# Executive Development Programme

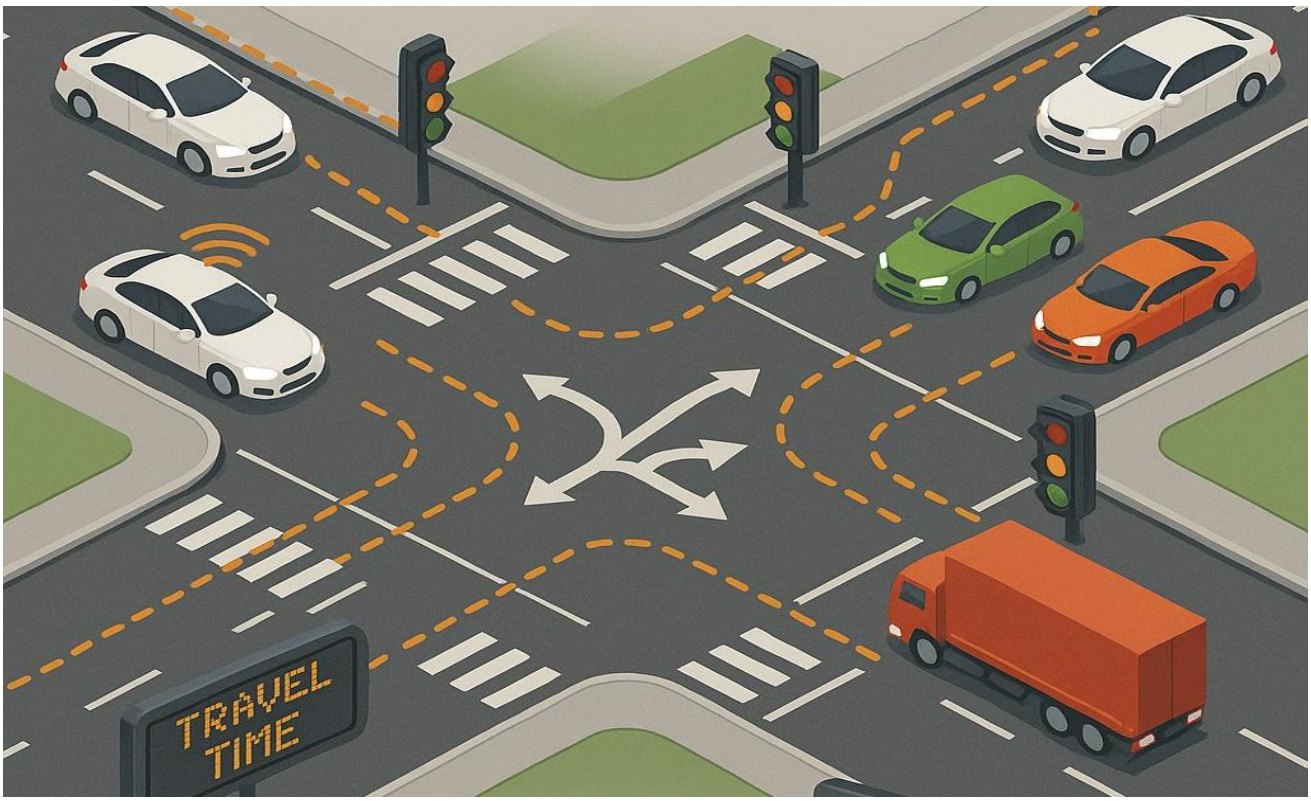
on

## Traffic Management & Simulation Techniques for Transport Planning

**29th October – 31st October 2025**

**A-CUPCB-SPAV**

# TRAINING OUTCOME REPORT




**Dr. MNV Pavan Kumar**
**Principle Instructor**
Faculty, Dept of Planning

**Mr. S Bhargava Teja**
**Principle Co- Instructor**
Faculty, Dept of Planning

**Mr. Sandeep P**
**Principle Co- Instructor**
Faculty, Dept of Planning

**Patron**
**Prof. Dr. Ramesh Srikonda**
Director, SPA Vijayawada

**Patron**
**Prof. Dr. Ayon Kumar Tarafdar**
Head A-CUPCB SPAV

Atal Mission for Rejuvenation and Urban Transformation

AMRUT Centre of Urban Planning for Capacity Building

A-CUPCB-SPAV

## Summary of Executive Development Programme (EDP) on

# "TRAFFIC MANAGEMENT & SIMULATION TECHNIQUES FOR TRANSPORT PLANNING"

India's cities are urbanizing at an unprecedented rate, leading to rapid motorization and urban sprawl. The nation's urban population is projected to exceed 600 million by 2036, while vehicle registration has already crossed 340 million (MoRTH, 2023). This rapid motorization, without a proportional expansion in transport infrastructure, has resulted in traffic congestion, increased travel times, fuel wastage, and deteriorating air quality.

Our road supply is limited and often cannot be expanded easily due to space, cost, and environmental constraints. Therefore, instead of merely increasing infrastructure, it is vital to manage existing resources efficiently. This is where Traffic Management (TM) and Travel Demand Management (TDM) play crucial roles Traffic Management focuses on optimizing current road capacity through short-term, low-cost measures, while Travel Demand Management aims to regulate and rationalize travel demand.

In this scenario, a balanced application of traditional traffic control techniques and advanced simulation-based decision-making tools becomes essential. This EDP aims to build such capabilities among participants, enabling them to plan, analyse, and implement effective traffic management solutions.

