

TRAINING ON ROADS & HIGHWAY CONSTRUCTION



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 Roads & Highway Construction. 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

- Roads & Highway Construction

Introduction to Road Construction Techniques:

- Comprehensive overview of various road construction methods and techniques.
- In-depth understanding of the stages involved in road construction, from planning to completion.
- Site visits and hands-on experiences to witness and understand each phase of road construction.

Safety Protocols in Road and Highway Construction:

- In-depth training on safety regulations and best practices specific to road construction sites.
- Identification and awareness of potential safety hazards associated with construction activities.
- Practical exercises and simulations to reinforce safe practices in road and highway construction environments.

Quality Control and Assurance in Road Construction:

- Training on quality control principles specific to road and highway construction.
- Understanding industry standards for ensuring the quality of road infrastructure.
- Application of quality assurance measures to maintain consistency and reliability in construction projects.



Environmental Compliance in Road Construction:

- Awareness of environmental regulations and considerations in road construction.
- Training on minimizing the environmental impact of construction processes.
- Application of sustainable practices for eco-friendly road and highway construction.

Road Material Properties and Testing:

- In-depth training on the properties of road materials and their impact on construction.
- Understanding the testing methodologies for assessing the quality of construction materials.
- Hands-on experience with material testing equipment and techniques.

Equipment Operation and Maintenance in Construction:

- Training on the safe and efficient operation of construction machinery used in road projects.
- Identification of potential hazards and safety measures associated with specific equipment.
- Maintenance procedures to ensure the reliability and longevity of construction machinery.

Surveying and Geotechnical Basics for Road Construction:

- Introduction to surveying techniques and their importance in road construction projects.
- Understanding geotechnical considerations and their impact on construction design.
- Practical applications of surveying and geotechnical principles in road construction.



Communication and Team Coordination in Construction Projects:

- **Training on effective communication strategies within construction teams.**
- **Understanding the importance of teamwork and coordination in road construction projects.**
- **Practical exercises and case studies focusing on successful collaboration in construction environments.**

Road Design and Planning Principles:

- **In-depth training on road design principles, including alignment and geometric considerations.**
- **Understanding the planning process for road construction projects.**
- **Application of design principles in the development of effective road infrastructure.**

Emergency Response and Crisis Management in Construction:

- **Advanced training on emergency response procedures for incidents in road construction.**
- **Simulation exercises for quick and effective responses to accidents or emergencies.**
- **Coordination with emergency services and effective communication during crisis situations.**



REFRESHER TRAININGS

- Roads & Highway Construction

Advanced Road Construction Techniques:

- Updates on the latest advancements in road construction methodologies.
- In-depth training on emerging technologies and innovations in construction techniques.
- Practical applications and case studies showcasing the implementation of advanced road construction methods.

Safety Leadership and Crisis Management in Construction:

- Advanced training on safety leadership principles for supervisors and managers in construction.
- Simulation exercises for crisis management and effective leadership during emergencies.
- Continuous improvement strategies for enhancing safety culture and practices in road and highway construction.

Quality Control Excellence in Road Construction:

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



Environmental Sustainability in Construction Practices:

- Updates on environmental regulations and sustainability practices in road construction.
- Advanced training on minimizing the environmental impact of construction processes.
- Application of sustainable practices and innovations for eco-friendly road and highway construction.

Efficient Equipment Operation and Maintenance:

- Updates on the latest technologies and best practices in equipment operation and maintenance.
- Advanced troubleshooting techniques for ensuring the reliability of machinery in construction projects.
- Hands-on training on the maintenance of advanced equipment used in road and highway construction.

Road Design Optimization and Planning:

- Updates on road design principles, including alignment and geometric considerations.
- Advanced training on optimization methodologies for road construction projects.
- Practical applications of design principles in the development of efficient and cost-effective road infrastructure.

Communication and Collaboration in Construction Projects:

- Training on advanced communication strategies within construction teams.
- Building effective collaboration and coordination in complex construction projects.
- Practical exercises and case studies focusing on successful teamwork in challenging construction environments.



