

رقم المقرر	اسم المقرر	عدد الوحدات	عدد الساعات	التوصيف العلمي للمقرر (عربي)	التوصيف العلمي للمقرر (انجليزي)
المقررات التخصصية الاجبارية					
111-43-03	Introduction to Food Science	3	3	-	The subject introduces the definition of foods science and technology, its importance to the community, the key sources of foods, ways of processing, and preparation of various foods – ingredients and their relation to nutritional value – changes and transactions of foods – additives – and available food sources globally.
125-43-03	Food Preservation and Manufacturing	3	4	-	The subject covers studying the factors that lead to food decay and deterioration and the preventive methods applied accordingly. Introducing the various ways of food preservation whether by using low temperatures such as cooling and freezing, or using high temperatures such as thermal drying, pasteurization, and sterilization for the canning process, and using high sugar and salt concentration levels,

as well as using industrial fermentations. The course will discuss the food spoilage factors and the preservation methods.					
Principles of microbiology applied to the quality control of foods. Emphasis is on the growth and survival of microorganisms in foods, methods of analysis, species of importance, control of food borne pathogens and food spoilage organisms. Laboratory work is on basis standard techniques employed for the microbiological quality evaluation of food.	-	4	3	<b>Food Microbiology</b>	<b>127-43-03</b>
This subject aims to clarify the concept of food security in our modern world, especially in the Middle East, underscoring the close relationship between production, marketing, and consumption levels and the rates of population increase, as well as shedding light on social, economic and political variables that affect food security.	-	3	3	<b>Food Security</b>	<b>128-43-03</b>
This course presents an overview of the hospitality industry including the hotel, restaurant and travel segments. This course takes a management perspective in introducing students to the organization and structure of hotels, restaurants, food service, Kuwait		4	3	<b>Hospitality</b>	<b>130-43-03</b>

food industry and cruise ships. There are chapters on business ethics, franchising, management contracts, and areas of management responsibility such as human resources, marketing and sales, and advertising					
<p>This course deals with receiving and handling of food deliveries, checking food deliveries, stock rotation and stock records. It deals also with accept and store of meat, poultry, fish, fruit and vegetables, eggs, bread items, dairy foods and dry goods. Different storage conditions such as ambient, chilling, freezing as well as storage of cooked, uncooked and preserved foods will be included. Principles and functions of food packaging including types and material of food-packaging containers will be considered.</p> <p>This course also covers function and the importance of food packaging</p>	-	3	3	Food Storage	218-43-03

material putting emphasis on their chemical and physical properties, interaction with foods and applications in selected food commodities.					
<p>Food Law is the foundation that supports an understanding of all industry regulation.</p> <p>This course outlines major U.S. food laws, factors that led to their passage, and explains the role of key agencies like the FDCA, FDA and FSIS in regulation and enforcement.</p> <p>Other topics include religious dietary law, occupational Safety and Health Administration regulations, environmental regulations, HACCP and GMPs, laws governing health claims, and the regulation of biotechnology. The laws and regulations governing food production in Kuwait at provincial and federal levels will be discussed.</p>	-	3	3	<b>Food Laws and Regulation</b>	<b>233-43-03</b>

<p>Review of products available in world market, with focus on Kuwait.</p> <p>All topics will be explored through discussions on factors that make a food safe or unsafe, risk-benefit concepts, the real safety issues and the role of regulatory agencies and consumers to ensure safety of food.</p>					
<p>The subject addresses basics of group / community nutrition (hospitals – restaurants – hotels – schools, and the like), cooking methods of various foods – calculating food quantities – features of food menus and factors affecting how they are planned – activities of main operations in food service systems – required utensils used in kitchens. Including catering management.</p>	-	3	3	<b>Food Catering Services</b>	<b>235-43-03</b>