### Objectives of the EDP

The Executive Development Program is designed to achieve the following objectives:

- Understand the principles and practices of traffic and transport management.
- Gain proficiency in traditional traffic management techniques.
- Learn simulation-based analysis for real-world traffic operations.
- Build and evaluate models using PTV VISSIM or Aimsun simulation software.
- Integrate simulation findings into Transport Planning and policymaking.
- Explore the application of AI, ML, and ITS in-traffic management and decision support systems.
- Equip participants with the ability to address urban mobility challenges through effective short- and medium-term strategies.

The training session was conducted over THREE days, with each day dedicated to specific modules and activities. The EDP session was divided into the following modules 1-11.

**Day 1 – Fundamentals of Traffic and Transport Management**

1. Session I: Traffic and Transport Infrastructure
2. Session II: Traffic and Transport System Management
3. Session III: Traffic Management Techniques
4. Session IV: Simulation Software for Traffic Management

**Day 2 – Simulation-Based Analysis and Applications**

5. Session V: Application of Traffic Simulation Software
6. Session VI: Hands-on Exercise on Traffic Management using Simulation – I
7. Session VII: Hands-on Exercise on Traffic Management using Simulation – II
8. Session VIII: Advanced Traffic Simulation

**Day 3 – Emerging Technologies and Integration**

9. Session IX: Integrating Traffic Management in City Planning
10. Session X: Future Trends in Traffic Simulation
11. Session XI: Intelligent Transport Systems (ITS) and Their Applications

The EDP utilized a mix of instructional methods to ensure an engaging and comprehensive learning experience – Lectures, Presentations, Group Activities/ Workshops/ Exercise, Case Studies Analysis. Simulation softwares that can be used were introduced to the participants as part of the case-studies explained

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## EDP Day-wise Programme Schedule

**DAY 01- 29-10-2025, Wednesday- Inauguration and Traffic & Transport System Management**

| Time | Session Details | Expert |
|---|---|---|
| 9:30 -10.30 | **Inaugural Session**<br>Reporting of Participants and Registration Formalities<br>Assembling of Participants in Lecture Room<br>Welcome Address and Context Setting - Principal Instructor<br>Introduction to the Centre of Excellence - Centre Coordinator<br>Inaugural Address - Director, SPAV<br>Introduction of the Participants and the SPAV EDP Session Trainers' Team | EDP Session Trainers' Team |
| 10.30- 11.00 | **Hi-Tea** | |
| 11.00- 12.00 | **Session I: Traffic and Transport Infrastructure**<br>Basic Principles of Traffic and Transport Infrastructure Planning | **Dr. Pavan Kumar**<br>Faculty, SPA Vijayawada |
| 12.00-13.30 | **Session II. Traffic and Transport System Management**<br>Traffic and Transport System Management perspectives and Planning & Management Imperatives in Indian Context | **Prof. Dr. Sanjay Gupta**<br>Professor & HOD Planning, SPA Delhi |
| 13.30- 14.30 | **Lunch** | |
| 14.30- 15.30 | **Session III : Traffic Management Techniques**<br>Traffic Control methods and Management techniques | **Mr. S Bhargava Teja**<br>Faculty, SPA Vijayawada |
| 15.30-16.00 | **Refreshment Break** | |
| 16.00-17.30 | **Session IV: Simulation Software for Traffic Management**<br>Concept and Application of Simulation software in Traffic Management | **Dr. Naina Gupta**<br>Faculty, SPA Vijayawada |

**DAY 02- 30-10-2025, Thursday- Traffic Simulation Software application in Traffic Management (Hands on session)**

| Time | Session Details | Expert |
|---|---|---|
| 9:30 -11.00 | **Session V: Application of Traffic Simulation Software**<br>Application of AIMSUN software in Traffic Flow simulation | **Dr. Sai Chand**<br>Assistant Professor, TRIPS, IIT Delhi |
| 11.00- 11.30 | **Refreshment Break** | |
| 11.30- 13.00 | **Session VI: Hands-On Exercise on Traffic Management using Simulation -I**<br>Developing a Traffic Management Plan using Simulation software (Part-1) | **Dr. Sai Chand**<br>Assistant Professor, TRIPS, IIT Delhi |
| 13.00- 14.00 | **Lunch** | |
| 14.00- 15.30 | **Session VII: Hands-On Exercise on Traffic Management using Simulation-II**<br>Developing a Traffic Management Plan using Simulation software (Part-2) | **Dr. Sai Chand**<br>Assistant Professor, TRIPS, IIT Delhi |
| 15.30-16.00 | **Refreshment Break** | |
| 16.00-17.30 | **Session VIII: Advanced Traffic Simulation**<br>Simulating Dynamic Traffic Management Systems | **Dr. Sai Chand**<br>Assistant Professor, TRIPS, IIT Delhi |

**DAY 03- 31-10-2025, Friday- Application of AI, ML and Intelligent Transportation System in Traffic Management**

| Time | Session Details | Expert |
|---|---|---|
| 9:30 -11.00 | **Session IX: Integrating Traffic Management in City Planning**<br>Strategies and Planning Framework for Integrating Traffic Management in Master Plans | **Dr. Chetan Patel**<br>Associate Professor, SVNIT Surat |
| 11.00- 11.30 | **Refreshment Break** | |
| 11.30- 13.00 | **Session X: Future Trends in Traffic Simulation**<br>Emerging Role of AI and Machine Learning in Traffic Simulation for Managing Traffic | **Mr. Sandeep Peeke**<br>Faculty, SPA Vijayawada |
| 13.00- 14.00 | **Lunch** | |
| 14.00- 15.30 | **Session XI: Intelligent Transport Systems (ITS) and Its Application**<br>Traffic Incident and Congestion Management using Intelligent Transport System (ITS) | **Dr. Madhu Errampalli**<br>Chief Scientist, CRRI |
| 15.30-17.00 | **Concluding / Valedictory session**<br>Feedback session<br>Certificate Presentation<br>Concluding Remarks<br>Vote of Thanks | EDP Session Trainers' Team |
| 17.00-17.30 | **Hi- Tea** | |

