

TRAINING ON INDUSTRIAL ENGINEERING



+91 7842430123



contact@pertecnica.in



7th Floor, Dega Towers,
Rajbhavan Road, Hyderabad



www.pertecnica.net

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 Industrial Engineering. 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

- for Industrial Engineering

Introduction to Industrial Engineering Principles:

- Comprehensive training on the fundamental principles and concepts of industrial engineering.
- Overview of key methodologies, techniques, and tools used in industrial engineering projects.
- Hands-on exercises and case studies to provide practical insights into industrial engineering applications.

Workplace Safety and Occupational Health Training:

- In-depth training on safety protocols and occupational health practices in industrial settings.
- Identification of potential workplace hazards and preventive measures.
- Practical demonstrations and drills for promoting a culture of safety in industrial engineering environments.

Lean Manufacturing and Process Optimization:

- Training on lean manufacturing principles and methodologies.
- Understanding of waste reduction, value stream mapping, and continuous improvement.
- Application of lean concepts through simulations and real-world examples.



Quality Management Systems and Standards:

- **Comprehensive training on quality management systems such as ISO 9001.**
- **Overview of quality standards, auditing processes, and continuous quality improvement.**
- **Practical exercises for implementing and maintaining quality management systems.**

Project Management for Industrial Engineers:

- **In-depth training on project management principles and best practices.**
- **Understanding of project planning, scheduling, budgeting, and resource management.**
- **Hands-on project simulations and case studies to develop project management skills.**

Industrial Automation and Control Systems:

- **Training on automation technologies, control systems, and robotics in industrial engineering.**
- **Overview of programmable logic controllers (PLCs), sensors, and human-machine interfaces.**
- **Practical exercises and demonstrations for hands-on experience with industrial automation.**

Supply Chain Management in Industrial Engineering:

- **Comprehensive training on supply chain principles and optimization strategies.**
- **Understanding of inventory management, logistics, and demand forecasting.**
- **Practical applications and case studies for optimizing supply chain processes.**



Energy Efficiency and Sustainability in Industrial Operations:

- **Training on energy efficiency practices and sustainable operations in industrial engineering.**
- **Overview of green manufacturing, renewable energy options, and environmental impact assessments.**
- **Practical exercises for implementing sustainable practices in industrial processes.**

Data Analysis and Decision-Making in Industrial Engineering:

- **In-depth training on data analysis techniques, statistical tools, and decision-making processes.**
- **Understanding of data-driven decision-making for process optimization.**
- **Hands-on exercises using industrial data sets to enhance analytical skills.**

Human Factors and Ergonomics in Industrial Engineering:

- **Comprehensive training on human factors, ergonomics, and workplace design.**
- **Understanding of optimizing work environments for human performance and safety.**
- **Practical applications and case studies for incorporating human factors principles into industrial engineering projects.**



REFRESHER TRAININGS

- for Industrial Engineering

Advanced Lean Manufacturing and Six Sigma:

- Updates on the latest lean manufacturing and Six Sigma methodologies.
- Advanced training on waste reduction, process optimization, and quality improvement.
- Practical applications and case studies for applying advanced lean principles.

Current Trends in Industrial Automation and Robotics:

- Updates on the latest technologies and trends in industrial automation and robotics.
- Advanced training on the integration of robotic systems and smart manufacturing.
- Hands-on exercises and demonstrations for applying cutting-edge automation solutions.

ISO 9001 Quality Management Systems:

- Updates on changes in ISO 9001 standards and quality management system requirements.
- Advanced training on auditing processes, risk management, and compliance.
- Practical exercises and simulations for maintaining and improving quality management systems.



Advanced Project Management Techniques:

- Updates on emerging trends and techniques in project management for industrial engineers.
- Advanced training on risk management, stakeholder engagement, and project optimization.
- Hands-on project simulations and case studies for refining project management skills.

Supply Chain Optimization Strategies:

- Updates on the latest strategies for supply chain optimization in industrial engineering.
- Advanced training on demand forecasting, inventory management, and logistics.
- Practical applications and case studies for optimizing complex supply chain processes.

Advanced Data Analysis and Analytics for Industrial Engineers:

- Updates on the latest data analysis tools, techniques, and software.
- Advanced training on predictive analytics, machine learning, and statistical modeling.
- Hands-on exercises using real-world industrial data sets to enhance analytical skills.

