstration techniques, quality evaluation, and styles of service. Understand of economic, social, and physiological factors affecting food consumption. Apply principles of food selection, preparation, storage, and services required to meet the needs of individuals of varying socioeconomic levels and stages in life. Apply scientific principles during food preparation to maintain a safe and sanitary work environment for food preparation; and apply of management principles in planning, purchasing, preparing, and serving foods.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703353	Nutrition Through Life Stages	2	0703213
<p>This course covers nutrition guidelines and key nutritional issues, and understands the impact of various physical, behavioral and socio-economic factors on nutrition during different phases of life cycle. It includes nutritional needs for women during the pre-conception period, pregnancy and lactation; infancy; growing fetus, childhood; adolescence; and ageing adults. Presents growth and development indicators, and implications for future health; interactions between nutrition and the ageing process. It will include biological basis of energy and nutrient needs for each life stage.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703354	Nutrition Through Life Stages-Practical	1	0703353*
<p>This course covers nutrition guidelines and key nutritional issues, and understands the impact of various physical, behavioral and socio-economic factors on nutrition during different phases of life cycle. It includes nutritional needs for women during the pre-conception period, pregnancy and lactation; infancy; growing fetus, childhood; adolescence; and ageing adults. Presents growth and development indicators, and implications for future health; interactions between nutrition and the ageing process. It will include biological basis of energy and nutrient needs for each life stage.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703355	Maternity and Childhood Nutrition	1	0703353
<p>This course is concerned with the optimal nutritional practices and applications of mothers and children during different life stages. It covers nutrition of women during the pre-conception period, pregnancy and lactation; infancy; childhood; and adolescence, and implications for future health. For each life cycle stage, the biological basis of energy and nutrient needs will be studied, & discuss how nutritional status is assessed</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703356	Maternity and Childhood Nutrition-Practical	2	0703355
<p>This course is concerned with the optimal nutritional practices and applications of mothers and children during different life stages. It covers nutrition of women during the pre-conception period, pregnancy and lactation; infancy; childhood; and adolescence, and implications for future health. For each life cycle stage, the biological basis of energy and nutrient needs will be studied, & discuss how nutritional status is assessed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703411	Athletes Nutrition and Sport	1	0703343
<p>This course covers fundamentals of sports nutrition and develops an understanding of the nutritional requirements and issues involved in different variety of sports and exercises. Also covers nutrition for short duration, intermittent and endurance exercise; weight loss and weight gain in athletes; sport foods and supplements. It addresses nutritional needs for individuals and team sport participants across life cycle with more focus on selection of optimal dietary approaches as related to performance needs, maximizing performance, and unique nutrient needs for specific sport participants.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703412	Athletes Nutrition and Sport-Practical	2	0703411*
<p>This course covers fundamentals of sports nutrition and develops an understanding of the nutritional requirements and issues involved in different variety of sports and exercises. Also covers nutrition for short duration, intermittent and endurance exercise; weight loss and weight gain in athletes; sport foods and supplements. It addresses nutritional needs for individuals and team sport participants across life cycle with more focus on selection of optimal dietary approaches as related to performance needs, maximizing performance, and unique nutrient needs for specific sport participants.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703431	Food Hygiene and Quality Control	1	0703233
<p>This course covers topics related to food safety and Hygiene including current issues regarding microbiological, chemical and physical hazards in food. Control of food safety and quality through use HACCP, ISO and FSMS standards. It covers allergen control, modern plant sanitation techniques and pest management. It introduces Methods of statistical process control as related to maintaining constant product quality, and quality control prerequisites (GMP & GHP), with reviewing several key definitions and tools used (basic statistics and graphs), and emerging industry techniques.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703432	Food Hygiene and Quality Control-Practical	2	0703431*
<p>This course covers topics related to food safety and Hygiene including current issues regarding microbiological, chemical and physical hazards in food. Control of food safety and quality through use HACCP, ISO and FSMS standards. It covers allergen control, modern plant sanitation techniques and pest management. It introduces Methods of statistical process control as related to maintaining constant product quality, and quality control prerequisites (GMP & GHP), with reviewing several key definitions and tools used (basic statistics and graphs), and emerging industry techniques.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703441	Weight Management and Obesity	1	0703343
<p>This course covers the multifactorial aspects of obesity, maintenance of healthy weight, different obesity and weight indexes, and the relationship of weight status and chronic disease prevention. Traditional and novel nutrition and exercise theories as well as current popular diet and exercise trends will be discussed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703442	Weight Management and Obesity-Practical	2	0703441*
<p>This course covers the multifactorial aspects of obesity, maintenance of healthy weight, different obesity and weight indexes, and the relationship of weight status and chronic disease prevention. Traditional and novel nutrition and exercise theories as well as current popular diet and exercise trends will be discussed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703443	Nutrition for Cancer Patients and Immunodeficiency	1	0703343
<p>This course covers application of modern theories and principles of dietetics and nutritional intervention in the treatment and alleviation of different cancer types including liver, GIT, lung, kidney, blood, & breast cancers... etc., and immune-compromised patients (AIDS); and use of tube and total paternal nutrition. The practical part includes selected case studies and dietetic applications.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703444	Nutrition for Cancer Patients and Immunodeficiency-Practical	1	0703443*
<p>This course covers application of modern theories and principles of dietetics and nutritional intervention in the treatment and alleviation of different cancer types including liver, GIT, lung, kidney, blood, & breast cancers... etc., and immune-compromised patients (AIDS); and use of tube and total paternal nutrition. The practical part includes selected case studies and dietetic applications.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703451	Community Nutrition and Nutritional Epidemiology	1	0703213
<p>This course covers the rule of nutrition, health, and malnutrition in national development. Nutritional disorders- Epidemiology, clinical features, prevention and dietary treatment for protein/energy malnutrition, nutritional anemias & vitamins deficiency disorders. It addresses methods of improvement of community nutrition, such as food fortification, enrichment and nutrient supplementations, and nutrition education themes and messages in nutrition and health, relationship between nutrition, infections, immunity, and outbreaks prevention, & national and international agencies in uplifting the nutritional status -WHO, UNICEF, MOH, and community nutrition program and nutritional crisis planning.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703452	Community Nutrition and Nutritional Epidemiology-Practical	1	0703451*

