

GUJARAT UNIVERSITY

SYLLABUS

Certificate Course in Hydroponics

Effective from July 2021



Course Name	Certificate Course on Hydroponics
Course Type	Self Financed
Intake	30
Eligibility Criteria	Any Graduate
Admission Process	On Merit Basis
Course Duration	6 Months
Course Commencement	June and December
Fees	Rs. 15,500/-

Certificate course In Hydroponics

This course has 10 units will be completed in 3 months.

The students will have to undertake a Hands-on -Project to be completed in next 3 months.

HYD 101: Introduction to Hydroponic Technology

Introduction, History, Outdoor vs Indoor Hydroponics

Advantages and need of Hydroponics

Small and commercial hydroponics

Hydroponics as a hobby and as a business venture

HYD 102: Plant Growth Requirements

Light: artificial light, Lighting Equipment

Nutrition: Hydroponic Nutrient Formula's

Temperature: Solar Energy Applications in Horticulture

Planting medium: Types, properties, uses.

HYD 103: Hydroponic Growing Systems

Designs, site considerations.

Simple vs. Commercial Systems:

Dug in Aggregate Bed, Automated Systems

The Bentley System

HYD 104: Growing Structures

Greenhouse: types, designs

Greenhouse Benches and Beds: Shelving or Staging, Ground Beds, Raised Beds, Pot Crops,

Flooring, Guttering, Doors

Hi tech Green houses

HYD 105: Environmental Control

Temperature: Air & Water Based Systems, Ventilators

Light: Natural and artificial light, shading

Carbon enrichment

Water: irrigation, humidity, moisture

HYD 106: Cultural techniques In Hydroponics

Growth Control

Hydroponics Pests and Diseases

Nutrients application

Supplying water

HYD 107: Plant Propagation

Plant Propagation Techniques
Mixes/Substrates for Cuttings/Starting Bed
Nutrient Management during propagation
Estimating Cost of Cutting Productions

HYD 108: Commercially significant crops

Cut Flowers: Rose, Carnation, Gerbera, Gladioli, Anthurium, Orchids
Vegetables: Capsicums, cucumbers, tomatoes, Onions, salad greens
Fruits: Grapes, Strawberry, Lemon,
Spices: Basil, Mint,

HYD 109: Plant protection

Disease control
Weed control
Environmental control

HYD 110: Commercial Hydroponics

Layout : Size, Site, Labour, Facilities
Funding: loan, subsidy funding agencies
Harvesting, post harvest management, marketing, storing
Crop Scheduling

HYD 201: Project

The student will undertake a research project on Hydroponics (any aspect), plus write a report on the research and justify or explain findings. The final report should be around 10-15 pages long, and include a title page and a bibliography.