# EDP: Trainers Team

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| **Chief Patron** | **Prof. Dr. Ramesh Srikonda**<br>**Director, SPA Vijayawada** |
| **Patron** | **Prof. Dr. Ayon Kumar Tarafdar**<br>**Head, A-CUPCB-SPAV** |

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|  <br>Dr. Pavan Kumar Machavarapu<br>**Principle Instructor**<br>**Assistant Professor,**<br>**SPA Vijayawada** | Dr. Pavan Kumar Machavarapu is an Assistant Professor in the Department of Planning at SPA Vijayawada, teaching courses on Highway Planning, Traffic System Design, Public Transport, Smart Mobility, and Regional Transport. He holds a Ph.D. in Transport Planning from SPA New Delhi, with research on public bicycle-sharing systems and travel behavior. His research focuses on sustainable mobility, road safety, and transport economics, with over 20 publications in reputed journals.<br><br>He has contributed to major projects including Comprehensive Mobility Plans for Gurgaon and Dwarka, cycle track planning for NDMC Delhi, and road safety interventions, and is currently engaged in AMRUT-funded research on traffic management and sustainable transport. |
|  <br>Mr. Bhargava Teja S<br>**Principle Co-Instructor**<br>**Assistant Professor,**<br>**SPA Vijayawada** | Mr. Bhargava Teja S is an Assistant Professor at SPA Vijayawada with qualifications including an M. Plan in Transportation and Infrastructure Planning and a B.E. in Civil Engineering. He also worked as Assistant Professor at Jawaharlal Nehru Architecture and Fine Arts University<br><br>He qualified GATE 2022 (Architecture & Planning) with AIR 30. He is certified in PTV Visum, PTV Vissim, and CUBE software, and is currently pursuing a Ph.D. at IIT Roorkee. |
|  <br>Mr. Sandeep P<br>**Principle Co-Instructor**<br>**Assistant Professor,**<br>**SPA Vijayawada** | Mr. Sandeep P is an Assistant Professor at SPA Vijayawada with over five years of experience in urban and transport projects as well as academic engagements. He has presented research at two international conferences on road safety and transport infrastructure held at MANIT Bhopal and IIT Roorkee.<br><br>He previously served as Department Coordinator and Assistant Professor at Dr. YSR Architecture and Fine Arts University, SPA, Dept. of Planning, Kadapa, Andhra Pradesh. He has organized two national conferences at SPAV, authored three research papers, and contributed technical project proposals submitted to the state government. |

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|  <br>Dr. Naina Gupta<br>**Assistant Professor, SPA Vijayawada** | Dr. Naina Gupta, Assistant Professor in the Department of Planning at SPA Vijayawada, is a Gold Medalist and Ph.D. holder from SPA New Delhi.<br><br>She specializes in urban transport planning, public transport, freight logistics, and transport-environment issues. With over 30 publications, she leads national and state-funded research on low-emission zones, junction improvements, and regional mobility.<br><br>She has received the Prof. V.N. Prasad National Best Thesis Award and is an active member of professional bodies like CILT and the Institute of Town Planners, India. |
|  <br>Dr. Sanjay Gupta<br>**Professor, Dept of Transport Planning, SPA Delhi** | Prof. Dr. Sanjay Gupta is the Head of Transport Planning at SPA Delhi, specializing in sustainable mobility and policy. He holds a Ph.D., notable fellowships, and has extensive research and publications on public transport, last-mile connectivity, urban freight, and shared/electric mobility. His work integrates rigorous research with practical solutions for efficient, inclusive, and sustainable transport systems. |
|  <br>Dr. Sai Chand<br>**Assistant Professor, TRIPS, IIT Delhi** | Dr. Sai Chand earned his Ph.D. in Transportation Engineering from UNSW Sydney in 2019. His research includes an accepted *Scientific Reports* paper on discrepancies between media-reported and officially recorded fatal road crashes in India, along with a TRB 2026 conference paper examining mode-choice heterogeneity for advanced air mobility using a mixed logit approach. He also teaches the postgraduate course Mathematical Methods in Road Safety |
|  <br>Dr. Chetan Patel<br>**Associate Professor, SVNIT Surat** | Dr. Chetan R. Patel, Associate Professor at SVNIT Surat, has over 20 years of academic experience and expertise in climate studies, active transport, urban planning, geospatial technology, and ITS. He has supervised numerous Ph.D. and M. Tech students, published extensively, and authored *Elements of Civil Engineering*.<br><br>His recognitions include ISTE awards, the CII-SISTech Guru Award, and multiple best paper/poster awards. Actively involved in professional bodies, he has led major consultancy projects such as PBS and drone-based urban mapping, and has visited leading institutions in Hong Kong, Singapore, and Malaysia. |

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|  <br>Dr. Madhu Errampalli<br>**Chief Scientist, CRRI** | Dr. Madhu Errampalli has over 27 years of R&D and consultancy experience at CSIR-CRRI, with around 173 publications, including 48 journal papers and 13 books/chapters. His major recognitions include the Pt. Jawaharlal Nehru Birth Centenary Award (2017), CIDC Vishwakarma Award (2016), SKOCH Order-of-Merit, CSIR-CRRI Young`` Scientist Award, two IRC Bronze Medals, and the Monbukagakusho Scholarship.<br><br>He also holds a national patent for a Car Driving Simulator with Driver Diagnostics and Training Method (2024). |

## Inauguration of EDP on 29-10-2025

The three-day Executive Development Programme titled *"Traffic Management & Simulation Techniques for Transport Planning"* was inaugurated on 29th October 2025 at the SPA Vijayawada campus. The sessions were conducted in the Conference Room of SPAV, which is well-equipped with the necessary infrastructure to facilitate interactive lectures and discussions. The programme was carefully designed for professionals and academicians from varied disciplines, aiming to equip participants with advanced strategies to address the growing complexities of traffic management in urban environments.