Innovations in Construction Materials and Technologies:

- **Exploration of innovative construction materials and technologies.**
- **Updates on the latest advancements in materials used in road and highway construction.**
- **Hands-on projects and demonstrations showcasing the application of cutting-edge construction materials.**

Advanced Geotechnical Considerations in Road Construction:

- **Updates on advanced geotechnical considerations and their impact on construction design.**
- **Application of sophisticated geotechnical testing and analysis techniques.**
- **Practical scenarios demonstrating the integration of advanced geotechnical principles in road construction.**

Emergency Response and Crisis Management Refresher:

- **Updates on emergency response procedures for incidents in road construction.**
- **Simulation exercises for quick and effective responses to accidents or emergencies.**
- **Review and reinforcement of coordination with emergency services and effective communication during crisis situations.**



SKILL UPGRADATION PROGRAMME

- Roads & Highway Construction

Advanced Surveying Techniques for Construction:

- In-depth training on advanced surveying methods used in road construction projects.
- Application of cutting-edge surveying equipment and technologies.
- Practical exercises for accurate data collection and mapping in construction sites.

Digital Technologies in Construction Management:

- Exploration of digital tools and technologies transforming construction project management.
- Training on the integration of construction management software, BIM, and project collaboration platforms.
- Hands-on experience with digital tools for efficient planning, monitoring, and communication.

Building Information Modeling (BIM) for Road Projects:

- In-depth understanding of BIM principles and its application in road and highway construction.
- Training on creating, managing, and utilizing BIM models for construction projects.
- Practical exercises for collaborative BIM usage in the design and construction phases.



Construction Materials Testing and Quality Assurance:

- **Advanced training on materials testing methodologies and equipment.**
- **In-depth knowledge of quality assurance measures for construction materials.**
- **Application of advanced testing techniques to ensure the durability and performance of road infrastructure.**

Geospatial Technologies for Construction Planning:

- **Training on the use of geospatial technologies for accurate project planning.**
- **Integration of GIS (Geographic Information System) for spatial analysis in construction projects.**
- **Hands-on application of geospatial tools for optimal site selection and alignment planning.**

Advanced Equipment Operation and Maintenance:

- **Updates on the latest technologies and best practices in operating construction machinery.**
- **Advanced troubleshooting techniques for ensuring the reliability of equipment in road construction.**
- **Practical training on the maintenance of sophisticated equipment used in modern construction projects.**

Construction Project Cost Estimation and Control:

- **In-depth understanding of advanced cost estimation techniques for construction projects.**
- **Training on controlling project costs through effective budgeting and financial management.**
- **Practical exercises in estimating and managing costs in real-world construction scenarios.**



Lean Construction Practices:

- **Training on lean principles and methodologies in the context of construction.**
- **Application of lean construction practices for reducing waste and improving efficiency.**
- **Practical scenarios and case studies focusing on implementing lean principles in road construction.**

Innovations in Road Design and Construction:

- **Exploration of innovative design and construction methodologies for roads and highways.**
- **Updates on the latest advancements in construction technologies and materials.**
- **Hands-on projects and demonstrations showcasing the application of innovative practices in road construction.**

Effective Stakeholder Management in Construction Projects:

- **Training on stakeholder identification, engagement, and communication strategies.**
- **Building effective relationships with project stakeholders, including local communities and regulatory bodies.**
- **Practical exercises and case studies focusing on successful stakeholder management in construction projects.**



MANDATORY TRAINING

- Roads & Highway Construction

Construction Safety Certification:

- In-depth training on safety regulations and best practices specific to road and highway construction.
- Identification and awareness of potential safety hazards associated with construction activities.
- Practical exercises and simulations to reinforce safe practices in construction environments.

Quality Control and Assurance in Construction:

- Comprehensive training on quality control principles specific to road and highway construction.
- Understanding industry standards for ensuring the quality of construction materials and processes.
- Application of quality assurance measures to maintain consistency and reliability in construction projects.

Environmental Compliance in Construction:

- Awareness of environmental regulations and considerations in road and highway construction.
- Training on minimizing the environmental impact of construction processes.
- Application of sustainable practices for eco-friendly road and highway construction.



