

# Gurukul Educational And Research Institute



SHIKSHA SANKUL, SAHASTRADHARA ROAD, NEARBY IT PARK,  
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## Diploma in Refrigeration & AC Technician (1 Year)

**Course Name:** Diploma in Refrigeration & AC Technician **Duration:** 1 Year  
(12 Months) **Eligibility:** 10th Pass (Minimum).

**Training Mode:** Theory + Practical **Internship:** Optional (1-2 Months).

### Course Objective

- To provide complete knowledge of refrigeration and air conditioning systems
- To develop installation, servicing, and repair skills
- To train students in domestic and commercial AC systems
- To prepare students for employment or self-employment

### Syllabus Structure

Semester 1 (6 Months)

#### Module 1: Basic Electrical & Electronics

- Electrical fundamentals
- Voltage, current, resistance (Ohm's Law)
- Wiring systems and earthing
- Safety rules and precautions
- Tools and measuring instruments

#### Module 2: Fundamentals of Refrigeration

- Refrigeration cycle
- Types of refrigerants
- Types of compressors
- Condenser and evaporator working

#### Module 3: Domestic Refrigerator Repair

- Single door and double door systems

- Gas charging process
- Fault finding and troubleshooting

#### **Module 4: Window & Split AC Systems**

- Components and working principles
- Installation procedures
- PCB and remote system basics

#### **Semester 2 (6 Months)**

#### **Module 5: Advanced Air Conditioning**

- Inverter AC systems
- VRV/VRF basics
- Commercial AC systems

#### **Module 6: Servicing & Maintenance**

- Preventive maintenance
- Leakage detection methods
- Vacuuming and gas charging

#### **Module 7: Practical Training**

- Live AC installation practice
- Fault diagnosis
- Customer service skills

#### **Module 8: Entrepreneurship Development**

- Starting an AC service business
- Cost estimation and billing
- Basic marketing skills

#### **Practical Training Includes**

- Gas welding
- Copper pipe fitting
- Brazing techniques
- Multimeter usage
- Compressor testing

#### **Career Opportunities**

- AC Technician
- Refrigeration Mechanic
- HVAC Assistant
- Service Engineer
- Self-Employed Technician