The inaugural programme was hosted by Mr. Sandeep Peeke, who warmly welcomed the participants and introduced the expert faculty members contributing to the sessions of the Executive Development Programme.

Mr. Bhargav Teja provided an overview of the programme, highlighting the growing need for effective traffic management in the context of India's rapid urbanization. He outlined the key objectives of the programme, which included understanding the principles and practices of traffic management and the introduction of new simulation software tools such as PTV Vissim and *AIMSUN*.

Dr. Ramesh Srikonda, Director of SPA Vijayawada, welcomed all guests and participants and shared that the Institute has been recognized as a Centre of Excellence by the Ministry of Housing and Urban Affairs (MoHUA) under the AMRUT division. He emphasized the significance of traffic management in urban planning and appreciated the emerging innovations and technologies that can play a crucial role in addressing future traffic challenges. He also expressed his happiness about the positive response received from participants who attended the earlier EDPs and CBPs conducted by the Centre

Dr. Ayon Kumar Tarafdar, Head of A-CUPCB-SPAV, further elaborated that the programme was designed to offer in-depth insight into leading traffic management software and methodologies. He extended his gratitude to the external guest speakers for their cooperation and support and expressed hope that the programme would stimulate interest and engagement among participants.

The inaugural session concluded with Dr. MNV Pavan Kumar presenting the structure and details of the three-day Executive Development Programme. He extended his thanks to all participants for their active involvement and enthusiasm, marking a successful beginning to the event.


Figure 1 (Left and Right): Inaugural Session of the EDP on *Traffic Management & Simulation Techniques for Transport Planning*

## DAY 01- (29-10-2025)- Inauguration and Traffic & Transport System Management (Session I – Session IV)

### Session I: Traffic and Transport Infrastructure

The first session of the Executive Development Programme, titled Traffic and Transport Infrastructure – Basic Principles of Traffic and Transport Infrastructure Planning, was conducted by Dr. MNV Pavan Kumar, Principal Instructor and faculty member at SPA Vijayawada.

He began the session by introducing the broader concept and growing importance of traffic management in the context of modern urban environments. Dr. Pavan Kumar emphasized that efficient traffic management plays a vital role in ensuring safety, reducing congestion, and maintaining the overall efficiency of transportation networks. He elaborated on the role of planning, control, and regulation in achieving a well-coordinated transport system that balances both mobility and accessibility.

He then explained the concept of bridging the gap between supply and demand within traffic systems, describing how proper management strategies can help optimize existing infrastructure and mitigate inefficiencies. The session addressed the challenges and consequences of poor traffic management, such as delays, accidents, and increased fuel consumption, underscoring the need for systematic planning and policy interventions.
Dr. Pavan Kumar also provided a detailed discussion on the various elements that define traffic demand and supply, supported by key concepts, parameters, and standards used in the field. He spoke on the importance of assessing road capacity and the techniques involved in its evaluation.

The session further covered methods of traffic data collection and survey techniques, focusing on how accurate data supports informed decision-making in planning. Participants were introduced to approaches for analyzing and interpreting traffic data to understand movement patterns and identify critical issues. The session concluded with a concise recap, reinforcing the essential principles and takeaways discussed throughout the lecture.


*Figure 2 (Left) and Figure 3 (Right): Session 1 of the EDP by Dr.MNV Pavan Kumar.*

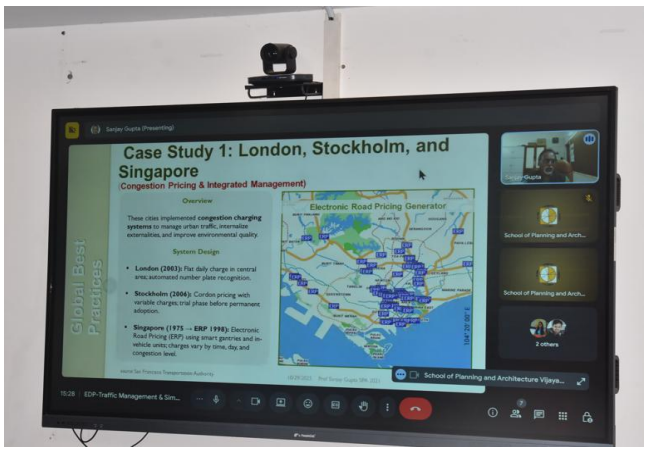
## Session II: Traffic and Transport System Management

The second session of the Executive Development Programme, titled *Traffic and Transport System Management – Perspectives and Planning & Management Imperatives in the Indian Context*, was conducted by Prof. Dr. Sanjay Gupta, Professor and Head of the Department of Planning, SPA Delhi.

The session was held online and began with an overview of the key factors influencing urban mobility, including urbanization patterns, motorization trends, and urban sprawl. Dr. Gupta discussed how these factors contribute to rising congestion levels and declining mobility efficiency, emphasizing the link between transport supply and the quality of urban movement.

