

## BSC23SE105

### Introduction to Food Hygiene and food testing (SEC)

CREDIT 2

#### 1 General Introduction

(5 Hours)

1. Food hygiene,
2. Food poisoning
3. Food spoilage
4. Socio-economic costs of poor food hygiene,
5. The role of HACCP and hazard analysis in ensuring food safety.
6. Foods most commonly involved in outbreaks of food poisoning.

#### 2. Food contamination and its prevention

(10 hours)

1. Define the terms: contamination, cross contamination, high risk food.
2. Main sources, vehicles and routes of bacterial contamination of food.

#### 3. METHODS OF PRESERVATION

- Temperature (including cooking, canning, pasteurization)
- Dehydration, control of water availability
- Chemicals (particularly salt and sugar)
- Controlled atmosphere packaging and vacuum packing
- Smoking

#### Unit 3. Routine testing methods

(15 hours)

1. Preparation of nutrient agar plates, slants and nutrient broth
2. Cultivation and isolation of bacteria
3. Cultivation of anaerobic bacteria
4. Cultivation and isolation of fungi
5. Staining of bacteria:
  - Differential staining: gram staining and acid fast staining
  - Endospore staining
6. Mounting of fungi
7. Biochemical tests: IMViC test

8. Demonstration of rapid identification kit
9. Standard Plate Count of milk
10. Most probable number of coliforms
11. Detection of faecal coliforms
12. MBRT/Resazurin test
13. Phosphatase test
14. Cultivation, Isolation and Identification of *Staphylococcus aureus*, *Bacillus cereus*, *Escherichia coli*, *Enterobacter aerogenus*, *Pseudomonas*.