### **PERTECNCA'S**

# DRIP & SPRINKLER IRRIGATION TECHNICIAN TRAINING BROCHURE

A MARINE



Practical training



Post training assistance

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### **DRIP & SPRINKLER IRRIGATION TECHNICIAN**

Optimize water usage in agriculture with our Piping, Drip, and Sprinkler Irrigation Technician training program. This course is designed to equip you with the knowledge and skills necessary to design, install, and maintain efficient irrigation systems. As an Irrigation Technician, you will learn about various irrigation methods, system components, installation techniques, and maintenance practices to ensure effective water management in agricultural fields.

#### What you'll learn?

- Fundamentals of irrigation systems
- Design and layout of drip and sprinkler irrigation systems
- Installation techniques for piping, drip, and sprinkler systems
- Maintenance and troubleshooting of irrigation systems
- Water management and conservation strategies
- Soil-water-plant relationships
- Use of technology in irrigation (automation, sensors)
- System efficiency and performance evaluation
- Safety practices in irrigation system installation
- Environmental impact of irrigation practices

### **Course summary:**

Our Piping, Drip, and Sprinkler Irrigation Technician course provides comprehensive training in the design, installation, and maintenance of modern irrigation systems. You will gain practical knowledge and hands-on experience in various irrigation methods to improve water efficiency and crop yield. This course focuses on the latest technologies and sustainable practices in irrigation.

- Detailed training in drip and sprinkler system design
- Effective techniques for installing irrigation systems
- Advanced maintenance and troubleshooting methods
- Insights into water management and conservation
- Practical knowledge of soil-water-plant relationships
- Use of modern technology in irrigation systems

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### Course syllabus:

### Module 1: Introduction to Irrigation Systems

- Overview of Irrigation Methods
- Importance of Efficient Irrigation
- Roles and Responsibilities of an Irrigation Technician
- Types of Irrigation Systems (Surface, Drip, Sprinkler)

### **Module 2: Basics of Water Management**

- Understanding Plant Water Requirements
- Soil-Water-Plant Relationships
- Water Sources and Quality
- Irrigation Scheduling and Water Use Efficiency

### **Module 3: Piping Systems**

- Types of Pipes (PVC, HDPE, Metal)
- Pipe Fittings and Connections
- Pipe Sizing and Flow Calculations
- Installation Techniques for Piping Systems

### **Module 4: Drip Irrigation Systems**

- Components of Drip Irrigation Systems
- Designing a Drip Irrigation System
- Installation and Layout Techniques
- Operation and Maintenance of Drip Systems

### **Module 5: Sprinkler Irrigation Systems**

- Types of Sprinklers and Their Applications
- Designing a Sprinkler Irrigation System
- Installation and Layout Techniques
- Operation and Maintenance of Sprinkler Systems

### Module 6: Pumping Systems

- Types of Pumps Used in Irrigation
- Selection and Sizing of Pumps
- Installation and Operation of Pumping Systems
- Maintenance and Troubleshooting of Pumps

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### **Module 7: Filtration Systems**

- Importance of Filtration in Irrigation
- Types of Filters (Screen, Sand, Disc)
- Installation and Maintenance of Filters
- Troubleshooting Filtration Issues

### Module 8: Automation and Control Systems

- Introduction to Irrigation Automation
- Types of Controllers and Sensors
- Installation and Programming of Controllers
- Monitoring and Adjusting Automated Systems

### **Module 9: System Maintenance and Troubleshooting**

- Routine Maintenance Practices
- Identifying and Solving Common Issues
- Leak Detection and Repair
- Winterizing and Seasonal Maintenance

### **Module 10: Safety and Best Practices**

- Installation of Piping Systems
- Setting Up Drip and Sprinkler Systems
- · Operating and Maintaining Systems in the Field
- Troubleshooting and Repair Exercises

### Module 11: Practical Training and Hands-On Experience

- Installation of Piping Systems
- Setting Up Drip and Sprinkler Systems
- · Operating and Maintaining Systems in the Field
- Troubleshooting and Repair Exercises

### **Evaluation and Certification**

- Written and Practical Examinations
- Continuous Assessment through Assignments and Projects
- Certification upon Successful Completion

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### **Practical training:**

- Hands-on experience in designing and laying out irrigation systems
- Practical training in installing drip and sprinkler systems
- Real-time projects on system maintenance and troubleshooting
- Workshops on water management and conservation techniques
- Case studies on successful irrigation projects
- Field visits to farms with advanced irrigation systems
- Training in the use of irrigation technology (automation, sensors)
- Projects on evaluating system efficiency and performancet

#### Career scope:

Upon completing the Piping, Drip, and Sprinkler Irrigation Technician course, graduates can explore career opportunities in various sectors, including:

- Commercial farms and agricultural enterprises
- Irrigation equipment manufacturers and suppliers
- Agricultural consulting firms
- Government agricultural departments
- Non-governmental organizations focused on water management
- Landscaping companies
- Agribusiness companies
- Research and development institutions in agriculture
- Environmental and conservation organizations
- Agricultural extension services
- Dairy Equipment and Supply Companies