He highlighted the concept of sustainable transport, stressing its growing importance in addressing contemporary urban challenges. The discussion covered the need for adopting sustainable strategies and principles that promote efficient, inclusive, and environmentally responsible mobility systems. Dr. Gupta underscored the goals of smart growth and smart mobility as essential directions for Indian cities, integrating technological solutions with planning approaches. He provided insights into the role of infrastructure development and traffic control devices in improving transport efficiency and safety.

The session further explored transport demand management, its categories, and various strategies through case studies from three international cities, illustrating global best practices. Dr. Gupta also elaborated on planning and mobility management imperatives, focusing on measures such as traffic calming, parking management, and policy interventions to regulate demand and encourage sustainable travel behaviour. He concluded the session by summarizing the key points discussed, reinforcing the need for holistic and context-specific approaches to traffic and transport system management in India.



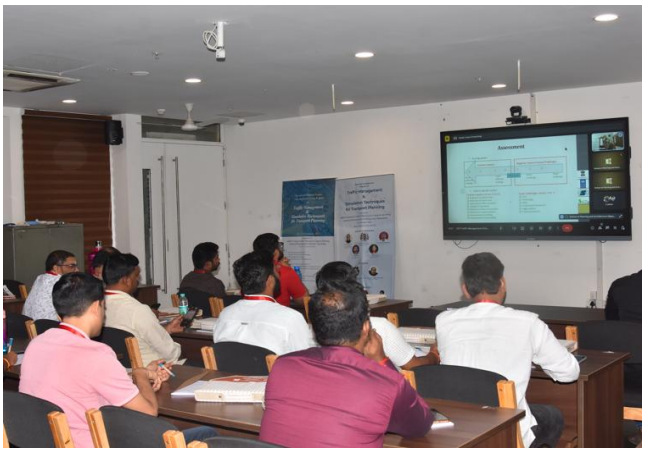



*Figure 4 (Left) and Figure 5 (Right): Session 2 of the EDP by Prof. Dr.Sanjay Gupta (online session).*

## Session III: Traffic Management Techniques

The third session of the Executive Development Programme, titled Traffic Management Techniques, was conducted by Mr. S. Bhargava Teja, Faculty, School of Planning and Architecture, Vijayawada. The session commenced after the lunch break on Day 1, and participants engaged in an insightful discussion on the fundamentals and applications of traffic control and management. A refreshment break followed at the end of the session.

Mr. Bhargava Teja began by introducing various traffic control methods and management techniques essential for ensuring safe and efficient movement on urban road networks. He explained how a combination of regulatory, physical, and technological measures helps streamline traffic flow and minimize conflicts on roads.

A significant portion of the session focused on traffic signal concepts, where the principles of signal control, warrants for installation, phase design, and signal timing optimization were discussed in detail. Participants gained clarity on how proper signal planning enhances operational efficiency at intersections and contributes to smoother traffic operations.

The session also explored the role of road design and infrastructure improvements in achieving effective traffic management. Mr. Teja highlighted elements such as channelization, geometric corrections, lane marking, signage, and pedestrian facilities, explaining how infrastructural enhancements play a vital role in reducing delays and improving travel safety.

To reinforce the concepts, the session included examples of successful traditional traffic management projects through relevant case studies. These real-world examples demonstrated how well-planned and context-sensitive interventions can significantly improve mobility in Indian cities without relying solely on large-scale infrastructure expansion.

The session concluded with key takeaways emphasizing the importance of integrated, scientific, and context-appropriate traffic control strategies in shaping efficient urban transport systems.


*Figure 6 (Left) and Figure 7 (Right): Session 3 of the EDP by Mr. S. Bhargava Teja*

## Session IV: Traffic Simulation and Modelling Techniques

The third session was conducted by Dr. Naina Gupta, faculty member at SPA Vijayawada. She began with a background discussion on the rapid pace of urban growth and its resulting impact on traffic congestion, emphasizing the growing need for advanced simulation and modelling tools in effective traffic management. Dr. Naina Gupta introduced key terminologies related to transport modelling and traffic simulation, laying the foundation for a better understanding of their practical relevance.

She discussed the major benefits and applications of traffic simulation in planning, particularly its role in analyzing complex traffic scenarios and supporting informed decision-making. The session then moved on to the process of setting up traffic models and the different approaches involved in model development. Dr. Naina Gupta elaborated on both macroscopic and microscopic modelling techniques, explaining their distinct characteristics and uses in simulating real-world conditions.

The latter part of the session focused on a live demonstration of *PTV Vissim*, traffic simulation software, where participants observed its interface, workflow, and potential for real-time traffic analysis and visualization.

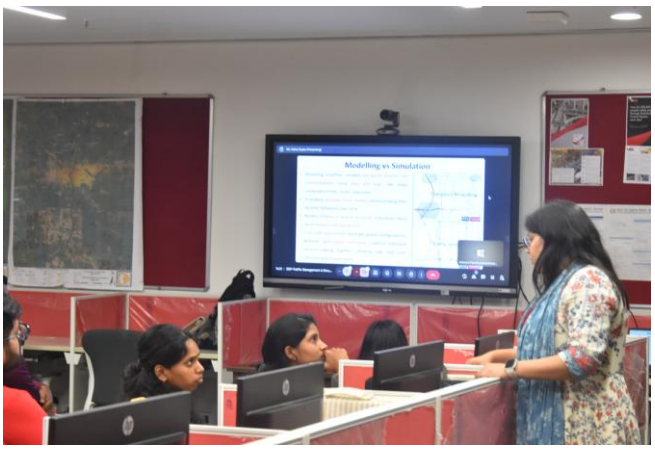



*Figure 8 (Left) and Figure 9 (Right): Session 4 of the EDP by Dr. Naina Gupta.*

*Figure 10 (Left) and Figure 11 (Right): Session 4 of the EDP by Dr. Naina Gupta.*

## DAY 02- (30-10-2025)- Traffic Simulation Software application in Traffic Management (Hands on session) (Session V-SessionVII)

### Session V: Application of Traffic Simulation Software

The fifth session of the Executive Development Programme, and the first session of Day 2, focused on the Application of Traffic Simulation Software and was conducted by Dr. Sai Chand, Assistant Professor, TRIPS, IIT Delhi. The session began with Dr. Chand offering a brief self-introduction, sharing his academic background, ongoing research initiatives, and acknowledging the support of his students who contribute to his work in transport planning and road safety.

