

NITEC IN APPLIED FOOD SCIENCE

CERTIFICATION

Credits required for certification:

Core Modules	: 50
Life Skills Modules	: 10
Elective Modules	: 4
<u>Total</u>	<u>: 64</u>

COURSE STRUCTURE

Module Title	Credits
CORE MODULES	
Applied Science Fundamentals	6
Introduction to Food Science	7
Food Processes and Equipment	6
Food Microbiology	7
Fundamentals of Laboratory Chemistry	3
Food Services and Business Management	3
Food Analysis	7
Food Safety and QMS	7
Industry Attachment	4
ELECTIVES (COURSE SPECIFIC)	
Food Packaging	2
Product and Process Development	4
ELECTIVES (GENERAL) AND LIFE SKILLS MODULES	
For details, click here	

Note: The offer of electives is subject to the training schedule of respective ITE Colleges. Students are advised to check with their Class Advisors on the availability of the elective modules they intend to pursue.

MODULE OBJECTIVES

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.

Electives (Course Specific)

Food Packaging

On completion of the module, students should be able to select suitable packaging materials, perform quality tests/check for packaging materials as well as assess the effectiveness of applied packaging technology on food product shelf life.

Product and Process Development

On completion of the module, students will be able to plan and design tasks specific to a project and perform planned tasks according to the project plan. They will also be required to prepare a report and orally present the data and results collated from their project.

Electives (General) and Life Skills Modules

For details, click [here](#).