Sustainability and Green Manufacturing Practices:

- Updates on the latest sustainability practices and green manufacturing initiatives.
- Advanced training on energy efficiency, environmental impact assessments, and renewable energy options.
- Practical exercises for implementing and advancing sustainable practices in industrial operations.



Human Factors and Ergonomics Advancements:

- **Updates on advancements in human factors, ergonomics, and workplace design.**
- **Advanced training on optimizing work environments for human performance and safety.**
- **Practical applications and case studies for incorporating the latest human factors principles into industrial engineering projects.**

Advanced Industrial Engineering Analytics and Decision Support Systems:

- **Updates on advanced analytics tools and decision support systems in industrial engineering.**
- **Advanced training on optimization algorithms, simulation techniques, and big data analytics.**
- **Practical exercises for leveraging advanced analytics to make data-driven decisions in industrial processes.**

Risk Management and Resilience in Industrial Engineering:

- **Updates on risk management strategies and resilience planning in industrial engineering.**
- **Advanced training on identifying and mitigating risks in complex industrial projects.**
- **Case studies and simulations for enhancing risk management skills in industrial operations.**



SKILL UPGRADATION PROGRAMME

- for Industrial Engineering

Advanced Data Analytics and Visualization Skills:

- In-depth training on advanced data analytics techniques and tools.
- Hands-on experience with data visualization tools for effective data communication.
- Practical exercises using industrial data sets to enhance analytical and interpretation skills.

Simulation Modeling for Process Optimization:

- Comprehensive training on simulation modeling techniques for industrial processes.
- Understanding of simulation software and its applications in optimizing workflows.
- Hands-on simulations for creating and analyzing models to improve process efficiency.

Digital Twin Technology and Implementation:

- In-depth training on digital twin technology and its applications in industrial engineering.
- Hands-on experience with creating and implementing digital twins for process optimization.
- Practical exercises for leveraging digital twins to improve system performance.



Advanced Project Management and Agile Practices:

- **Comprehensive training on advanced project management methodologies.**
- **Understanding of agile practices for increased adaptability and efficiency.**
- **Real-world project simulations and case studies to refine project management skills.**

Machine Learning Applications in Industrial Engineering:

- **In-depth training on machine learning algorithms and applications in industrial settings.**
- **Hands-on experience with implementing machine learning solutions for predictive analytics.**
- **Practical exercises using industrial data for developing machine learning models.**

Industry 4.0 Technologies Integration:

- **Comprehensive training on integrating Industry 4.0 technologies into industrial processes.**
- **Understanding of IoT, cloud computing, and cyber-physical systems.**
- **Practical applications and case studies for implementing Industry 4.0 solutions.**

Advanced Supply Chain and Logistics Optimization:

- **In-depth training on advanced strategies for supply chain optimization.**
- **Understanding of demand forecasting, inventory management, and distribution network optimization.**
- **Hands-on exercises for applying advanced logistics optimization techniques.**



Robotics and Automation System Integration:

- **Comprehensive training on integrating robotics and automation systems into industrial workflows.**
- **Understanding of robotic programming, control systems, and collaborative robotics.**
- **Hands-on experience with designing and implementing robotic solutions.**

Advanced Industrial Ergonomics and Human Factors Engineering:

- **In-depth training on advanced principles of ergonomics and human factors engineering.**
- **Understanding of optimizing work environments for human performance and safety.**
- **Practical applications and case studies for incorporating advanced human factors principles.**

Advanced Statistical Process Control (SPC)

Techniques:

- **Comprehensive training on advanced statistical process control methods.**
- **Understanding of multivariate SPC, control charts, and process capability analysis.**
- **Practical exercises using industrial data sets to implement and enhance SPC techniques.**



MANDATORY TRAINING

- for Industrial Engineering

Occupational Health and Safety Certification:

- Comprehensive training on occupational health and safety regulations in industrial settings.
- Identification of workplace hazards and preventive measures.
- Certification upon successful completion, ensuring compliance with safety standards.

ISO 14001 Environmental Management Systems

Training:

- In-depth training on ISO 14001 standards for environmental management systems.
- Understanding of environmental impact assessments and sustainable practices.
- Practical exercises for implementing and maintaining environmental management systems.

Ethics and Professional Conduct in Industrial

Engineering:

- Comprehensive training on ethical standards and professional conduct in the industry.
- Understanding of ethical considerations in decision-making and project management.
- Case studies and scenarios for ethical problem-solving in industrial engineering.



