Traffic Impact Analysis (TIA) 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 Impact Analysis (TIA) is an essential process in modern urban planning and transportation engineering, providing critical insights into how new developments affect existing traffic patterns and infrastructure. As cities continue to grow, understanding traffic flow dynamics, congestion management, and sustainable mobility solutions has become imperative for planners, engineers, and developers. Traffic Impact Analysis (TIA) Training Course is designed to equip professionals with cutting-edge methodologies, analytical tools, and practical strategies to assess, predict, and mitigate traffic impacts effectively. Participants will gain hands-on experience in conducting comprehensive TIAs, leveraging traffic simulation software, and implementing data-driven solutions for safer and more efficient transportation networks.

In this training, participants will explore the integration of advanced traffic modeling, GIS analytics, and intelligent transportation systems (ITS) into real-world projects. By combining theoretical frameworks with applied case studies, learners will develop actionable skills to influence urban mobility planning, regulatory compliance, and sustainable transport solutions. Whether managing large-scale infrastructure projects or planning local developments, this course ensures participants can confidently evaluate traffic implications, optimize network performance, and implement mitigation measures that enhance community accessibility and safety.

Programme Curriculum

Traffic Impact Analysis (TIA) Training Course

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Course Duration

5 days

Course Objectives

1. Master Traffic Impact Analysis methodologies using the latest transportation planning techniques.
2. Understand traffic flow modeling, simulation tools, and predictive analytics for urban networks.
3. Learn to assess peak hour traffic volumes and congestion patterns effectively.
4. Conduct multi-modal traffic studies integrating pedestrian, bicycle, and public transit impacts.
5. Analyze intersection performance, signal timing, and level of service (LOS) metrics.
6. Implement sustainable transport solutions and smart mobility strategies.
7. Evaluate parking demand, curbside management, and roadway capacity planning.
8. Apply Geographic Information System (GIS) for traffic data visualization and mapping.
9. Develop comprehensive traffic mitigation plans aligned with municipal guidelines.
10. Interpret traffic safety audits, accident analysis, and risk assessment data.
11. Integrate real-world case studies for effective decision-making in traffic projects.
12. Communicate traffic analysis findings to stakeholders using advanced reporting techniques.
13. Stay updated on evolving transportation policies, smart city frameworks, and autonomous vehicle integration.

Target Audience

1. Urban Planners
2. Traffic Engineers
3. Transportation Consultants
4. Civil Engineers
5. Government Regulators
6. Project Managers in Infrastructure Development
7. Smart Mobility Analysts
8. Environmental Impact Assessors

Course Modules

Module 1: Introduction to Traffic Impact Analysis

- Overview of TIA principles and objectives

- Importance of traffic studies in urban planning
- Key regulations, guidelines, and compliance requirements
- Data collection methods for traffic assessment
- Case Study: TIA for a new residential development

Module 2: Traffic Data Collection and Analysis

- Manual and automated traffic count techniques
- Vehicle classification and origin-destination surveys
- Peak hour and daily traffic volume analysis
- Travel time, delay, and queue length studies
- Case Study: Traffic data collection for a mixed-use project

Module 3: Traffic Flow and Simulation Modeling

- Introduction to microsimulation and macroscopic models
- Simulation tools: VISSIM, Synchro, and Aimsun
- Scenario development for traffic forecasting
- Calibration and validation of traffic models
- Case Study: Simulation of a commercial hub expansion

Module 4: Intersection and Roadway Analysis

- Intersection capacity and level of service (LOS) evaluation
- Signal timing and optimization strategies
- Roundabout and arterial road performance analysis
- Highway segment and corridor studies
- Case Study: LOS analysis for urban arterial intersections

Module 5: Multi-Modal Traffic Assessment

- Pedestrian and bicycle traffic integration
- Public transit impact analysis
- Non-motorized mobility planning
- Accessibility and safety evaluation
- Case Study: Multi-modal TIA for a transit-oriented development

Module 6: Traffic Mitigation and Management Strategies

- Mitigation measures for congestion and safety improvement
- Traffic calming and demand management techniques
- Intelligent transportation systems (ITS) applications
- Parking and curbside management strategies
- Case Study: Mitigation plan for high-density commercial development

Module 7: GIS and Data Visualization for TIA

- GIS mapping for traffic patterns and analysis
- Spatial analysis and hotspot identification
- Integration with traffic modeling outputs
- Visualization for reporting and stakeholder communication
- Case Study: GIS-based traffic impact assessment for a city district

Module 8: Reporting, Policy, and Sustainable Transport Solutions

- Developing comprehensive TIA reports
- Communication with stakeholders and regulatory agencies
- Policies for sustainable urban mobility
- Smart city planning and autonomous vehicle integration
- Case Study: Policy-driven TIA recommendations for a metropolitan area

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
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

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