Dr. Chand opened the technical discussion by highlighting the significance of traffic safety analysis, emphasizing parameters such as evacuation time, signal control strategies, and the critical role that simulation models play in assessing and improving safety outcomes. He explained the fundamentals of traffic simulation, outlining how simulation tools help examine complex traffic dynamics, evaluate alternative management strategies, and support data-driven planning decisions.

A key component of the session was the introduction to AIMSUN, a widely used microscopic traffic simulation software. Dr. Chand explained the interface, key features, workflow process, and essential data requirements for building accurate simulation models. Participants were guided through the logic and structure of the software, gaining an understanding of how AIMSUN supports real-world transport analysis.

The session progressed with a demonstration of setting up a simple traffic simulation using AIMSUN, where Dr. Chand illustrated the step-by-step process of model creation, calibration, and execution. This was followed by a basic traffic flow simulation applied to a case study area, showcasing how the software can represent actual traffic conditions while also discussing its limitations in handling highly complex scenarios.

The session concluded with an emphasis on the potential applications of simulation tools in traffic planning and safety evaluation, reinforcing the importance of integrating technology-driven approaches in contemporary traffic management practice.

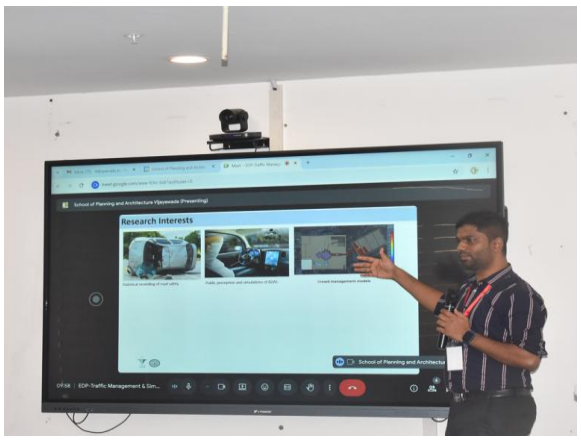



*Figure **12** (Left) and Figure **13** (Right): Session 5 of the EDP by Dr. Sai Chand.*

## Session VI: Hands-On Exercise on Traffic Management Using Simulation – I

The sixth session of the Executive Development Programme, titled Hands-On Exercise on Traffic Management Using Simulation - I, was conducted by Dr. Sai Chand, Assistant Professor, TRIPS, IIT Delhi. As the first part of the practical simulation module, the session focused on developing a Traffic Management Plan using AIMSUN through an interactive, hands-on demonstration.

Dr. Chand began by introducing the participants to the AIMSUN software interface, explaining its key features, tools, and workflow processes. He demonstrated how different data inputs such as traffic volumes, turning movements, signal timings, and network characteristics are integrated within the software to simulate real-world traffic behaviour. Emphasis was placed on junction operations and signal coordination, showcasing how simulation can capture dynamic interactions and operational challenges at critical nodes.

The session proceeded with a structured walkthrough of the step-by-step methodology involved in developing a traffic management plan using simulation technique. Dr. Chand demonstrated how AIMSUN enables users to test multiple strategies, compare alternative scenarios, and identify optimal solutions for improving traffic performance.

Participants were familiarized with the individual and group exercise structure, including the aims, objectives, and expected outputs. They were guided on how to build and run traffic simulations for their assigned case areas, encouraging active application of the concepts demonstrated. Dr. Chand also introduced the fundamentals of traffic flow analysis, explaining how simulation outputs such as speed, delays, queue lengths, and level of service indicators can be interpreted to assess network performance.

To support independent learning, Dr. Chand provided an overview of the AIMSUN software manual and showcased several simulation models developed for Indian city contexts, highlighting their relevance in addressing real-world traffic management challenges through data-driven, scenario-based approaches.

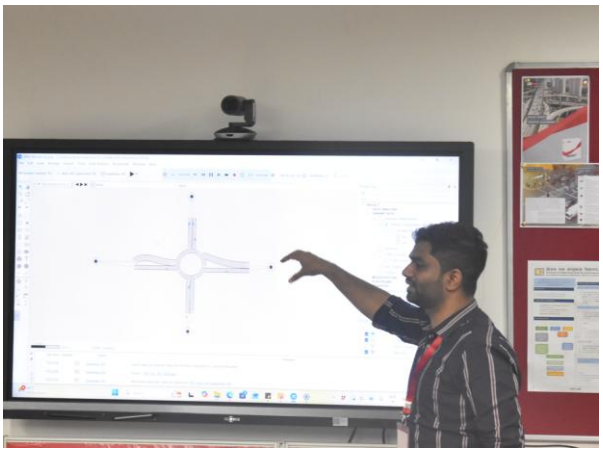


*Figure 14 (Left) and Figure 15 (Right): Session 6 of the EDP exercise by Dr. Sai Chand.*

## Session VII: Hands-On Exercise on Traffic Management Using Simulation – II

The sixth session of the Executive Development Programme focused on Hands-On Traffic Management using Simulation, and was conducted by Dr. Sai Chand, Assistant Professor, TRIPS, IIT Delhi. This online session served as the second part of the practical simulation module and enabled participants to apply traffic analysis concepts through real-time exercises.

