

Industrial Process Fundamentals



Plant personnel require a wide range of knowledge to effectively perform their job duties.

Whether you are training new employees or providing refresher instruction to experienced personnel, OverNite Software, Inc.'s Industrial Process Fundamentals is essential in laying the groundwork.

Industrial Process Fundamentals series of 29 courses from OSI, provide basic plant knowledge for all industrial plant personnel. These courses provide plant personnel with an adequate background and understanding of process fundamentals by discussing safety, detailing various industrial processes, emphasizing principles and theories involved in the process and much more.

Our courses are delivered via a state-of-the-art learning management system that allows you to customize curricula, adjust testing parameters, and even customize courses with site-specific content and photos.



For more information call 1.888.228.2473 or visit OverNiteCBT.com

INDUSTRIAL PROCESS FUNDAMENTALS

211 How Process Operators Can Reduce Costs looks at how to reduce costs by reducing time, material, and labor wastes and cost reduction pertaining to fuel, steam, and utility waste, heat conservation, leaking safety relief valves, and preventive maintenance. (50 min)

212 Process Control Tests - Part 1 examines proper sampling methods for process control tests, reporting and interpreting test results, and common tests to determine physical properties. (30 min)

213 Process Control Tests - Part 2 examines sample purity, production composition, quality, and composition testing methods. (20 min)

214 Plant Firefighting: Fuels and Combustion examines the operator's role in fighting plant fires, fire classifications, burning and extinguishing characteristics, boiling point and vapor pressure, and sources of oxygen, ignition, explosions, and detonations. (45 min)

215 Plant Firefighting: Use of Water addresses water's effect on different types of fires, proper hose handling, monitors and sprays, and tools for an effective water stream. (45 min)

216 Plant Firefighting: Extinguishers and Foam examines fire extinguisher effectiveness and when to use each type of fire extinguisher. (45 min)

217 Plant Firefighting: Tactics and Strategy explains how to handle different hoses, nozzles, and types of fires and how to approach a fire. (45 min)

218 Heat: Temperature and Heat examines the states of matter, how heat energy works, and the use of boilers and cooling towers. (45 min)

219 Heat: Heat Transfer addresses types of heat transfer, heat transfer rate calculations, ways heat is transferred in a furnace and efficiency is maximized, and identification types and parts of exchangers. (50 min)

220 Heat: Combustion and Fuel examines the components of a basic chemical reaction and combustion reaction and control. (40 min)

221 Fluid Mechanics: The Nature of Fluids defines fluids, lists the states of matter, and identifies the types of phase changes. (25 min)

222 Fluid Mechanics: Units of Measurement addresses density, specific gravity, viscosity, and units of measurement for pressure and temperature. (20 min)

223 Fluid Mechanics: The Behavior of Gases examines the gas laws, gas measurement and handling, and real and ideal gases. (35 min)

224 Fluid Mechanics: Fluid Statics examines static pressure, fluid pressure, specific gravity, and formulas for net positive suction head and calculating static pressure and liquid head from measurements. (45 min)

225 Fluid Mechanics: Motion of Fluids explores types of flow, how flow is measured and controlled, and how flowing liquid is affected by gravity, piping, valves, pumps, compressors, fans, and blowers. (40 min)

226 Centrifugal Pumps addresses the types of centrifugal pumps, pump operation, and pump systems. (65 min)

227 Positive Displacement Pumps - Part 1 addresses pumps and their function, capacity, pressure, and mechanical efficiency. (45 min)

228 Positive Displacement Pumps - Part 2 explains the parts of a pump and how they function, proper ways to prepare, start, and shut down a pump, and how to prevent and correct common pump problems. (60 min)

229 Process Control Instruments explains the types of valves and how they open and close, other types of process controls, and safety devices used to shut down or repair areas in a plant. (50 min)

231 Furnaces: Combustion and Air Control describes the parts of a furnace and how it operates and how to control combustion and maintain an optimal supply of air to the furnace. (40 min)

232 Furnaces: Startup and Shutdown examines proper startup and shutdown procedures for furnaces, the appropriate time for shutdown, and how to restore correct and efficient firing of a furnace. (40 min)

233 Distillation: Hydrocarbons defines atoms, molecules, and hydrocarbons and explains fractionation and how to calculate BTUs. (55 min)

234 Distillation: Fractionating Equipment examines fractionating towers and trays, how to safely clean and enter a tower, and proper shutdown and startup procedures. (60 min)

235 Distillation: Normal Operations explains what happens in a fractionating tower and proper ways to collect and analyze data. (35 min)

236 Accident Control Techniques addresses accident causes and avoidance, PPE, and potentially hazardous areas or situations. (50 min)

237 Compression in Industry - Part 1 explains how to calculate pressure and discusses heat, kinetic and thermal energy, temperature conversions, and thermocouples. (35 min)

238 Compression in Industry - Part 2 examines temperature and volume; Charles' Law; Boyle's Law; compressors, and ways to measure work. (35 min)

380 Basic Plant Mathematics explains how to add, subtract, multiply, and divide fractions and decimals, defines direct and inverse proportions, and number conversion. (60 min)

611 AC Motors examines the types of motors including their functions and uses. (50 min)



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