<p>The economic and nutritional values of meat and meat products-</p> <p>Slaughterhouse and its importance-</p> <p>Meat carcasses (Major cuts and chemical composition)-Structure and functions of meat muscle-</p> <p>Postmortem changes in meat muscles-Factors affecting meat palatability-Meat type identification-</p> <p>Poultry slaughter and processing-</p> <p>Chemical and physical characteristics of fish-Meat, poultry and egg and fish preservation and storage-Meat and fish processed products (cured meat products, sausages, smoked meat, dried meat, canned meat, canned fish, smoked fish and dried fish products)-</p> <p>Meat, Poultry and Fish by-products.</p>	-	4	3	<b>Meat and Fish Technology</b>	<b>237-43-03</b>
<p>Dairy Technology studies physical and chemical and properties of milk.</p> <p>Milk production management fresh</p>	-	4	3	<b>Dairy Technology</b>	<b>239-43-03</b>

dairy production and powder milk processed ingredients. Examining fresh milk chemically, and microbiologically . Studying the dairy products processes produced from milk (yogurt, ice cream, cheese ).					
<p>In this subject, students study food quality theoretically and practically – how samples are taken – various ways to evaluate food quality characteristics – quality criteria, difference between food quality assurance and quality control , and global specifications of food. The importance of HACCP and its relation to food quality.</p> <p>The importance of International Standard Organization (ISO).</p>	-	4	3	<b>Food Quality Assurance</b>	<b>243-43-03</b>

<p>Food analysis it aims to characterize food products in terms of chemical composition, traceability, safety, quality, introduces the scientific and practical ways of how food samples are taken for analysis – basics of quantitative and qualitative estimations of food ingredients to estimate food quality, and how far they are compliant with standard specifications and food regulations.</p>	-	4	3	<b>Food Analysis</b>	<b>245-43-03</b>
<p>The subject studies the technological aspects of cereals and their produces as well as plant oils in terms of composition and structure – grinding and extraction processes - it also includes practical study of applying the theoretical aspects, as well as studying characteristics and ingredients.</p>	-	4	3	<b>Cereals Technology</b>	<b>248-43-03</b>



<p>The subject addresses food health and safety in all processes from production till consumption, as well as the safety of the tools and equipment used to serve foods, safety and cleanliness of catering staff/personnel, health requirements to be followed by personnel working in the fields of food and nutrition, while shedding light on health requirements to be followed by catering enterprises.</p>	-			<p><b>Health Affairs of Foods</b></p>	<p><b>249-43-03</b></p>
<p>Each semester / year the training covers 4 hours of practical visits and training to Food Catering companies, Juice factories, Hotel Kitchen. Visits includes Kuwait Institute for Scientific Research (Department of Biotechnology - KISR), Public Authority for Agriculture and Fisheries Resources ( Meat standards and Laws), Fresh</p>	-	<p><b>4</b></p>	<p><b>1</b></p>	<p><b>Field Training in Food Science</b></p>	<p><b>251-43-03</b></p>

Produce , Fertilizers and Animal feed, fish husbandry. Kuwait Dairy Company (KDC) (Farm Milk Production and lab testing of Milk and care of Animals ), Ministry of Health Laboratories, Kuwait Municipalities Standards and Specifications, Public Authority for Industry (ISO) and Food Standards, Environmental Protection Agency (EPA) role and activities , Public Authority for Food and Nutrition (Inspection Department for imported and exported food products.					
The 30 hours summer training covers daily applied practical training for the students to live up to the nature of work in the field of Food Science.	-	30	3	Field Training (summer) on Food Science	301-43-03

<p>Field visits inspection to Food manufacturing, Restaurants, Cafeteria, Hospital, Military and Schools Kitchen Facilities. Learning how to apply Good Manufacturing Practices in Catering food.</p> <p>Inspection on site using up to date equipment as Temperature controls, Fried oil control, Sanitation testing, PH testing, for facilities and premises. Learn the Hygiene standards of employees. Understand standard and specification of raw food , and processed products . The Training covers Laboratory testing by taking samples of different prepared food from restaurants to test them chemically and microbiologically.</p>					
<p>The subject addresses the functions of food, and its role in human life and health – essential nutrients and</p>	-	3	3	<p><b>Introductory Principles of Human Nutrition</b></p>	<p><b>112-43-03</b></p>

