



Course: Mastering Hydroponic Farming Technology & Innovation
For Beginners, Backyard Growers and Commercial Farmers

Guided Learning Hours: 12

Pre-requisite: None

Course Description:

This course is designed to provide the essential tools required to start a small business or bac yards growers utilizing a modern method of food production. This course aims to build a strong foundation exploring the foundational science of hydroponic farming and creative ways to customized system designs base on fix a budget, geographic land terrane, market demands, natural elements and lifestyle a healthy lifestyle. Utilizing a hands-on teaching approach, participants will be engaged in system design and construction, fertilizer and irrigation managements and the comprehensive breakdown of controlling major insect pest and diseases.

Target Audience:

- Individuals who are interested in hydroponics, growing healthier crops and nutritious food
- Home growers and small business start-ups
- Persons seeking formal training and expertise
- Agro-entrepreneurs

Learning Outcomes

On the completion of this programme, participants should:-

- Understand the principles of plant health and agronomy
- Understand plant fertility and hydroponic fertilizer blends and application methodology
- Understand the different types of hydroponic systems and builds
- Design and build basic shade/greenhouses and fully automated irrigation systems
- Understand the scientific approach to IPM stratifies and Organic Agriculture

Course Content

Module One – Introduction to Hydroponic Farming

- Define Hydroponic Farming
- System Designs, function, and tropical climate suitability
- DIY Hydroponic set-up

Module 2 - Building A budget Hydroponic Drip-to-Waste System (Practical)

- System description and components
- Management and tips
- Construction of System

Module 3 – Hydroponic Fertilizer Blending and Application (Blended)

- Science and Technology of Hydroponic Fertilizer
- Steps in mixing fertilizer
- Plant Fertility

Module 4 – Hydroponic System Management & Record keeping (Practical)

- Proper Handling of Spray devices
- Record Keeping and Daily Operation Planning
- Sanitation

Module 5 – Integrated Pest Management & Good Agricultural Practices (Online)

- Introduction to prevent, control, and eradicate major pests and diseases safely.
- Pest Life cycles, vulnerabilities, and organic practices
- Food Safety and Best Practices

Module 6 – Starting A small Farm Business & Modern Marketing (Classroom)

- Requirements for starting a small farm business in Trinidad and Tobago
- Support systems and government incentives
- Creating a Brand
- The era of Social Media Marketing

Module 7 – Fundamental Science for Post-Harvest Management (Practical)

- Extending shelf life, enhancing food safety, and maximizing returns
- Packaging and local resources