Legal Compliance and Regulatory Training:

- In-depth training on legal requirements and regulations relevant to industrial engineering.
- Understanding of compliance obligations and reporting procedures.
- Practical exercises for ensuring legal compliance in industrial operations.

Risk Assessment and Management in Industrial Processes:

- Comprehensive training on identifying and assessing risks in industrial engineering projects.
- Understanding of risk mitigation strategies and resilience planning.
- Practical applications and case studies for effective risk management.

Quality Management and Six Sigma Certification:

- In-depth training on quality management principles and Six Sigma methodologies.
- Understanding of continuous improvement, process optimization, and defect reduction.
- Certification upon completion, demonstrating proficiency in quality management practices.

Workplace Diversity and Inclusion Training:

- Comprehensive training on fostering a diverse and inclusive workplace culture.
- Understanding of cultural sensitivity, inclusion, and fair employment practices.
- Certification to demonstrate commitment to diversity and inclusion principles.



Advanced Industrial Safety and Emergency Response Procedures:

- **In-depth training on advanced industrial safety protocols and emergency response procedures.**
- **Identification of potential hazards and escalation procedures for emergencies.**
- **Practical drills and simulations for hands-on experience in emergency response.**

Conflict Resolution and Effective Communication Skills:

- **Comprehensive training on conflict resolution techniques in industrial settings.**
- **Understanding of effective communication strategies for collaboration.**
- **Role-playing scenarios and practical exercises for honing communication skills.**

Professional Development and Continuous Learning:

- **In-depth training on the importance of continuous learning and professional development.**
- **Understanding of industry trends, emerging technologies, and best practices.**
- **Development of a personalized professional development plan for ongoing upskilling.**



SAFETY TRAINING

- for Industrial Engineering

Industrial Hazard Recognition and Mitigation:

- Comprehensive training on identifying potential hazards in industrial settings.
- Understanding of hazard mitigation strategies and preventive measures.
- Practical exercises for recognizing and addressing common industrial hazards.

Personal Protective Equipment (PPE) Usage and Maintenance:

- In-depth training on the proper selection, usage, and maintenance of PPE.
- Identification of specific PPE requirements for different tasks in industrial engineering.
- Practical demonstrations and drills to ensure correct PPE usage.

Emergency Evacuation and Response Procedures:

- Comprehensive training on emergency response protocols specific to industrial environments.
- Identification of emergency exit routes, assembly points, and communication methods.
- Simulation exercises and drills for effective emergency response and evacuation.



Machine Safety and Lockout/Tagout Procedures:

- In-depth training on machine safety principles and lockout/tagout procedures.
- Understanding of proper isolation techniques to prevent accidental machine starts.
- Practical demonstrations and hands-on exercises for implementing safe machine practices.

Chemical Handling and Hazard Communication Training:

- Comprehensive training on the safe handling, storage, and labeling of chemicals.
- Identification of chemical hazards and proper use of Material Safety Data Sheets (MSDS).
- Practical exercises for safe chemical handling and emergency response.

Fall Protection and Working at Heights:

- In-depth training on fall protection measures and equipment.
- Understanding of working at heights safety protocols and regulations.
- Practical demonstrations and simulations for safe practices when working at elevated positions.

Electrical Safety in Industrial Environments:

- Comprehensive training on electrical safety principles and procedures.
- Identification of electrical hazards and safe work practices around electrical equipment.
- Hands-on experience with electrical safety equipment and protocols.



Fire Safety and Prevention in Industrial Facilities:

- **In-depth training on fire safety principles and preventive measures.**
- **Understanding of fire extinguisher usage, evacuation procedures, and fire suppression systems.**
- **Practical drills for handling fire-related emergencies in industrial settings.**

Confined Space Entry and Rescue Procedures:

- **Comprehensive training on the hazards of confined spaces in industrial environments.**
- **Understanding of confined space entry protocols, monitoring, and rescue procedures.**
- **Hands-on exercises and simulations for safe confined space entry and rescue.**

Heat Stress Prevention and Heat Illness Awareness:

- **In-depth training on recognizing and preventing heat-related illnesses.**
- **Understanding of heat stress risk factors, symptoms, and mitigation strategies.**
- **Practical applications and guidelines for working safely in high-temperature environments.**

