

Central Utilities Course Bundle

55 Total Lessons

Module 1 – Basic Electricity

491-01	Electron Theory
401-02	Magnetism and Electromagnetism Explained
402-01	Introduction to Alternating Current (AC)
409-01	AC Induction Motors
409-02	AC Generators
415-01	Transformer Basics
416-02	Electrical Backup Systems
605-01	Multimeter

Module 2 – Plant Instrumentation & Control Theory

603-01	Instrumentation and Control Overview
603-02	Principles of Temperature
603-03	Principles of Pressure
603-04	Principles of Level
603-05	Principles of Flow
603-06	Temperature Instruments
603-07	Pressure Measuring Devices
603-08	Level Measuring Devices
603-09	Flow Measuring Devices
613-01	Introduction to Automated Control

Module 3 – Mechanical Systems & Equipment

201-01	Working Principles of Simple Machines
201-02	Hand Tools, Part 1
201-03	Hand Tools, Part 2
201-04	Portable Power Tools
219-01	Introduction to Centrifugal Pumps
215-01	Introduction to Valves and Their Components
223-01	Heat Exchanger Theory
231-01	Introduction to Positive Displacement Pumps
243-01	Introduction to Hydraulics

Module 4 – Electrical Systems & Equipment

411-04	Motor Control Centers
417-01	Switchgear
417-02	Low Voltage Breakers
418-05	Grounding and Bonding
427-01	Electrical Freeze Protection Components and Application
560-01	Main Transformers
560-03	Fuses and Circuit Breakers
560-05	Equipment Disconnects and Grounding

Module 5 – Plant Drawings

611-01	P&ID Basics
611-02	Reading a P&ID
611-03	Electrical Drawings
611-05	Industrial Print Reading Overview

Module 6 – Power Generation & Plant Components

501-01	Energy Conversions
501-05	Generator Overview
551-08	Cooling Towers: Operating Principles and Design
551-09	Cooling Towers: Components
581-01	Diesel Engines for Power Generation

Module 7 – Basic Water Chemistry & Treatment

559-01	Molecular Chemistry of Water
559-02	Elements and the Periodic Table of Elements
559-03	Chemical Compounds
559-04	Corrosion Causes and Effects
559-07	Industrial Water Treatment Systems
559-10	Reverse Osmosis

Module 8 – District Energy

670-01	Air Conditioning Fundamentals
670-06	Chiller Design and Maintenance
670-09	Ducting and Air Movement for HVAC Systems
670-15	District Energy Basics
670-17	Package Boiler Fundamentals

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800.447.3177

industrial-skills@hsi.com