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VISION  
2030

جامعة أم القرى  
كلية العلوم الطبية التطبيقية  
قسم التغذية العلاجية

**Course Curriculum for Postgraduate Diploma in Food Safety and Quality Control**  
**College of Applied Medical Sciences**  
**Department of Clinical Nutrition**

This programme requires you to undertake 24 has the following:

Level	Course Code	Course Title	Required or Elective	Prerequisite Courses	Credit Hours
Level 1	1702525-2	Food Toxicology	R		2
	1702516-2	Food Processing & Preservation	R		2
	1702517-3	Food Microbiology	R		3
	1702518-2	Fundamentals of Food and Nutrition	R		2
	1702519-2	Food Laws and Standards	R		2
Level 2	1702524-3	Food Inspection, Investigation and Judgment	R		3
	1702515-2	Food plant Sanitation and Hygiene	R		2
	1702526-3	Food Safety and Quality Management Systems (GMPs, HACCP).	R		3
	1702527-2	Food safety practical in establishments	R		2
	1702523-3	Research methodology in Nutrition	R		3



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## Courses Description

### **Food Toxicology / 1702515-2**

The course will cover topics such as formation, characteristics, and control of various toxins (natural and synthetic) that occur in food. Fundamental concepts will be covered including dose-response relationships, absorption of toxicants, distribution and storage of toxicants, biotransformation and elimination of toxicants, target organ toxicity, teratogenesis, mutagenesis, carcinogenesis, food allergy, and risk assessment. The impact of contaminants on nutrient utilization, adverse effects of nutrient excesses, metabolism of food toxicants, and the relationship of the body's biologic defense mechanisms to such toxicants will be covered.

### **Food Processing & Preservation / 1702516-2**

This course assists the students in understanding; the effect of specific food processing and preservation techniques such as pasteurization, dehydration, thermal sterilization, freezing, chemical additives on storage, shelf-life, sensory and nutritional properties of different foods. The Protective packaging and interaction of the food with the package

### **Food Microbiology / 1702517-3**

This module is designed to integrate theory and practice of food microbiology and microbial risk assessment. It covers the Sources of microorganisms in nature; structure and reproduction of microbial cell and its implications in the food industry; classification of microorganisms, desirable and undesirable roles of microorganisms in the food industry; sources, growth and destruction of microorganism in foods. Morphology, classification, identification and life cycles of parasites transmitted via food, Food borne diseases and control of microorganisms of importance to food safety.

### **Fundamentals of Food and Nutrition / 1702518-2**

This is an integrated lecture/lab/recitation course applying theories of molecular reactivity to model food systems. Lectures focus on the molecular bases of chemical phenomena that dictate the behavior of foods. Laboratories and recitations provide opportunities for students to observe, manipulate, and explore model food systems. The emphasis is on the major food components (water, lipids, proteins, and carbohydrates) and their behavior under conditions of particular relevance to food processing.

### **Food Laws and Standards / 1702519-2**

The course of food laws and standards is designed to provide the opportunity for in-depth study of the importance and development of food legislation, codes of practice and specifications, and formulations of food standards. In addition, this course surveys the food laws and regulations of a variety of countries and regions. After an overview of general concepts in global food regulation and the international food safety agencies, the course compares and contrasts the similarities and differences in food law and regulations around the world. This course gives the student a better understanding of the issues involved in the regulation of foods and food products on a national and global level.



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### **Food Inspection, Investigation and Judgment / 1702524-3**

This module is to provide the student with theoretical and practical of knowledge on the operational procedures concerning the inspection of food. It covers the measurement and monitoring techniques within a food safety and control, identify hazards and assess risks in the food, Food inspection techniques, Appropriate equipment, clothing and record keeping for undertaking inspections in a food premises and during the food production cycle. Administrative systems and procedures and their link to the quality management system, Draft appropriate letters/reports/notices following the completion of inspections.

### **Food plant Sanitation and Hygiene / 1702525-2**

Biological and chemical hazard in food that result from improper processing, packaging, handling and storage, work place safety standards, cleaning of food plant equipment and facilities including characteristics of soil on equipment surfaces, cleaning compounds, clean-in-place, clean-out-of-place, sanitizers and their characteristics, and GMPs. A study of personal hygiene; sanitary practices in food preparation, and Hazard Analysis Critical Control Points.

### **Food Safety and Quality Management Systems / 1702526-3**

This course assist postgraduate students to know and compare between physical, chemical and microbiological contaminants, the genetically modified organisms and genetically modified foods, Develop their ability to analyze current articles/reviews in the field of quality management theories, food safety systems, learning how the different contaminants reach food and how we can determined and measure it by the different methods, identifying the microbiology food safety and the significance of foodborne disease. How we can protecting public health and eliminating risk through application of the quality management programs and studying the international and national regulation of novel foods and labelling requirements.

### **Food Safety Practical in Establishments / 1702527-2**

The course is covering the importance of food safety in terms of industrial food production food in smaller quantities. Sanitation and public health as related to the food service industry, including potential hazards that may occur in the operation and production of food.

Topics include prerequisite programs such as Current Good Manufacturing Practices and Sanitation Standard Operating Procedures, Hazard Analysis Critical Control Point (HACCP), food safety management systems (SQF auditing) and the application of current technologies in reducing foodborne illness. Upon successful completion of the course, the students will receive HACCP and SQF implementation certification.



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### **Research Methods in Nutrition / 1702523-3**

This course will provide an opportunity for participants to establish or advance their understanding of research through critical exploration of research language, ethics, and approaches. The course introduces the language of research, ethical principles and challenges, and the elements of the research process within quantitative, qualitative, and mixed methods approaches. Participants will use these theoretical underpinnings to begin to critically review literature relevant to their field or interests and determine how research findings are useful in forming their understanding of their work, social, local and global environment.