**PERTECNCA'S** 

# POLYHOUSE CONSTRUCTION TRAINING BROCHURE



Practical training

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# **POLYHOUSE CONSTRUCTION TRAINING**

The Polyhouse Construction Training Program is designed for individuals interested in gaining expertise in the design, construction, and maintenance of polyhouses. This course provides a deep dive into the technical aspects of building polyhouses, with an emphasis on sustainability, efficiency, and adaptability to different climatic conditions. The program is ideal for aspiring agricultural engineers, construction professionals, and anyone interested in specializing in polyhouse construction.

# What you'll learn?

- Fundamental principles of polyhouse construction
- Selection of materials for durability and efficiency
- Step-by-step guidance on polyhouse design and construction
- Climate control systems for polyhouses
- Maintenance and troubleshooting techniques

## **Course summary:**

Polyhouses are a critical component of modern agriculture, enabling controlled environments for year-round crop production. This training program covers every aspect of polyhouse construction, from initial design and material selection to advanced techniques for optimizing climate control and crop protection. Participants will gain practical experience in building polyhouses and learn how to tailor them to specific agricultural needs.

Key Takeaways:

- Comprehensive understanding of polyhouse construction techniques
- Skills in designing polyhouses for various agricultural applications
- Knowledge of materials that enhance polyhouse efficiency and longevity
- Expertise in installing and maintaining climate control systems
- Practical experience in troubleshooting and optimizing polyhouse performance

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# Course syllabus:

## **Module 1: Introduction to Polyhouse Construction**

- Overview of polyhouse benefits in modern agriculture
- Types of polyhouses and their applications
- Key factors in polyhouse design and construction
- Economic advantages of polyhouse farming

#### Module 2: Polyhouse Design Principles

- Basic principles of polyhouse design
- Considerations for crop type, climate, and location
- Customizing designs for specific agricultural needs
- Use of CAD software for polyhouse design

#### **Module 3: Material Selection and Procurement**

- Types of materials used in polyhouse construction
- Advantages and disadvantages of different materials
- Sourcing and procurement of construction materials
- Cost-effective solutions for durable polyhouses

#### Module 4: Structural Framework Construction

- Step-by-step guide to building the polyhouse framework
- Techniques for ensuring structural stability and strength
- Installation of foundation, columns, and arches
- Importance of alignment and balance in construction

# Module 5: Covering Materials and Installation

- Selection of covering materials (polyethylene, polycarbonate, etc.)
- Techniques for installing and securing covering materials
- Maintenance of covering materials for durability
- Light transmission and insulation properties of different coverings

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# Module 6: Climate Control Systems

- Overview of climate control needs in polyhouses
- Installation of ventilation, cooling, and heating systems
- Automation and control technologies for optimal climate management
- Troubleshooting and maintaining climate control equipment

#### Module 7: Water Management Systems

- Design and installation of irrigation systems in polyhouses
- Integration of drip and mist irrigation for water efficiency
- Techniques for water conservation and management
- Rainwater harvesting systems for polyhouses

# Module 8: Electrical and Lighting Systems

- Electrical setup for polyhouse operations
- Installation of grow lights and supplemental lighting
- Energy-efficient solutions for polyhouse environments
- Safety considerations in polyhouse electrical systems

## Module 9: Maintenance and Troubleshooting

- Regular maintenance practices for polyhouse longevity
- · Common issues in polyhouses and how to address them
- Techniques for repairing structural and system-related problems
- Case studies of polyhouse maintenance challenges and solutions

# Module 10: Practical Training in Polyhouse Construction

- Real-world exercises in building a polyhouse from start to finish
- Hands-on experience in installing climate control and irrigation systems
- Practical application of design principles and material selection
- On-site troubleshooting and optimization of polyhouse systems

# Module 11: Evaluation and Certification

- Final assessment through practical and theoretical exams
- Evaluation of participants' skills in polyhouse construction
- Certification of completion, recognizing expertise in polyhouse construction

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#### **Practical training:**

- Designing Polyhouses: Learn to create custom designs based on crop and climate requirements.
- Construction Techniques: Hands-on experience in constructing polyhouses using different materials.
- Climate Control Installation: Practical training in setting up and optimizing climate control systems.
- Maintenance and Repairs: Real-time troubleshooting and repair of common polyhouse issues.

#### Career scope:

Upon completing the Polyhouse construction training course, graduates can explore career opportunities in various sectors, including:

- Polyhouse Construction Supervisor
- Agricultural Infrastructure Specialist
- Polyhouse Project Manager
- Sustainable Agriculture Consultant
- Agricultural Engineer
- Greenhouse Technician
- Polyhouse Design Consultant
- Agribusiness Entrepreneur





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