



Department of Nutrition and Food Technology

Course description

Course No. Course Title Weekly Hours Lec. Lab.

Credit

Hours Pre-requisite

(0) General

603301 General Microbiology 3 3 4 304102

Fundamentals and applications of microbiology providing students with basics for understanding the broad aspects of the biology of the microorganisms; basic knowledge on microbial structure, physiology, growth, nutrition, genetics and taxonomy; environmental, industrial, medical and food microbiology will be covered. The practical part helps students to practice standard microbiological staining and culture techniques as well as microbial purification, identification, and verification techniques

0603302 Physiology 3 - 3 304102

Study of structure and function of the human body emphasizing general principles of physiology, surveying homeostasis, cellular, tissue, neurophysiology, cardiovascular, respiratory, renal, endocrine, gastrointestinal, skeletal, muscular and reproductive systems as well as integrative physiology.

(1) Basic sciences

0603410 Sensory Evaluation of Foods 2 3 3 603220 or 605150

Importance of sensory evaluation of foods, the preparation and proper conditions needed for conducting the sensory evaluation tests; different methods used in the sensory evaluation and statistical analysis for their results; some of the sensory evaluation tests on selected locally processed foods.



(2) Foods

603220 Principles of Food Science 2 - 2 303102+304101

Main definitions and principles of food science and technology; the composition of foods and their role in food processing; the influence of processing on food attributes; causes of food spoilage and an introduction to food processing methods.

0603322 Food Preparation 2 3 3 0603231, 0603220

Cookery processes and their properties; structure, composition and nutritive value of foods; the changes that take place during preparation especially those in the nutritive value and the quality of the product .

603323 Food Analysis 1 3 2 303211

The roles of food analysis, sampling, recording and interpreting of results, experimental errors; Spectroscopy theory, atomic absorption, spectrophotometry and chromatography techniques such as paper, thin layer, GLC and HPLC.

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0603420 Food Additives 2 - 2 0303102

Advantages and disadvantages of food additives; their safety evaluation and regulatory aspects; different classes of food additives with respect to chemical and physical nature and mode of action.



**(3) Human nutrition
0603231 Fundamentals of
Nutrition 3 - 3 0303102 and
0304102**

living body, focusing on Basic concepts of nutrition; nutrients and their metabolism within the the fate of nutrients and their interrelationships, energy release and disease symptoms of malnutrition.

**0603332 Human nutrition and
Metabolism 3 - 3 0603231**

Applications of human nutrition concepts emphasizing the integration of the effect of nutrient and nutritional status of metabolic and physiological function at cellular, tissue, organ and whole body level in humans as related to health and disease; regulation of metabolic homeostasis; health claims and their nutrient implications; dietary standards and their methods of determination under different physiological conditions; drug nutrient interaction and nutrition and physical fitness.

0603430 Nutrition Extension 3 - 3 603332

Concept of nutrition education and extension and its importance and techniques, as well as its applications; use of audiovisual aids and food advertisement; role of extension programs in healthy diet and nutritional knowledge and their evaluation; development trends, assessment and interrelationship of food habits with social, economical, cultural, physiological, psychological, advertisement. political, and environmental factors and with food



**0603431 Nutrition during the lifecycle
3 - 3 0603332**

Physical growth and important physiological and psychological developments during growth prenatally and postnatally; important physiological changes during pregnancy and lactation and mechanism of milk production and relationship with nutritional needs and feeding; physiological and psychosocial changes for the elderly and their nutritional requirements; some concerns related to nutrition during the various stages and their management.

**0603432 Contemporary Issues in
Nutrition and Dietetics 3 - 3 0603332**

Development and extending student's knowledge and skills in both nutrition and applied dietetics, and highlighting the latest development in selected current issues of special interest.

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0603435 Community Nutrition 2 3 3 0603332

Study of the community, community nutrition system and community nutritional status; community nutrition programs: community characterization, organization and management; nutrition intervention and feeding programs, including governmental and non-governmental, particularly for groups at risks of malnutrition; nutrition education, food advertisement, group feeding and nutrition and food policies.



0603436 Nutrition of Athletes 2 - 2 0603332

Providing students with sound principles of exercise and nutrition and their interaction for the promotion of health and performance in certain population groups; the optimum nutrient and hydration needs for exercise of varying intensities and duration; fundamentals of strength, power, and muscular endurance assessment; facts and fallacies about the available supplements and ergogenic aids; applied topics in nutrition and exercise for weight management and chronic diseases prevention.

(4) Food processing

0603342 Food Packaging 2 - 2 303102 or 603220

Types of food packaging materials: metals , glass , paper, and plastics ; production of food packaging materials , their chemical and physical properties, their interaction with foods , methods followed in their quality evaluation and selection; different filling systems and principles of filling techniques used in food industry.

0603442 Food Biotechnology 1 3 2 0603301

General definition of biotechnology and developments in food biotechnology; principles of fermentations, genetic engineering, cloning and other modern techniques of biotechnology; introducing the use of biotechnology in the production of fermented foods, production of enzymes, vitamins and proteins, and treatment of food plants wastes; tools of modern food biotechnology.



(5) Hygiene and diet therapy

0603353 Introduction to Diet Therapy 3 - 3 0603231

Application of basic human nutritional principles in the selection of normal and therapeutic diets, emphasizing the elements of nutritional care process, concepts of dietary guides, criteria of the healthful diet, interviewing and counseling techniques and role of the dietitian, common hospital therapeutic diets and major disease requiring diet therapy.

