

# TRAINING ON CHEMICALS



# ABOUT US

**Welcome to Pertecnica, where knowledge meets expertise! As a leading employee training institute, we specialize in a diverse range of sectors, providing top-notch induction trainings, refresher courses, and elevating skills through our upgradation programs. We take pride in offering mandatory trainings that ensure compliance and safety trainings across various sectors/industries especially in the dynamic sector of Chemicals. At Pertecnica, we are your partners in growth, fostering a culture of continuous learning and development. Join us on a transformative journey.**



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# INDUCTION TRAININGS

## - Chemicals

### Chemical Safety and Hazard Awareness:

- Comprehensive training on safety regulations and best practices specific to the chemical industry.
- Identification and awareness of potential chemical hazards and risks in the workplace.
- Practical demonstrations on the proper handling, storage, and disposal of chemicals.

### Introduction to Chemical Processes and Manufacturing:

- Overview of fundamental chemical processes and manufacturing techniques.
- Understanding the key stages in chemical production, from raw materials to finished products.
- Site visits and hands-on experiences to witness and understand chemical manufacturing in practice.

### Quality Control and Assurance in Chemical Manufacturing:

- In-depth training on quality control principles specific to the chemical industry.
- Understanding industry standards for ensuring the quality of chemical products.
- Application of quality assurance measures to maintain consistency and reliability in chemical production.



## **Environmental Compliance in Chemical Industry:**

- **Awareness of environmental regulations and considerations in chemical manufacturing.**
- **Training on minimizing the environmental impact of chemical processes.**
- **Application of sustainable practices for eco-friendly chemical production.**

## **Chemical Handling and Emergency Response Certification:**

- **Training on the safe handling of various chemicals used in the industry.**
- **Identification of potential chemical hazards and measures for safe storage and handling.**
- **Emergency response procedures for chemical spills, including containment and cleanup.**

## **Occupational Health and Safety in Chemical Plants:**

- **Comprehensive training on occupational health principles specific to chemical manufacturing.**
- **Identification of potential health hazards associated with chemical processes.**
- **Promotion of employee wellness and measures to ensure a healthy work environment.**

## **Introduction to Chemical Laboratory Techniques:**

- **Training on laboratory safety protocols and best practices.**
- **Hands-on experience with common laboratory techniques used in chemical analysis.**
- **Understanding the importance of accuracy and precision in chemical testing.**



## **Chemical Regulations and Compliance Training:**

- **Overview of regulations governing the chemical industry at local, national, and international levels.**
- **Training on compliance requirements, permits, and reporting obligations.**
- **Case studies and practical exercises to reinforce understanding of regulatory compliance.**

## **Process Safety Management (PSM) Certification:**

- **In-depth training on the principles and practices of Process Safety Management.**
- **Identification of potential process safety hazards and risk assessment methodologies.**
- **Implementation of PSM measures to prevent and mitigate chemical incidents.**

## **Chemical Engineering Fundamentals:**

- **Introduction to basic principles of chemical engineering.**
- **Understanding the role of chemical engineers in designing and optimizing chemical processes.**
- **Practical applications of chemical engineering concepts in the context of chemical manufacturing.**



# REFRESHER TRAININGS

## - Chemicals

### Advanced Chemical Safety and Emergency Response:

- Updates on the latest safety regulations and best practices in the chemical industry.
- Advanced training on identifying and mitigating emerging chemical hazards.
- Simulation exercises for quick and effective emergency responses to chemical incidents.

### Innovations in Chemical Processes and Manufacturing:

- Updates on the latest advancements in chemical manufacturing techniques.
- Exploration of innovative processes and technologies transforming the chemical industry.
- Practical applications and case studies showcasing the implementation of cutting-edge manufacturing methods.

### Quality Control Excellence in Chemical Manufacturing:

- Updates on the latest quality control principles and standards in the chemical industry.
- Advanced training on quality testing methodologies and equipment.
- Case studies and practical exercises focusing on addressing contemporary challenges in maintaining chemical product quality.



### **Environmental Sustainability in Chemical Practices:**

- Updates on environmental regulations and sustainability practices in the chemical industry.
- Advanced training on minimizing the environmental impact of chemical processes.
- Application of sustainable practices and innovations for eco-friendly chemical production.

### **Advanced Chemical Handling and Emergency Response:**

- Updates on the safe handling of new chemicals introduced in the industry.
- Advanced training on emergency response procedures for chemical spills and accidents.
- Practical exercises and simulations for handling complex emergency scenarios.

