

Transportation Infrastructure Design & Maintenance

COURSE OVERVIEW

This course covers engineering principles and best practices for the design, construction, and maintenance of transportation infrastructure. Topics include roadway and pavement design, bridge engineering, traffic management, and asset preservation techniques. The program integrates technical, safety, and sustainability considerations to prepare professionals for developing durable, efficient, and resilient transportation systems that meet modern mobility demands. Through practical case studies and real-world applications, participants will gain the knowledge and skills required to design durable transportation facilities and implement effective maintenance programs that ensure long-term performance and reliability.

WHO SHOULD ATTEND?

This course is ideal for civil engineers, transportation planners, infrastructure managers, public works professionals, and anyone involved in the planning, design, construction, or maintenance of roads, bridges, highways, and related transportation facilities.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Design safe and efficient roadways, pavements, and bridge structures.
- Apply traffic flow and control principles for optimal transportation management.
- Develop asset management plans to prolong infrastructure lifespan.
- Implement modern materials and technologies for sustainable infrastructure.
- Conduct maintenance and rehabilitation strategies to improve asset performance.
- Incorporate environmental and safety standards in transportation projects.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Transportation infrastructure design fundamentals including geometric and structural aspects.
- Pavement materials, design, and performance evaluation methods.
- Bridge engineering concepts and maintenance challenges.
- Traffic engineering principles and smart traffic management techniques.
- Infrastructure maintenance planning and rehabilitation methods.
- Integration of sustainability and resilience in infrastructure lifecycle management.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded