| **Elective courses****It is divided into five levels as follows, and the student chooses one subject from each level****First level:** |
| --- |
| **Course no.** | **Course name** | **No. of credit hours** | **Total**  | **Registration requirements** | **Written exam time** | **The great end of the score** |
| **Theoretical** | **Practical**  |
| E 01 | الاقتصاد البيطرى و تسويق الغذاء Vet. economics and food marketing  | 1 | - | 1 | - | 2 | 50 |
| E 02 | القوانين و حمايه المستهلك Food legislation and consumer protection | 1 | - | 1 | - | 2 | 50 |
| E 03 | اداره منشأت غذائيه Management of food establishments | 1 | - | 1 | - | 2 | 50 |

**Second level:**

| **Course no.** | **Course name** | **No. of credit hours** | **Total** | **Registration requirements** | **Written exam time** | **The great end of the score** |
| --- | --- | --- | --- | --- | --- | --- |
| **Theoretical** | **Practical** |
| E 04 | التلوث البيئى و أثره على سلامه الغذاء Environmental pollution and food safety | 1 | - | 1 | - | 2 | 50 |
| E 05 | اداره فنادق Hotel management  | 1 | - | 1 | - | 2 | 50 |
| E 06 | صحه الاغذيه و المطهرات Food sanitation and sanitizer | 1 | - | 1 | - | 2 | 50 |

**Fourth level:**

| **Course no.** | **Course name** | **No. of credit hours** | **Total** | **Registration requirements** | **Written exam time** | **The great end of the score** |
| --- | --- | --- | --- | --- | --- | --- |
| **Theoretical** | **Practical** |
| E 07 | الاضافات الغذائيه Food additives  | 1 | 2 | 2 | - | 2 | 50 |
| E 08 | المتبقيات فى الاغذيهFood residues | 1 | 2 | 2 | - | 2 | 50 |

**Fifth level:**

| **Course no.** | **Course name** | **No. of credit hours** | **Total** | **Registration requirements** | **Written exam time** | **The great end of the score** |
| --- | --- | --- | --- | --- | --- | --- |
| **Theoretical** | **Practical** |
| E 09 | سلامه الاغذيه المستورده Safety of imported food commodities | 1 | - | 1 | - | 2 | 50 |
| E 10 | الاغذيه الوظيفيةFunctional foods | 1 | - | 1 | - | 2 | 50 |

Elective courses

| **Title**: **Veterinary Economics & Marketing** | **Credit hours** |
| --- | --- |
| **Code Number:** **E01** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | - |
| **Course Contents:**- Introduction about veterinary economics and the importance of economics in veterinary medicine- Pricing- The business of veterinary practice.- Management in a veterinary setting.- Veterinary marketing- Production function theory- Costs of production- Economic and productive efficiency of animal production farms- The economic justification of diseases control- Methods used for assessing the economic benefits of diseases control.- Farm records and accounts.- Depreciation- Position of animal farms and their requirements**Part II**- **Large and small animal problems**- Density problem and its economic importance.- Ununiformity and weight disturbances of breeder flocks and their economic importance.- Economics of drug treatment.- Economic benefits to the individual farmer from mastitis control.- Is bigger better- Economic importance of tuberculosis and brucellosis among cattle and buffaloes.- Culling and costs of diseases in dairy herds.- Surgical affections of equine limbs with special reference to their economic losses.- Management quality.- Judgment on the farm income statement.- **Animal and poultry projects:**- Feasibility studies of broiler projects.Feasibility studies of breeding fresian cattle for milk production. |

| **Title**: **Food regulation. Consumer protection** | **Credit hours** |
| --- | --- |
| **Code Number:E02** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | - |
| **Course Contents:**An Overview. The United Nations Guidelines for consumer protection. Consumer Protection Agencies. International food law. Food legislation (Regulation of food packaging, food additives, food sanitation, regulation of Meat, eggs, fish, Poultry, milk, dairy products).Regulation of imports and exports. Regulation of GMO’s food. Application of risk assessment in food regulation. |