### **Occupational Health and Wellness in Chemical Plants:**

- Updates on the latest occupational health principles and practices in the chemical industry.
- Advanced training on identifying and addressing health hazards associated with chemical processes.
- Promotion of employee wellness and strategies for maintaining a healthy work environment.

### **Chemical Laboratory Techniques Advancements:**

- Updates on the latest laboratory safety protocols and advancements.
- Hands-on experience with advanced laboratory techniques used in chemical analysis.
- Practical applications of cutting-edge laboratory equipment and methodologies.



## **Regulatory Compliance and Changes in Chemical Industry:**

- **Updates on changes in regulations governing the chemical industry.**
- **Advanced training on compliance requirements, permits, and reporting obligations.**
- **Case studies and practical exercises to reinforce understanding of evolving regulatory compliance.**

## **Process Safety Management (PSM) Refresher:**

- **Updates on the latest advancements in Process Safety Management.**
- **Review of potential process safety hazards and risk assessment methodologies.**
- **Application of updated PSM measures to prevent and mitigate chemical incidents.**

## **Chemical Engineering Innovations and Applications:**

- **Updates on the latest innovations in chemical engineering.**
- **Exploration of advanced concepts in optimizing chemical processes.**
- **Practical applications of chemical engineering innovations for improved efficiency and sustainability.**





# SKILL UPGRADATION PROGRAMME

## - Chemicals

### Advanced Chemical Process Optimization:

- In-depth training on optimizing chemical processes for efficiency and cost-effectiveness.
- Use of advanced modeling and simulation tools for process analysis.
- Practical applications and case studies focusing on improving production yields and reducing resource consumption.

### Instrumentation and Automation in Chemical Manufacturing:

- Training on advanced instrumentation and automation technologies in the chemical industry.
- Hands-on experience with modern control systems and sensors.
- Application of automation for improved accuracy, efficiency, and safety in chemical manufacturing.

### Advanced Analytical Techniques for Chemical Analysis:

- In-depth training on advanced analytical methods and equipment.
- Use of cutting-edge techniques for chemical composition analysis.
- Practical applications in identifying impurities, ensuring product quality, and troubleshooting issues.



### **Lean Six Sigma for Chemical Processes:**

- Training on Lean Six Sigma principles and methodologies for process improvement.
- Application of DMAIC (Define, Measure, Analyze, Improve, Control) methodology in chemical manufacturing.
- Practical exercises and projects to implement Lean Six Sigma techniques for efficiency gains.

### **Supply Chain and Logistics Optimization in Chemical Industry:**

- Comprehensive training on supply chain management principles specific to the chemical sector.
- Optimization of logistics for raw materials procurement and product distribution.
- Case studies and simulations for effective supply chain planning and execution.

### **Advanced Chemical Engineering Principles:**

- Training on advanced principles of chemical engineering.
- In-depth understanding of thermodynamics, reaction kinetics, and transport phenomena.
- Application of advanced engineering concepts in optimizing chemical processes.

### **Energy Efficiency and Sustainability in Chemical Production:**

- Training on energy-efficient practices and sustainable approaches in chemical manufacturing.
- Identification of opportunities for reducing energy consumption and environmental impact.
- Implementation of sustainable initiatives for greener and more efficient chemical production.



## Digital Transformation in the Chemical Industry:

- Exploration of digital technologies transforming the chemical manufacturing landscape.
- Training on the integration of Industry 4.0 technologies, IoT, and data analytics.
- Hands-on experience with digital tools for real-time monitoring, predictive maintenance, and data-driven decision-making.

## Advanced Process Safety Management (PSM)

### Techniques:

- In-depth training on advanced PSM principles for preventing and mitigating chemical incidents.
- Updates on the latest technologies and methodologies in process safety.
- Practical application of risk assessment and management techniques in chemical processes.

## Innovations in Green Chemistry:

- Exploration of innovative and sustainable practices in green chemistry.
- Training on designing environmentally friendly processes and products.
- Practical applications of green chemistry principles for reducing environmental impact.



# MANDATORY TRAINING

## - Chemicals

### Chemical Safety and Hazard Communication Training:

- Comprehensive training on safety regulations specific to the chemical industry.
- Identification and awareness of potential chemical hazards in the workplace.
- Communication of safety protocols and emergency procedures to ensure a safe working environment.

### Hazardous Materials Handling and Transportation Certification:

- Training on the safe handling, storage, and transportation of hazardous materials.
- Compliance with regulatory requirements for labeling and packaging of hazardous substances.
- Emergency response procedures for chemical spills during transportation.

### Process Safety Management (PSM) Certification:

- In-depth training on the principles and practices of Process Safety Management.
- Identification of potential process safety hazards and risk assessment methodologies.
- Implementation of PSM measures to prevent and mitigate chemical incidents.



### **Chemical Spill Response and Cleanup Training:**

- **Comprehensive training on responding to and containing chemical spills.**
- **Identification of spill response equipment and procedures.**
- **Practical exercises and simulations for effective and safe chemical spill cleanup.**

### **Emergency Evacuation and Response Drills:**

- **Regular drills and training for emergency evacuation procedures.**
- **Simulation exercises to ensure employees are familiar with emergency response protocols.**
- **Coordination with emergency services for effective evacuation and response.**

### **Personal Protective Equipment (PPE) Certification:**

- **Training on the proper selection, usage, and maintenance of personal protective equipment.**
- **Identification of appropriate PPE for different chemical handling tasks.**
- **Practical demonstrations to ensure proper PPE usage in diverse work environments.**

### **Chemical Laboratory Safety and Good Laboratory Practices:**

- **Training on laboratory safety protocols and best practices.**
- **Adherence to good laboratory practices for accurate and reliable results.**
- **Practical applications of safety measures in chemical analysis and experimentation.**



### **Regulatory Compliance and Reporting Training:**

- **Overview of regulations governing the chemical industry at local, national, and international levels.**
- **Training on compliance requirements, permits, and reporting obligations.**
- **Case studies and practical exercises to reinforce understanding of regulatory compliance.**

### **Occupational Health and Wellness in the Chemical Industry:**

- **Comprehensive training on occupational health principles specific to chemical manufacturing.**
- **Identification of potential health hazards associated with chemical processes.**
- **Promotion of employee wellness and measures to ensure a healthy work environment.**

### **Security and Counterterrorism Awareness in Chemical Facilities:**

- **Training on security measures to prevent unauthorized access and protect chemical facilities.**
- **Identification of potential security threats and counterterrorism measures.**
- **Collaboration with law enforcement and emergency services for enhanced facility security.**



# SAFETY TRAINING

## - Chemicals

### Chemical Handling Safety Certification:

- In-depth training on safe handling practices for a variety of chemicals used in the industry.
- Identification and understanding of chemical properties, hazards, and compatibility.
- Practical exercises for hands-on experience in proper chemical handling techniques.

### Personal Protective Equipment (PPE) Usage Training:

- Training on the correct selection, usage, and maintenance of personal protective equipment.
- Identification of specific PPE requirements for different chemical handling tasks.
- Practical demonstrations and drills to ensure proper PPE usage in various work scenarios.

### Emergency Response and Evacuation Procedures:

- Comprehensive training on emergency response protocols for chemical spills, leaks, or accidents.
- Simulation exercises to practice quick and effective responses to emergencies.
- Coordination drills with emergency services and local authorities for seamless evacuation.



### **Chemical Storage and Segregation Safety:**

- Training on safe storage practices for chemicals, including proper labeling and signage.
- Understanding segregation requirements to prevent incompatible chemicals from interacting.
- Practical exercises for organizing and managing chemical storage areas safely.

### **Process Safety Management (PSM) Awareness:**

- Training on the principles and importance of Process Safety Management.
- Identification of potential process safety hazards and the use of risk assessment methodologies.
- Understanding and adherence to PSM measures to prevent and mitigate chemical incidents.

### **Hazard Communication and Labeling Training:**

- In-depth understanding of hazard communication protocols and labeling requirements.
- Training on the interpretation of chemical labels and Safety Data Sheets (SDS).
- Practical exercises for effective communication of chemical hazards within the workplace.

### **Chemical Spill Response and Cleanup Certification:**

- Advanced training on responding to and containing chemical spills.
- Identification of spill response equipment and procedures.





### **Fire Safety and Prevention in Chemical Environments:**

- **Comprehensive training on fire safety principles specific to chemical facilities.**
- **Identification of potential fire hazards associated with chemical processes.**
- **Practical demonstrations and drills for fire prevention, response, and evacuation.**

### **Occupational Health and Wellness in Chemical Plants:**

- **Training on recognizing and mitigating health hazards associated with chemical processes.**
- **Promotion of employee wellness and strategies for maintaining a healthy work environment.**
- **Regular health check-ups and monitoring for early detection of occupational health issues.**

### **Security Measures and Chemical Facility Protection:**

- **Training on security protocols to prevent unauthorized access to chemical facilities.**
- **Identification of potential security threats and counterterrorism measures.**
- **Collaboration with law enforcement and emergency services for enhanced facility security.**

