

# SANITATION, SAFETY AND HYGIENE

**Prerequisite:** None    **Credits:** 3

## Overview

This course will provide students with information on basic microbiology, safety, personal hygiene, general handling of food. Local legislation for the food service industry will be examined. The course will provide students with the opportunity to obtain international certification in this area.

## General Objectives

This course is designed to:

- 1 present the rules of personal hygiene and the importance of adhering to safety rules and regulations.
- 2 introduce the causes and prevention of food poisoning and to introduce the requirements of safety in the workplace.
- 3 introduce local legislation relating to the food service industry

## Learning Outcomes

Upon successful completion of this course, the learner will:

- 1 discuss how contamination of food can occur in a food service establishment.
- 2 describe the effect and consequences of food borne illness.
- 3 display sound practices to prevent the possibility of food poisoning.
- 4 identify measures/procedures that will reduce or eliminate accidents in food preparation and service areas.

## Topics

### 1.0 How Food Handling Practices Cause Foodborne Illness

#### Objectives

Upon completion of the topic the student will be able to:

- 1.1 explain the concept/idea of food safety to other food handlers/employees/customers
- 1.2 discuss the types of hazards involved in food preparation
- 1.3 identify the challenges to food safety in their particular kind of food business operation
- 1.4 identify the factors that influence the growth of micro-organisms
- 1.5 illustrate by simulation/role-play, selected conditions that are associated with hazards in handling food.
- 1.6 explain what is meant by the “temperature danger zone” in food safety
- 1.7 identify The kinds of food borne illness that may result from unsafe food handling

#### Content

- The concept of food safety in the business environment
- The definition of “micro-organism”
- Factors that influence the growth of micro-organisms
- The definition of food borne illness

### 2.0 How Personal Hygiene Affects Food Safety

#### Objectives

Upon completion of the topic the student will be able to:

- 2.1 identify the kinds of organisms found on the human body, that may cause food contamination
- 2.2 illustrate the link between personal hygiene and food safety
- 2.3 demonstrate the principles of personal hygiene appropriate to safe food handling
- 2.4 explain why persons with the following conditions should not be involved in food preparation: fever, diarrhea, upset stomach, nausea, vomiting, sore throat, sinus infection, coughing, sneezing, dizziness

- 2.5 identify conditions and illnesses that must be reported to the employer or other authorities if the individual is a food handler

#### **Content**

- Principles of personal hygiene
- The linkages between personal hygiene and food safety
- Characteristics of food contamination

### **3.0 Sanitation Practices Relating to Purchasing and Receiving**

#### **Objectives**

Upon completion of the topic the student will be able to:

- 3.1 explain the characteristics of safe sources in the context of food safety
- 3.2 identify safe sources of foods and food products
- 3.3 adjust receiving schedules in keeping with food safety time:temperature requirements
- 3.4 identify characteristics of wholesome foods and food products, by category: fruit & vegetables, canned foods, meats and poultry, eggs, fish, dairy products, dry goods
- 3.5 explain the safety implications of “critical dates” labelling, specifically the following: “expiry”, “use by”, “best by”, “manufactured on”, in keeping with national standards
- 3.6 identify what changes they need to make to existing practices in order to meet food safety requirements
- 3.7 participate constructively with employees and health personnel in food inspection activities

#### **Content**

- Safe sources of food and food products
- Local food safety standards

### **4.0 Safe Food Storage Practices**

#### **Objectives**

Upon completion of the topic the student will be able to:

- 4.1 explain the meaning of storage in the context of food handling establishments and their supplier.
- 4.2 illustrate by example the types of food storage and their distinguishing characteristics
- 4.3 identify and maintain safe-zone temperatures for raw and cooked foods
- 4.4 store chemicals safely in relation to food components and food products
- 4.5 store food handling equipment and utensils safely
- 4.6 identify and discuss low cost, efficient storage strategies that are suited to the business operation

#### **Content**

- Types of food storage facilities
- Definition of “safe-zone”
- Sanitation of food handling equipment and utensils
- Cost effective storage

### **5.0 Safe Freezing, Thawing and Reheating**

#### **Objectives**

Upon completion of the topic the student will be able to:

- 5.1 distinguish between cooking and reheating
- 5.2 practice safe reheating
- 5.3 practice safe methods of thawing
- 5.4 practice safe freezing
- 5.5 apply time-temperature principles in practical situations

#### **Content**

- Definition of cooking and reheating
- Safe methods of reheating
- Safe methods of thawing
- Safe methods of freezing

## 6.0 Cleaning and Sanitizing Practices to Promote Food Safety

### Objectives

Upon completion of the topic the student will be able to:

- 6.1 differentiate between cleaning and sanitizing
- 6.2 explain what is meant by a food contact surface
- 6.3 identify the types of cleaning agents and sanitizers that may be used safely in a food handling operation
- 6.4 identify, plan, implement and monitor a basic cleaning schedule which ensures that areas, utensils and equipment are cleaned and sanitized
- 6.5 clean and sanitize based on the “3 sink principle”, using either a 3-compartment sink or a safe alternative
- 6.6 use cleaning agents and sanitizers safely in the food handling operation
- 6.7 store cleaning and sanitizing chemicals safely
- 6.8 store cleaned and sanitized items safely

### Content

- Definition of cleaning
- Definition of sanitizing
- Cleaning agents and sanitizers
- Cleaning methods
- Sanitizing methods
- Methods of storing chemicals safely

## 7.0 Vector Control

### Objectives

Upon completion of the topic the student will be able to:

- 7.1 describe the diseases that the vectors spread.
- 7.2 explain the indicators that show the presence of the vectors.
- 7.3 identify vector control measures.
- 7.4 explain and demonstrate the safe use of chemicals in vector control.