| **Title**: **Food establishments management** | **Credit hours** |
| --- | --- |
| **Code Number: E03** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | - |
| **Course Contents:** The concept of catering services as a business system.Services of restaurant, Services of restaurant, Services of restaurant.Nutrition in hospitalsFeeding in ships and floating hotels Control of meal production lines for large groupsProperties and cookware designed to provide feeding groupsProperties and cookware designed to provide feeding groupsManagement of food and beverage serviceContracting of raw materials and methods of preparationRaw materials used in feeding groupsProduction systems for lunch for large groupsControl of meal production lines for large groups- . |

| **Title:** **Environmental contaminants and Food safety** | **Credit hours** |
| --- | --- |
| **Code Number :E04** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | - |
| **Course Contents:**1.Food safety and hazard in food.2. Biological hazards (Bacteria and its toxins, Virus, Parasite).3. Chemical hazards (Mycotoxins, plant toxins and fish toxins).4. Non biological contaminants (contaminants from food contact materials).5. Environmental contaminants (Dioxin and heavy metals ).6. Veterinary residues (antibiotic and hormones)7. GMPs and Government regulations.8. Veterinary products: residues and resistant pathogens. |

| **Title**: **Hotel Management** | **Credit hours** |
| --- | --- |
| **Code Number: E05** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | - |
| **Contents:**Introduction to Hotel MarketingHotel ManagementContemporary cuisineNutrition and planning menus and drinkFood health and safety in the hotel industryHospitality Asset ManagementPurchasing Management in HotelsCost accounting in hotelsManage entertainment placesProject Management and Feasibility Study  |

| **Title**: **Food Sanitiation & Sanitizer** | **Credit hours** |
| --- | --- |
| **Code Number:** **E06** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | - |
| **Course Contents:**. Personal Hygiene, Sanitation in the home,Food Service sanitation, Food plant sanitationPlant exterior, Plant construction, Equipment, Personal facilities Storage, Cleaning the plantWater supply, Sewage disposal, Sanitation in retail outletsThe Hazard Analysis and Critical Control Point (HACCP) |

| **Title**: **Food Additives** | **Credit hours** |
| --- | --- |
| **Code Number: E07** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | 1(1) |
| **Course Contents:**. Food Additives○ Antioxidants, Sweeteners, Flavourings, Colours○ Antimicrobial preservatives, Enzymes, Nutritive additives (Vitamins & Minerals)○ Emulsifiers, Bulking agents, pH control agents○ Antifoams and release agents, Flour improvers and raising agents, Gases, Chelating agents |
| **Title**: **Food Residues** | **Credit hours** |
| **Code Number:E08** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | 1(1) |
| **Course Contents:****.** Veterinary Drug Residues* Ant-Helmintics, Antibiotics, Coccidiostats, Growth Promoters and Hormones.
* Other Contaminants

○ Pesticides, Trace elements, Mycotoxins, Tranquillizers, Probiotics, etc.  |
| **Title**: **Hygiene & safety of imported foods** | **Credit hours** |
| **Code Number: E09** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | 1(1) |
| **Course Contents:**Emerging Global Food System Risks and Potential SolutionsA Cooperative Federal–State Approach for Monitoring Imported Foods: Reviewing the New York State ModelThe Impact of the Development Model on Food SafetyLegal and Regulatory Issues/Structures in the United States and AbroadImproving US Regulation of Imported FoodsEU Food Safety Regulation and Trust-enhancing PrinciplesExperience of Food Safety Authorities in Europe and the Rapid Alert SystemThe Development of and Challenges Facing Food Safety Law in the People’s Republic of China 151Defining Food Fraud and the Chemistry of the CrimePotential Strategies to Improve Import SafetyTracking and Managing the Next CrisisFood Product TracingImproving the Safety of Imported Foods with Intelligent Systems: The Case of United States–Mexico Fresh Produce Supply ChainTesting with Confidence in the Pursuit of Global Food SafetyGlobal Food Protection: A New Organization is NeededSummary and Recommendations for the Safety of Imported Foods |

| **Title**: **Functional foods** | **Credit hours** |
| --- | --- |
| **Code Number** **: E10** | **Lectures** | **Practical** |
| **Prerequisite courses:** | 1 | 1(1) |
| **Course Contents**Definition , Benefits, classifications, functional foods of animal origin., functional foods of plant origin, safety considerations, the future of functional foods |