After the Lunch Break of Day 2, Dr. Sai Chand began the session by guiding participants through the process of building and running traffic simulations using the selected software platform. Participants engaged in individual and group exercises, where they worked with real-world network scenarios to understand how various traffic parameters influence system performance.

The core of the session revolved around developing a Traffic Management Plan using simulation tool. Dr. Chand demonstrated how simulation-based approaches can be used to evaluate alternative strategies, optimize traffic operations, and test management interventions before on-ground implementation. Participants experimented with changes in network configuration, signal timing, traffic control measures, and demand variations, observing their impact on flow and congestion.

The exercise further included traffic flow analysis, where participants interpreted simulation outputs such as flow characteristics, delays, queue lengths, and Level of Service indicators. Dr. Chand emphasized how these insights support evidence-based decision-making in urban traffic management.

The session concluded with a detailed discussion on outputs and lessons learned from the hands-on module. Participants shared their observations, challenges, and strategies adopted during the exercise. Dr. Chand highlighted the importance of simulation as a planning and management tool and reinforced its role in designing efficient, context-specific traffic management interventions.

*Figure 16 (Left) and Figure 17 (Right): Session 7 of the EDP exercise by Dr. Sai Chand.*

## Session VIII: Advanced Traffic Simulation

The eighth session of the Executive Development Programme, titled Advanced Traffic Simulation, was conducted by Dr. Sai Chand, Assistant Professor, TRIPS, IIT Delhi. This session focused on deepening participants' understanding of simulation-based traffic analysis by exploring complex, real-world traffic scenarios and advanced management strategies.

Dr. Sai Chand began the session by introducing methods for modelling complex traffic scenarios, emphasizing how urban networks with heterogeneous vehicle mixes, irregular movement patterns, and varying demand conditions can be realistically represented through simulation tools. Participants were guided through techniques to calibrate and validate such models to ensure reliable results.

A key component of the session was simulating dynamic traffic management systems, where Dr. Sai Chand demonstrated how simulations can be leveraged to test adaptive strategies such as real-time signal control, variable message systems, and demand-responsive measures. The discussion highlighted how dynamic simulation helps assess the performance of traffic networks under fluctuating conditions.

The session further explored strategies for optimizing traffic flow and reducing congestion, showcasing how simulation outputs can be used to identify bottlenecks, evaluate alternative traffic plans, and develop efficient operational improvements. Through examples and case references, Dr. Sai Chand illustrated how targeted interventions lead to measurable improvements in mobility.

A special focus was placed on signalised intersections, including their operation, performance evaluation, and control strategies. Using a case study, participants examined how changes in signal timing, phasing, and coordination influence vehicle delays, queues, and overall intersection efficiency.

The session concluded with an analysis of real-time traffic management solutions, followed by a discussion of the simulation results generated during the exercises. Participants reflected on the practical relevance of advanced simulation techniques, while Dr. Sai Chand emphasized the role of real-time, data-driven approaches in shaping effective, context-specific traffic management strategies for urban environments.

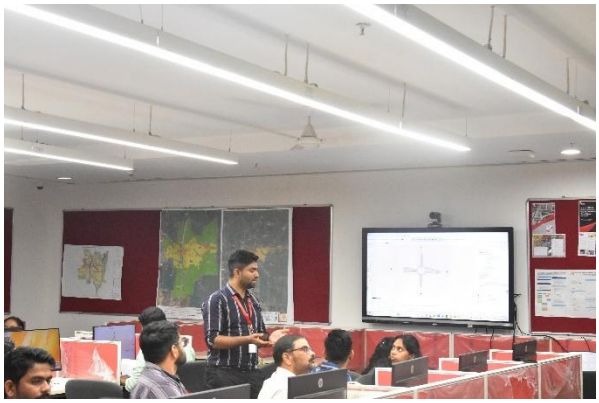


*Figure 18 (Left) and Figure 19 (Right): Session **8** of the EDP exercise by Dr. Sai Chand.*

## DAY 03- (31-10-2025), - Application of AI, ML and Intelligent Transportation System in Traffic Management (Session IX-SessionXI)

### Session IX: Integrating Traffic Management in City Planning

The ninth session of the Executive Development Programme, titled Integrating Traffic Management in City Planning, was conducted by Dr. Chetan Patel, Associate Professor, SVNIT Surat. Held on the morning of Day-3, the session focused on linking traffic management principles with broader urban planning frameworks, particularly within the structure of Master Plans.

Dr. Chetan Patel began the session by emphasizing the importance of traffic management in city planning, highlighting how efficient mobility forms the backbone of urban functioning. He explained that traffic management is not merely an operational task but a strategic component that directly influences accessibility, land-use efficiency, urban liveability, and environmental sustainability.

The session then reviewed the existing practices of incorporating traffic management strategies in Master Plans across Indian cities. Dr. Patel illustrated how mobility-related interventions such as transport network hierarchies, intersection treatments, corridor management, and public transport integration are traditionally embedded within Master Plan frameworks.

Participants were introduced to the challenges and constraints associated with integrating comprehensive traffic management strategies into Master Plans. These included institutional fragmentation, limited data availability, financial constraints, outdated regulatory mechanisms, and the lack of coordination between planning and enforcement agencies. Dr. Patel discussed how such limitations often affect the effective implementation of planned mobility interventions.