### Content

- Definition of vector
- Methods of identification of vector presence
- Vector control methods

## 8.0 Legislation (Local and International)

### Objectives

Upon completion of the topic the student will be able to:

- 8.1 differentiate between the Act and the Regulation.
- 8.2 list the relevant regulations and dates they were enacted.
- 8.3 outline the requirements for the registration and licensing of food premises and vehicles.
- 8.4 identify the legal requirements for the satisfactory layout of food establishment.
- 8.5 identify the penalties for the contravention of the regulations.
- 8.6 outline the functions of Environmental Health Officers as described in the regulations.

### Content

- Environmental health regulations
- The functions of Environmental Health Officers

## 9.0 Principles of HACCP

### Objectives

Upon completion of the topic the student will be able to:

- 9.1 define HACCP
- 9.2 describe the preparation processes that are involved in selected foods
- 9.3 create a basic flow diagram/description of selected preparation and serving processes
- 9.4 demonstrate safe ways of tasting, touching and smelling foods
- 9.5 identify the types of hazards that may occur in selected preparation and serving processes for a cooked food and a food that is served uncooked
- 9.6 identify the stages at which these hazards may occur in the processes of preparation and serving
- 9.7 distinguish between a “control point” and a “critical control point”
- 9.8 identify the critical control points in a “preparation flow” for a specific finished product typically prepared in the food establishment

- 9.9 outline preparation and serving practices to selected basic Health Services Regulations.
- 9.10 discuss the importance of the introduction to the principles of HACCP on the traditional methods of food purchasing, storage and preparation
- 9.11 describe the role of the local National Standards Institute and the Ministry of Health in implementing the guidelines articulated in HACCP

**Content**

- Definition of HACCP
- Definition of control point
- Definition of critical control point
- Relationship of HACCP to health regulation
- HACCP vs traditional approach to food preparation and service.

**10.0 Food Preservation**

**Objectives**

Upon completion of the topic the student will be able to:

- 10.1 define “food preservation”
- 10.2 state three principles of food preservation
- 10.3 define the term “additive”
- 10.4 describe at least four reasons for preserving food
- 10.5 discuss at least five methods of food preservation
- 10.6 define the terms “pasteurization” and “UHT”

**Content**

- Principles of food preservation
- Reasons for preserving food
- Methods of food preservation

**11.0 Refuse/Waste Disposal**

**Objectives**

Upon completion of the topic the student will be able to:

- 11.1 define the terms “refuse”, “rubbish”, “garbage” and “waste”
- 11.2 identify the different types of refuse
- 11.3 explain the characteristics/properties of refuse
- 11.4 discuss the storage of refuse before collection
- 11.5 identify final disposal sites
- 11.6 discuss suitable methods of solid and liquid waste disposal and state their advantages
- 11.7 identify potential hazards of improper waste disposal

**Content**

- Characteristics and types of refuse
- Storage of refuse
- Refuse disposal methods

**12.0 Safety Issues**

**Objectives**

Upon completion of the topic the student will be able to:

- 12.1 define the local legislation dealing with safety at work
- 12.2 describe the types of accidents that may occur and indicate the causes
- 12.3 discuss preventative measures
- 12.4 establish an accident prevention code

**Content**

- Local/regional legislation relating to safety at work
- Types of accidents that may occur in the work place
- Development of an accident code policy

### 13.0 Fires

#### Objectives

Upon completion of the topic the student will be able to:

- 13.1 discuss local fire regulations.
- 13.2 state the types of fire extinguishers that should be used for specific fires.
- 13.3 demonstrate the correct use of fire extinguishers.
- 13.4 explain procedures to be followed in case of fire.
- 13.5 recognize the importance of memorizing the emergency fire station number

#### Content

- Types of fires.
- Causes and prevention.
- Procedure in the handling of fires

### 14.0 Basic First Aid Techniques (Red Cross)

#### Objective

Upon completion of the topic the student will be able to:

- 14.1 describe simple first aid for minor burns, cuts electric shock and drowning casualties, etc.

#### Content

- Treatment of burns, cuts and electric shocks
- Resuscitation techniques

#### Instruction Format

Lecture  
Discussion  
Demonstration  
Guest Lecturer  
Field trips

#### Assessment and Evaluation

- Sanitation and Safety
  - one group project – 10%
  - a mid-term test - 15%
- First-Aid
  - three practical assessments - 15%
- Final theory exam (combines the sanitation and safety and first aid components) - 60%

#### Recommended Text

Applied Food Service Sanitation, National Restaurant Association, Wiley, John & Sons.

Hygiene for Management. London: Highfield Publications, 1998. Springer, Richard A.

Food Poisoning and Food Hygiene. London: Arnold, 1998. Hobbs, Betty C. and Roberts, Diane

Food Hygiene, Health and Safety. London: Longman, 1998. Stretch, A and Southgate, H.

The Essential Guide to food Hygiene and Safety. Surrey: Eaton Publications, 1997. Aston, Graham and Tiffney, John.

Food Safety: A Guide to What You Really Need to Know, J M Hemminger; published in 2000 by Wiley-Blackwell

Principles of Food Sanitation (Food Science Text Series), 5<sup>th</sup> Edition 2006, N Marriott & R B Gravanni, published by Springer

HACCP and Sanitation in Restaurants and Food Service Operations, 2005L Arduser & D R Brown; Atlantic Pub. Group Inc.

#### Attendance

Students are encouraged to attend all class sessions as all information presented may not be covered in the required text. Participation of students is an integral component of the learning process.