

# **NITEC IN APPLIED FOOD SCIENCE**

## **Core Modules**

### **Applied Science Fundamentals**

On completion of the module, students should be able to identify common elements of organic molecules, inorganic molecules, nomenclature used, chemical structure and bonding, common functional groups as well as the properties associated with the various functional groups of organic compounds, inorganic compounds and perform basic measurements in the laboratory.

### **Introduction to Food Science**

On completion of the module, students should be able to identify the various food groups, components in food including their physical and chemical properties, identify the select criteria and perform inspections through physical checks or using equipment.

### **Food Processes and Equipment**

On completion of the module, students should be able to follow the safety requirements in a processing plant, explain the various methods of food preparation and processing, perform recording of process parameters, operate food preparation and processing equipment safely, and troubleshoot product deviations of the process.

### **Food Microbiology**

On completion of the module, students should be able to perform environmental monitoring, conduct microbial analysis of food samples, perform basic microscopic technique and identify the characteristics of micro-organisms.

### **Fundamentals of Laboratory Chemistry**

On completion of the module, students will be able to perform basic laboratory techniques, organise laboratory data and perform basic analytical preparation and measurement.

### **Food Service and Business Management**

On completion of the module, students will be able to identify the various types of food service operations, develop products / services for customers and perform specific procedures pertaining to food service operations.

### **Food Analysis**

On completion of the module, students should be able to perform in-coming, in-process and final product laboratory analysis as well as interpret data obtained from the various tests.

### **Food Safety and QMS**

On completion of the module, students should be able to explain the importance of food hygiene, practise good personal hygiene and housekeeping, conduct audit on food premises and monitor the critical control points at the various stages of food production.

### **Industry Attachment**

Students are provided with the opportunity to work in food processing/manufacturing/catering or food laboratory analysis environments to gain hands-on training in the real work environment.