Traffic and Transport Engineering Training Course

Professional Development Training Course Outline

Category	Traffic Management & Road Safety	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Traffic and Transport Engineering is at the forefront of urban development, sustainable mobility, and intelligent transportation systems. With rapid urbanization, growing vehicular density, and emerging technologies, there is an unprecedented demand for skilled professionals who can design, optimize, and manage complex transport networks. Traffic and Transport Engineering Training Course equips participants with advanced knowledge in traffic flow analysis, transport planning, road safety, and smart mobility solutions. Participants will gain hands-on experience in the latest transport modeling software, data-driven traffic management, and innovative engineering solutions to address modern mobility challenges.

This comprehensive course integrates practical applications, case studies, and data-driven strategies to prepare professionals for the dynamic transportation industry. From optimizing traffic signal operations to designing multimodal transport systems, the program emphasizes sustainability, efficiency, and safety. Participants will learn to implement innovative solutions that reduce congestion, improve road safety, and enhance urban mobility. By combining theory, real-world examples, and interactive exercises, this course ensures that participants can transform transport networks into highly efficient, smart, and resilient systems.

Programme Curriculum

Traffic and Transport Engineering Training Course

Introduction

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Course Duration

5 days

Course Objectives

1. Understand fundamentals of traffic engineering and transport planning.
2. Analyze traffic flow patterns using modern modeling techniques.
3. Develop road safety strategies to reduce accidents and fatalities.
4. Implement intelligent transport systems (ITS) for smart mobility.
5. Optimize traffic signal operations and intersection management.
6. Design sustainable urban transport systems.
7. Apply data-driven traffic management techniques.
8. Evaluate multimodal transport networks for efficiency.
9. Integrate transport policy and planning for urban mobility.
10. Conduct traffic impact assessments for infrastructure projects.
11. Implement emerging mobility solutions, including EV infrastructure.
12. Enhance public transport efficiency through operational planning.
13. Develop skills in transport simulation software and practical case studies.

Target Audience

1. Civil and Transport Engineers
2. Urban Planners and City Development Officers
3. Traffic Police and Road Safety Officials
4. Transportation Consultants and Analysts
5. Highway and Road Infrastructure Professionals
6. Public Transport Operators and Managers
7. Academicians and Researchers in Transportation
8. Policy Makers in Urban Mobility and Transport

Course Modules

Module 1: Fundamentals of Traffic Engineering

- Introduction to traffic flow theory and principles
- Vehicle characteristics and traffic composition
- Traffic stream analysis and modeling
- Road design standards and guidelines
- Case Study: Urban arterial traffic flow assessment

Module 2: Transport Planning and Policy

- Urban transport planning frameworks
- Travel demand forecasting techniques
- Land-use and transportation integration
- Policy interventions for sustainable mobility
- Case Study: Smart city transport policy implementation

Module 3: Road Safety and Accident Analysis

- Road safety audits and hazard identification
- Accident data collection and statistical analysis
- Safety performance functions and KPIs
- Design of traffic calming measures
- Case Study: Reducing accidents at high-risk intersections

Module 4: Intelligent Transport Systems (ITS)

- Overview of ITS technologies
- Traffic monitoring and control systems
- Real-time traffic data collection and analytics
- Vehicle-to-Infrastructure (V2I) applications
- Case Study: Implementing adaptive traffic signals

Module 5: Traffic Signal and Intersection Management

- Signal timing and optimization techniques
- Roundabout and intersection design
- Priority lanes for public transport
- Simulation and modeling tools for signal planning
- Case Study: Optimizing congested downtown intersections

Module 6: Sustainable and Multimodal Transport

- Non-motorized transport planning (cycling, walking)
- Public transport system design
- Integration of multimodal networks
- Green mobility and low-emission strategies
- Case Study: Implementing a multimodal corridor in urban centers

Module 7: Traffic Impact Assessment and Infrastructure

- Traffic volume and capacity analysis
- Impact of new developments on existing networks
- Highway and arterial road design considerations
- Mitigation measures and infrastructure improvement plans
- Case Study: Traffic impact assessment for a commercial complex

Module 8: Emerging Mobility Solutions

- Electric vehicle (EV) infrastructure planning
- Ride-sharing and mobility-as-a-service (MaaS)
- Autonomous vehicles and future transport trends
- Data-driven transport optimization strategies

- Case Study: Smart mobility implementation in a pilot city

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call +254769199797

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

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