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**0603354 Assessment of Nutritional
Status 2 3 3 0603231**

Fundamentals of nutritional status assessment in health and disease using the dietary, nutritional, anthropometrical, clinical, biochemical, health and psychosocial indicators for a suitable nutrition intervention; selected practical applications.

0603451 Diet Therapy (1) 2 3 3 603332+603353

Application of nutritional and dietetic principles and counseling in diseases which respond to diet therapy; the diseases included in this course are infants diseases including inborn errors of metabolism, diseases of gastrointestinal tract, liver, pancreas, obesity and diabetes mellitus. The practical part includes selected case studies and dietetic applications.

0603452 Diet Therapy (2) 2 3 3 603332+603353

Application of dietetics in the treatment of some diseases including cardiovascular diseases, respiratory and kidney disease; also severe disease conditions requiring nutritional rehabilitation such as situations of some surgeries, burns, accidents, cancer and AIDS; and the use of tube feeding and total paternal nutrition. The practical part includes selected case studies and dietetic application.



0603453 Food Hygiene 3 - 3 0603301

Introduction to the concept of food hygiene and its importance; epidemiology of food-borne illness; hazards associated with foods; hygiene requirements in food production and, with emphasis on design and construction and hygienic food handling, processing and storage and prevention of cross contamination; personal hygiene and health requirements, cleaning and disinfection and pest control; application of hazard analysis and critical control point (HACCP) system in food establishments; principles of risk analysis and food safety management systems.

603455 Nutrition and Diseases of Affluence 3 - 3 0603332

Study of the relationship between nutrition and contemporary changes in dietary intake patterns and the development of chronic diseases of affluence such as obesity, diabetes mellitus, cancer, and cardiovascular and renal diseases; providing the student with a sound foundation in nutritional epidemiology of such diseases to analyze current contemporary nutritional problems and their prevention.

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**Population and environment
0603460 Food service Management
in Institutions 2 - 2 0603322**

Types and characteristics of institutions, structural organization, menu planning, kitchen layout and specifications, equipment, their materials and specifications; management of human resources and operations and quality and quantity control.



**0603461 Quality Management
Systems 1 3 2 Forth grade
Level**

Principles and applications of ISO 9000 and 22000, HACCP, risk analysis, good manufacturing practices, as well as other quality management systems. The practical part includes field visits and to food institutes and case studies.

**Nutrition counseling and education
Laboratory methods
Training, Research ,Seminars and Graduation Project**

0603391 Research Methodology 2 - 2 0605150

Basic of nutrition science research, with emphasis on the systematic process of identification and defining of research problems, formulation of hypotheses, quantitative and qualitative techniques for the collection and analysis of data, and the ethics of scientific research; development of a research proposal and training of the student on critical reading of research papers.

**0603490 Seminar in Human Nutrition
and Dietetics 1 - 1 (*)**

Training of the students to collect information on a certain subject in an area of nutrition and dietetics from different sources; presentation and discussion of the subject.

**603492 Training in Food service
Institutes - - 3 (**)**

Training the student in a foodservice institution on menu planning and management of human resources and operations from purchasing until service as well as controlling the quality.



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**603493 Training in The Nutrition of
Healthy People. - - 3 (**)**

Training the students to enable them develop skills in the nutrition of healthy people at different ages and physiological stages in the area of: nutritional assessment, nutritional education and counseling, diet and meal planning, community nutrition program, use of electronic nutrition soft ware.

**603494 Training in Therapeutic
Nutrition - - 3 (**)**

Training students to enable them develop skills necessary for: evaluating the nutritional status of patients and planning of suitable therapeutic diets for different disease conditions, use of electronic nutrition soft wares.

**603495 Graduation project
- - 3 (**)**

The student will undertake an applied project in any area of nutrition and dietetics under the staff supervision alone or in partnership with one student or more.

() Minimum successful 95 credit hours and (Diet Therapy (1) + Diet Therapy (2)+ Nutrition during the lifecycle + Assessment of Nutritional Status)**

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**603100 Principles of Human
Nutrition 3 - 3 –**

Basic concepts of human nutrition including a brief account of nutrients and their food sources and their body requirements in the different stages of life cycle. Planning balanced and healthy diet and its role in human health and disease. Malnutrition as influenced by local food habits and a brief account of the world food problems. Food safety and sources of food contamination.

**0603101 Principles of Food and
Nutrition 3 - 3 0304101**

Introduction to the nutrients with respect to classification; dietary sources, functions and body requirements, the concept of balanced diet; the etiology and management of malnutrition. Introduction to types and causes of food spoilage, food preservation, and food-borne diseases, emphasizing the status of nutrition and food industries in Jordan.

**0603201 Nutrition and Food
Processing 2 - 2 303102 +
304102**

Introduction to the nutrients with respect to classification , dietary sources , functions and body requirements, their role in food processing and preservation ; the concept of balanced diet ; the etiology and management of malnutrition . Introduction to causes of food spoilage, food borne diseases and food preservation emphasizing the status of nutrition and food industries in Jordan .



**0603232 Applied Nutrition (for
Nursery Students) 3 - 3 501101**

**Nutrients: Classification, food sources, functions and requirements;
concepts of balanced meals,
malnutrition: causes and management. Food preservation and processing:
refrigeration, drying,
pickling, concentration, freezing, fermentation and use of chemical
preservatives. Meal
preparation. Food groups and their use in dietary planning .The practical
part includes training on
food preservation skills using different**