

WORK-STUDY DIPLOMA IN AGRICULTURE & AQUACULTURE TECHNOLOGY

MODULE OBJECTIVES

Core Modules

Crop Curation & Inventory

On completion of the module, trainees should be able to perform crop curation and inventory, manage selection of indoors and outdoors edible and non-edibles. Trainees should also be able to identify activities of supply chain, perform technologies on traceability of fresh farm produce, and implement methods to collect, catalogue and maintain seed stock for future.

Crop Health Management

On completion of the module, trainees should be able to diagnose crop health disorders and determine common plant diseases and pests. Trainees should also be able to develop crop health management programme to treat crop disorder, determine acceptable level and economic threshold level for the responsible use of pesticides.

Urban Farming Systems & Technologies

On completion of the module, trainees should be able to determine different types of agricultural farms and design involved in urban agriculture. Trainees should also be able to perform resource optimisation, manage farming operations and sustainability.

Fish Care & Growth Management

On completion of the module, trainees should be able to identify parameters affecting the growth and health of the fish. Trainees should also be able to identify feed and nutritional requirement at different stages of life cycle.

AgriFood & Nutrient Management in Farm

On completion of the module, trainees should be able to perform soil, media testing, and analysis to meet international food standards for organic certification as well as regional variation in standards. Trainees should also be able to analyse fish nutrients based on feeding program.

Agriculture 4.0 (mechanisation & automation in modern farm)

On completion of the module, trainees should be able to perform mechanical automation farming processes such as seeding, harvesting and watering operations to improve the efficiency of urban farm. Trainees should also be able to interface systems using Internet of Things (IoT) and perform predictive maintenance using augmented reality (AR).

Poultry Egg Farm Systems

On completion of the module, trainees should be able to perform key poultry farming operations such as transporting and sorting through mechanical automation and poultry farming waste maintenance.

Aquaculture Systems & Technologies

On completion of the module, trainees should be able to identify common fish, crustaceans, aquatic plants, algae and other organisms in water for aquaculture farm operation and maintenance.

Precision Farming

On completion of the module, trainees should be able to apply technologies such as artificial intelligence devices and use data to manage a farm for optimal performance in terms of growth, process and yield in traceability.

Water Quality & Diseases Management

On completion of the module, trainees should be able to monitor and analyse water quality parameters and how it would impact the fish growth as well as the aquaculture systems. Trainees should also be able to determine different types of water and aquaculture system treatment, diagnostic techniques used to identify common aquatic diseases and parasites and manage waste disposal and system in the farms.

Company Project

On completion of the module, trainees should have applied their acquired competencies in an authentic project that would value-add to the company.

On-the-Job Training

On completion of the module, trainees should be able to apply the skills and knowledge acquired at ITE College and workplace to take on the full job scope, including supervisory function, where appropriate, at the company.