This course covers the rule of nutrition, health, and malnutrition in national development. Nutritional disorders- Epidemiology, clinical features, prevention and dietary treatment for protein/energy malnutrition, nutritional anemias & vitamins deficiency disorders. It addresses methods of improvement of community nutrition, such as food fortification, enrichment and nutrient supplementations, and nutrition education themes and messages in nutrition and health, relationship between nutrition, infections, immunity, and outbreaks prevention, & national and international agencies in uplifting the nutritional status -WHO, UNICEF, MOH, and community nutrition program and nutritional crisis planning.

Course number	Course Name	Credit hours	Pre-requisites
0703453	Seminar in Medical Nutrition and Dietetics	1	90 Cr H

Training for the students to search for literature related to certain topic in the field of medical nutrition and dietetics using different resources, then the student will present the findings and discuss them with the instructor and the peers.

Course number	Course Name	Credit hours	Pre-requisites
0703454	Nutritional Education and Counseling	1	0703341

Discussion of theories and principles of learning and behavior modification, models and techniques, communication skills, evaluation methods, and cultural competence in nutrition counseling and education; and application of concepts to facilitate behavioral change, meal planning, food selection, and feed habits on the individual and community levels.

Course number	Course Name	Credit hours	Pre-requisites
0703455	Nutritional Education and Counseling-Practical	1	0703454*
<p>Discussion of theories and principles of learning and behavior modification, models and techniques, communication skills, evaluation methods, and cultural competence in nutrition counseling and education; and application of concepts to facilitate behavioral change, meal planning, food selection, and feed habits on the individual and community levels.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703357	Food System and Services Management	1	0703351
<p>A study of the organization and administration of foodservice systems and the functions and responsibilities specific to management: decision making, planning, organizing, and staffing. Management of human resources, food, materials, capital, facilities, and markets as related to various hospitality management systems will be examined.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703358	Food System and Services Management-Practical	2	0703357*
<p>A study of the organization and administration of foodservice systems and the functions and responsibilities specific to management: decision making, planning, organizing, and staffing. Management of human resources, food, materials, capital, facilities, and markets as related to various hospitality management systems will be examined.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703413	Nutrition and Immunology	1	0703343
<p>This course covers the basic information about structure, types and functions of immune system and its connection with nutrition. Significance of nutrition and immune system response as well as pathologic status caused by incorrect immune function. The course will focus on the genetic susceptibility to nutrition-immunity reaction and population variance in response to diet.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703414	Nutrition and Immunology-Practical	2	0703413*
<p>This course covers the basic information about structure, types and functions of immune system and its connection with nutrition. Significance of nutrition and immune system response as well as pathologic status caused by incorrect immune function. The course will focus on the genetic susceptibility to nutrition-immunity reaction and population variance in response to diet.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703415	Nutrition and Toxicology	1	0703213
<p>This course covers qualitative and quantitative toxicology, biotransformation and mechanism of toxicity. Types, sources, health risks and mode of action of food toxicants include heavy metals, organic toxicants, mycotoxins, phycotoxins, phytotoxins, food additives, nutrients, and other foodborne toxicants will be discussed. Food safety management system, HACCP planning and regulation of foodborne toxicants will be addressed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703416	Nutrition and Toxicology-Practical	2	0703415*
<p>This course covers qualitative and quantitative toxicology, biotransformation and mechanism of toxicity. Types, sources, health risks and mode of action of food toxicants include heavy metals, organic toxicants, mycotoxins, phycotoxins, phytotoxins, food additives, nutrients, and other foodborne toxicants will be discussed. Food safety management system, HACCP planning and regulation of foodborne toxicants will be addressed.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703421	Functional Foods in Health and Diseases	1	0703321
<p>This course covers definition, importance, classes, technology and applications of functional foods, sometimes referred to as nutraceuticals. Functional foods (or food ingredients) that deliver specific non-nutritive physiological benefits that may enhance health. The course discusses the growing consumer interest in Functional Foods is transforming the food industry as we know it, and redefining the relationship between food, nutrition, and health.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703422	Functional Foods in Health and Diseases-Practical	2	0703421*
<p>This course covers definition, importance, classes, technology and applications of functional foods, sometimes referred to as nutraceuticals. Functional foods (or food ingredients) that deliver specific non-nutritive physiological benefits that may enhance health. The course discusses the growing consumer interest in Functional Foods is transforming the food industry as we know it, and redefining the relationship between food, nutrition, and health.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703423	Food Biotechnology	1	0703321
<p>This course introduces biochemical methods, analysis, and techniques used in the bioscience research and development industry. It includes the chemistry of organic macromolecules, intermediary metabolism and the relationships to the human body. Topics also include structures, properties, functions, reactivity, and synthesis of simple organic molecules. Students will monitor, record, and maintain integrity of equipment and instrumentations; environmental conditions of the facility; and inventory.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703424	Food Biotechnology-Practical	2	0703423*
<p>This course introduces biochemical methods, analysis, and techniques used in the bioscience research and development industry. It includes the chemistry of organic macromolecules, intermediary metabolism and the relationships to the human body. Topics also include structures, properties, functions, reactivity, and synthesis of simple organic molecules. Students will monitor, record, and maintain integrity of equipment and instrumentations; environmental conditions of the facility; and inventory.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703445	Computerized Applications in Clinical Nutrition and Dietetics	1	0703351
<p>This course covers the recent applications of software and computer programs in nutrition and dietetics, meal planning, meals analysis, body composition analysis ...etc.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0703446	Computerized Applications in Clinical Nutrition and Dietetics-Practical	2	0703445*

This course covers the recent applications of software and computer programs in nutrition and dietetics, meal planning, meals analysis, body composition analysis ...etc.