Equipment Operation and Maintenance Certification:

- Training on the safe and efficient operation of construction machinery used in road projects.
- Identification of potential hazards and safety measures associated with specific equipment.
- Maintenance procedures to ensure the reliability and longevity of construction machinery.

Occupational Health and Wellness in Construction:

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

Emergency Response and Crisis Management in Construction:

- Advanced training on emergency response procedures for incidents in road and highway construction.
- Simulation exercises for quick and effective responses to accidents or emergencies.
- Coordination with emergency services and effective communication during crisis situations.

Legal and Regulatory Compliance in Construction:

- Training on legal and regulatory requirements governing road and highway construction.
- Understanding permits, approvals, and compliance obligations associated with construction projects.
- Case studies and practical scenarios focusing on adherence to legal and regulatory standards.



Traffic Management and Control Certification:

- **In-depth training on traffic management principles and control measures in construction zones.**
- **Understanding traffic regulations and safety protocols for construction-related activities.**
- **Practical exercises and simulations to ensure safe traffic flow in and around construction sites.**

Fall Prevention and Working at Heights Certification:

- **In-depth understanding of fall prevention measures for workers involved in road construction.**
- **Training on the proper use of fall protection equipment, such as harnesses and lanyards.**
- **Practical scenarios to demonstrate effective fall prevention and rescue techniques.**

Construction Communication and Team Coordination:

- **Training on effective communication strategies within construction teams.**
- **Building effective collaboration and coordination in complex construction projects.**
- **Practical exercises and case studies focusing on successful teamwork in challenging construction environments.**



SAFETY TRAINING

- Roads & Highway Construction

Construction Site Safety Certification:

- In-depth training on safety regulations specific to road and highway construction sites.
- Identification and awareness of potential hazards associated with construction activities.
- Practical exercises and simulations to reinforce safe practices in a construction environment.

Traffic Control and Management Safety:

- Training on traffic control principles and safety measures in construction zones.
- Understanding traffic regulations and protocols for construction-related activities.
- Simulation exercises to ensure safe traffic flow in and around construction sites.

Fall Prevention and Working at Heights Training:

- In-depth understanding of fall prevention measures for workers involved in road construction.
- Training on the proper use of fall protection equipment, such as harnesses and lanyards.
- Practical scenarios to demonstrate effective fall prevention and rescue techniques.



Heavy Equipment Operation Safety Certification:

- Training on the safe and efficient operation of heavy equipment used in construction.
- Identification of potential hazards and safety measures associated with specific machinery.
- Hands-on training and simulations to ensure safe equipment operation on construction sites.

Hazardous Materials Handling and Awareness:

- Comprehensive training on the safe handling and disposal of hazardous materials in construction.
- Identification and awareness of potential hazards associated with hazardous substances.
- Practical exercises to demonstrate proper procedures for handling and storing hazardous materials.

Emergency Response and Crisis Management in Construction:

- Advanced training on emergency response procedures for incidents in road and highway construction.
- Simulation exercises for quick and effective responses to accidents or emergencies.
- Coordination with emergency services and effective communication during crisis situations.

Construction Equipment Maintenance and Safety:

- Training on the safe operation and maintenance of construction machinery.
- Identification of potential hazards related to equipment malfunction and maintenance.
- Hands-on exercises to ensure proper maintenance practices for construction equipment.



Personal Protective Equipment (PPE) Certification:

- **Training on the importance of PPE in preventing injuries and ensuring worker safety.**
- **Identification of appropriate PPE for different construction tasks and environments.**
- **Practical demonstrations on the correct usage and maintenance of PPE on construction sites.**

Heat Stress Prevention and Safety:

- **Training on recognizing and preventing heat-related illnesses on construction sites.**
- **Understanding the signs and symptoms of heat stress and dehydration.**
- **Implementation of strategies to mitigate the risks of heat-related health issues.**

Excavation and Trenching Safety:

- **In-depth training on safety protocols for excavation and trenching activities.**
- **Identification of potential hazards associated with trench collapses and cave-ins.**
- **Practical exercises and simulations for safe excavation practices and trench protection.**

