

**PLT100:**  
**Industrial Safety—Plant Operations and Process Control**

**Duration:** 1 Day Classroom or 8 hours Online  
**Audience:** Operators, Technicians, Engineers, Supervisors and Managers.  
**Prerequisites:** None  
**Course Material:** Training slides and hand-outs.

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**Course Description and Objectives:**

Despite advances and improvements on safety in modern-day plant operation, injuries, illnesses and fatalities on-the-job still happen. The course covers most common areas of safety related to plant operation, startup, commissioning and maintenance. A unique aspect of the course is that it also discusses how process control schemes and strategies may be used to increase operational safety. The course also aims at increasing safety awareness and reducing both on-the-job and off-the-job safety-related incidences.

**Learning Outcomes:**

After completion of the course, attendees will be familiar with important safety concepts relevant to chemical plants. They will be more aware of hazards and will be more cognizant of imminent dangers. Course attendees are likely to operate and work safer than ever before and contribute to improved company safety records. This course is a must for operators, technicians, engineers and managers. The following topics are covered in this course:

- Safety in perspective, causes of accidents, psychological and human nature
- What employees, management and personnel can do to mitigate accidents and improve safety
- Accident examples and what could have been done to avoid them
- Industrial safety, working safely with chemicals, safe handling of pressurized gases
- Welding safety
- Electrical and lighting safety Material handling
- Machine shop safety Powered hand operated tools
- Back safety, correct lifting technique
- Asbestos awareness, ammonia, H<sub>2</sub>S, and other hazards Asphyxiation dangers
- Blood-borne pathogens
- Fire safety, different types of fires and fire extinguishers Hazard communications
- Hazardous materials transportation
- Lock-out and Tag-out procedures Material safety data sheets Office ergonomics
- Personal protective equipment Scaffolds
- Slips, trips and falls, fall protection Forklifts
- DOT training
- Using DCS/PLC control schemes and advisories for increased safety
- Online analyzer – GCs and other analyzers and how to use them in process control strategies
- Incorporating safety in design of process control strategies and online closed-loop advisories