Course number	Course Name	Credit hours	Pre-requisites
0703447	Special Topics in Human Nutrition and Dietetics	3	90 Cr H

This is an advanced course dealing with selected topics in human nutrition & dietetics. Topics vary from year to year and may include drug/nutrient interactions, protein metabolism, nutrition and behavior, nutrition and exercise, and any other advanced topics in the field.

Course number	Course Name	Credit hours	Pre-requisites
0703456	Research Methods in Human Nutrition and Dietetics	1	90 Cr H

This course covers the quantitative and qualitative approaches in research methods. Statement of the problem, objectives, research questions and hypotheses. Theoretical and conceptual frameworks. Review of literature. Research design, sampling and sample size determination. Data collection methods and instruments. Methods of data analysis. Interpretation and presentation of data. Research proposal development, research report writing and dissemination of findings.

Course number	Course Name	Credit hours	Pre-requisites
0703457	Research Methods in Human Nutrition and Dietetics- Practical	2	0703456*

This course covers the quantitative and qualitative approaches in research methods. Statement of the problem, objectives, research questions and hypotheses. Theoretical and conceptual frameworks. Review of literature. Research design, sampling and sample size determination. Data collection methods and instruments. Methods of data analysis. Interpretation and presentation of data. Research proposal development, research report writing and dissemination of findings.

Course number	Course Name	Credit hours	Pre-requisites
0703493	Training in Clinical Nutrition (1)	3	95 Cr H and Department Approval

This course gives students the chance to practice on the modern medical clinical nutrition principles & applications in specialized hospitals on different disease cases.

Course number	Course Name	Credit hours	Pre-requisites
0703494	Training in Clinical Nutrition (2)	3	95 Cr H and Department Approval

This course gives students the chance to practice on the modern medical clinical nutrition principles & applications in specialized hospitals on different disease cases.

Course number	Course Name	Credit hours	Pre-requisites
0703495	Training in Human Nutrition	3	95 Cr H and Department Approval
<p>This course gives students the chance to practice on the modern human nutrition principles & applications in nutrition clinics and centers such as to manage weight.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0300135	Analytical Chemistry (1)	3	0300132 & 0300133
<p>This course covers both fundamental and practical aspects of chemical analysis, it covers the following topics: basic chemical concepts, statistics and data analysis, application of chemical equilibrium systems in quantitative analysis, gravimetric analysis, titrimetric method of analysis.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0300136	Organic Chemistry	3	0300132 & 0300133
<p>This is an introductory organic chemistry course. It has a theoretical and a practical component. The theoretical component reviews the basic principles of chemical bonding as they apply to organic molecules. It focuses on the basic principles to understand the structure and reactivity of organic molecules. It introduces the concepts of functional groups, nomenclature, stereochemistry, and reaction mechanisms. It also covers the basic chemistry of alkanes, alkenes, alkynes, aromatics, halides, alcohols, ethers, aldehydes and ketones, acids and derivatives. The practical component emphasizes the major aspects of the theoretical one.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0701285	Biostatistics	3	0300141
<p>The purpose of this course is to get students familiar with the fundamental concepts of statistics which is useful in the fields of health and medical sciences. This course represents an introduction to the field and 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. While there are some formulae and computational elements to the course, the emphasis is on interpretation and concepts.</p>			

Course number	Course Name	Credit hours	Pre-requisites
0701364	Human Physiology	3	0300141
<p>A theoretical and practical course that covers basic issues in human physiology. Physiology of the circulatory, respiratory, nervous, digestive, excretory, endocrine and reproductive systems are covered. Hormonal balance in females prior to and during pregnancy and lactation & the physiology of body temperature regulation will be illustrated.</p> <p>Study the basic concepts in pathology, cell injury, death and adaptation. Also, this course focuses on the description of Acute and chronic inflammation, repair, cell regeneration, fibrosis, wound healing and disorders of immune system. Furthermore, it emphasize on the pathophysiology of integumentary, cardiovascular, hematopoietic, lymphoid, respiratory, renal, gastrointestinal, endocrine, musculoskeletal and, nervous systems.</p>			