<p>how they are impacted by the processes of digestion, absorption, and metabolism inside human body</p> <p>– needs of various nutrients and their sources, calculation of calories, balanced food and its impact on human body health.</p>					
<p>This subject aims to identify food nutrients and their role in growth and health – the relationship between nutrition, health, and disease – healthy nutrition – impact of processes on food</p>	-	3	3	<b>Food and Health</b>	<b>123-43-03</b>
<p>The subject addresses man's nutritional and physiological needs to grow and develop across various age groups from prenatal to seniority – the factors that affect these needs and their evaluations, modern ways of diseases'treatment, prevention and their breakouts</p>	-	3	3	<b>Nutrition Across Age Groups</b>	<b>124-43-03</b>

<p>This subject is an introduction of nutritional care for community individuals, the role of nutrition specialist in identifying nutritional problems in the community by monitoring nutrition to assess the nutritional condition of individuals and groups with the aim to reduce nutrition-related health problems – and conduct nutrition awareness programs to improve the nutritional condition of the community.</p>	-	4	3	<b>Community Nutrition</b>	<b>232-43-03</b>
<p>The subject aims at introducing students to how nutritional assessment of individuals and communities/groups is conducted across age groups – conducting nutrition surveys to assess nutritional condition – how individual interviews are conducted – studying the medical, lab, and nutritional history – analysis of</p>	-	4	3	<b>Nutrition Assessment</b>	<b>234-43-03</b>

collected information to evaluate nutritional condition, studying tools and techniques of food condition and the factors affecting nutritional condition evaluation.					
The subject studies the functions of body organs – characteristics of nutrients and the interactions inside human body – metabolism of carbohydrates, proteins, and fats, and the role of both vitamins and minerals in the body.	-	3	3	<b>Nutrition and Metabolism</b>	<b>125-43-03</b>
In this subject, students study how to make plans, and implement and evaluate programs on nutrition education both for individuals and groups using various methods of learning, media channels, lectures and seminars for all ages from childhood to adulthood (nutrition	-	4	3	<b>Nutrition and Metabolism</b>	<b>244-43-03</b>

specialization Compulsory, and food science specialization elective)					
This subject provides a study on the types of core remedial nutrition diets/systems used in hospitals and on how they are implemented and modified – fundamentals of providing any remedial nutrition system in various ailment conditions such as diabetes, obesity, digestive systems diseases, liver, kidneys, heart – evaluating nutritional care of patients	-	3	3	<b>Therapeutic Nutrition</b>	<b>246-43-03</b>
During this course, the student is trained to apply the fundamentals of nutritional care in hospitals by getting acquainted with the method of reading the patient's medical file, including patient's condition, diagnosis, symptoms, method of reading medical analysis and	-	4	1	<b>Field Training in Nutritional Science</b>	<b>252-43-03</b>

<p>medical history, and taking physical measures according to health status.</p> <p>Training is also carried out on the basics of interviewing and communicating with patients, getting acquainted with all the therapeutic diets provided to patients in the hospital, and learning about the method of assessing different meals according to the patient's need and health status.</p> <p>Also, students are trained in outpatient clinics for chronic diseases such as diabetes, hypertension, heart diseases, kidney diseases, gastrointestinal diseases, etc.) in general and specialized hospital wards (internal medicine - surgical - pediatrics). They are also trained to prepare educational materials for patients in an</p>					
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accessible scientific way that is easy for the patient to understand.					
<p>This subject includes continuous daily training for the student to live up to the nature of work in the field of Nutrition.</p> <p>This subject includes conducting field visits to places related to the field of Nutrition Science.</p> <p>An advance course of practical training in different aspects of menus for different type of patients, storage, and inventory control in hospital settings of the Ministry of Health and private clinics. Activities will be performed by the student and evaluated by a preceptor. Emphasis will be placed on effective communication with personnel, developing proper</p>	-	30	3	Field Training (summer) in Nutritional Science	302-43-03

<p>employee attitude. Students learn the role and duties of Assistant Nutrition in hospital. Upon completion, students should obtain dispensing skills and be able to demonstrate an understanding of Nutrition operations, utilize references, ability to read and assess recipes, prepare patient menus, and efficiently operate computers. Skills in prepare food for special patients. Time period of this practical field experience will be 30 hours per week for 7 weeks (a total of 210 hours of intensive hospital and private clinics training).</p>					
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