

WELCOME TO OUR LEARNING CENTRE

TRAFFIC SIGNAL CONTROLLER LEARNING PROGRAMS



TRAFFIC SIGNAL PRIORITY (TSP) COURSE



This course is tailored to provide an in-depth understanding of how Traffic Signal Priority functions and how it can be used to improve the movement of specific classes of vehicles.



***"Roadmap Your Success with Our
Intelligent Transportation Systems Learning Courses!"***



DELIVERED IN ASSOCIATION WITH
IMSA ONTARIO TRILLIUM SECTION



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Traffic Signal Controller Functionality – Program Learning

Traffic Signal Priority Course

COURSE OVERVIEW

Traffic Signal Priority (TSP) is now a key strategy in transportation for the efficient and safe movement of public transit, commercial goods, and other roadway transports. These reasons..

- Provide in-depth understanding of how traffic signal priority functions and how it can be deployed to improve the movement of a specific classes of vehicles,
- You will gain a greater understanding of TSP principles, and strategies through a combination of theoretical instruction, and practical demonstrations.

COURSE OBJECTIVES

- Understand the fundamentals and objectives of Traffic Signal Priority (TSP)
- Learn about different types of TSP systems, their components, and operational modes
- Explore the benefits and challenges of TSP implementation
- Understand the integration of TSP with existing transit operations and traffic management infrastructure
- Learn strategies for optimizing TSP performance, and appropriate distribution of priority
- Discuss emerging technologies and future trends in TSP, including connected and autonomous vehicles (CAVs)

COURSE OUTLINE

Lesson 1: Introduction to Traffic Signal Priority (TSP)

- Definition, objectives, and benefits of TSP,
- Overview of TSP strategies and operational concepts
- Historical context and evolution of TSP

Lesson 2: Types and Components of TSP Systems

- Different types of TSP modes (e.g. green extension, early green, conditional priority)
- Components of TSP systems (e.g. onboard equipment, roadside infrastructure, communication protocols)
- Integration with transit vehicle technology and traffic signal controllers

Lesson 3: Considerations for TSP Parameters

- TSP strategies to optimize transit service reliability and efficiency
- Discussion on how TSP parameters function and their impact on priority

Lesson 4: Operational Challenges

- Conflicts between transit priority and other traffic movements
- Monitoring and adjusting TSP parameters to adapt to changing traffic conditions

Lesson 5: Simulation and Analysis Tools

- Overview of TSP simulation software, modeling techniques, and performance metrics

Lesson 6: Emerging Technologies and Future Trends

- Innovations in TSP technology, including predictive analytics, vehicle-to-infrastructure (V2I) communication
- Potential impacts of connected and autonomous vehicles (CAVs) on TSP operations and strategies

DELIVERY METHOD

- In-Class Room

TARGET AUDIENCE

- Traffic Management Professionals
- Transit Professionals
- Commercial Vehicle Operators

DURATION

- Approx 3 hours