To address these gaps, the session proposed a policy framework for integrating traffic management in Master Plans. Dr. Patel outlined the need for a structured approach supported by robust data systems, inter-agency coordination, demand management strategies, and context-specific mobility solutions. He stressed the importance of proactive planning, continuous monitoring, and adaptive management to create resilient urban mobility systems.

The session concluded with key insights on strengthening planning processes, encouraging holistic integration, and enhancing the role of traffic management within long-term city development strategies.

*Figure 20 (Left) and Figure 21 (Right): Session **9** of the EDP exercise by Dr. **Chetan Patel***

## Session X: Future Trends in Traffic Simulation

The tenth session of the Executive Development Programme, titled Future Trends in Traffic Simulation, was conducted by Mr. Sandeep P, Faculty, School of Planning and Architecture, Vijayawada. Held during the late morning session of Day 3, this lecture focused on the technological advancements that are shaping the future of traffic management and simulation in India and across the globe.

Mr. Sandeep began by introducing participants to emerging technologies and innovations that are redefining modern traffic management systems. He highlighted developments such as real-time data analytics, sensor-based monitoring, connected vehicle technologies, and integrated traffic control platforms, explaining how these tools enhance accuracy, responsiveness, and efficiency in traffic operations.

A central part of the session focused on the role of Artificial Intelligence (AI) and Machine Learning (ML) in traffic simulation. Mr. Sandeep explained how AI-driven algorithms can analyse vast datasets, predicting congestion patterns, optimizing signal timings, and simulating complex traffic scenarios with greater precision. Mr. Sandeep emphasized how these advanced systems could support planners and administrators in making informed, long-term mobility decisions.

The session concluded with insights on preparing for future challenges in traffic management. Mr. Sandeep discussed issues such as rapid urbanization, increasing travel demand, data integration barriers, and technology adoption gaps. He stressed the need for capacity-building, robust digital infrastructure, and forward-thinking policies to effectively harness emerging technologies.

Overall, the session highlighted the transformative potential of AI, ML, and next-generation simulation tools in shaping smarter, more adaptable, and more resilient traffic management systems for Indian cities.

*Figure 22 (Left) and Figure 23 (Right): Session **10** of the EDP exercise by **Mr. Sandeep P***

## Session XI: Intelligent Transport Systems (ITS) and Its Application

The eleventh and final session of the Executive Development Programme, titled Intelligent Transport Systems (ITS) and Its Application, was delivered by Dr. Madhu Errampalli, Chief Scientist, CRRI. Conducted after the lunch break on Day 3, this concluding session highlighted the pivotal role of advanced technologies in shaping the future of traffic management and smart mobility in urban environments.

Dr. Madhu Errampalli opened the session by discussing traffic incidents, congestion, and their management through ITS-based solutions. He explained how modern cities rely on real-time data, automated detection systems, and coordinated response mechanisms to minimize delays and improve overall network efficiency during critical incidents.

A major part of the session focused on ITS for-traffic control, where Dr. Errampalli elaborated on systems such as Advanced Traffic Management Systems (ATMS), Automatic Number Plate Recognition (ANPR), Emergency Management Systems (EMS), and other intelligent monitoring and enforcement technologies. These tools were presented as essential components for enhancing operational safety and managing complex traffic patterns.

Participants were introduced to various traffic management tools and application techniques enabled by ITS, including adaptive signal control, traffic surveillance networks, dynamic message sign systems, and integrated corridor management frameworks. Dr. Errampalli highlighted how these technologies work together to create intelligent, responsive, and resilient transport systems.

The session also explored the broader concept of smart mobility, emphasizing the integration of digital infrastructure, data analytics, and user-centric mobility solutions. Through global case studies, Dr. Errampalli presented successful examples from leading international cities, demonstrating how ITS and smart mobility initiatives contribute to congestion reduction, improved travel reliability, and sustainable transport outcomes.

As the final session of the EDP, Dr. Errampalli concluded by summarizing the transformative potential of Intelligent Transport Systems in the Indian context. He emphasized the need for technological readiness, institutional coordination, and long-term planning to harness the full benefits of ITS and drive the transition toward smarter, safer, and more efficient urban mobility.


*Figure **24** (Left) and Figure **25** (Right): Session **11** of the EDP exercise by **Dr. Madhu Errampalli***

## Participants Profile

### Registered and Attended Participants List

| S. No. | Participant Name | Participant Number | Participant Type | Participant Designation | Gender | State |
|---|---|---|---|---|---|---|
| 1 | Dr. Shravan A Kanalli | EDP_25_01_01 | Faculty | Employee with Private Industry | Male | Karnataka |
| 2 | Dr. Siva Rama Krishna Uppuluri | EDP_25_01_02 | Faculty | Other | Male | Andhra Pradesh |
| 3 | Sudharsanamurthy P | EDP_25_01_03 | Faculty | Regular Employee with Government | Male | Tamil Nadu |
| 4 | Badake Sanju Kumar | EDP_25_01_04 | Private | Employee with Private Industry | Male | Tamil Nadu |
| 5 | Chiranjeevi Tadi | EDP_25_01_06 | Faculty | Employee with Private Industry | Male | Karnataka |
| 6 | A Lakshmoji | EDP_25_01_07 | Government | Employee with Private Industry | Male | Andhra Pradesh |
| 7 | Monica Sree Yarlagadda | EDP_25_01_08 | Government | Contractual Employee with Government | Male | Andhra Pradesh |
| 8 | BDNV Prasad Manepalli | EDP_25_01_09 | Government | Regular Employee with Government | Female | Andhra Pradesh |
| 9 | Yarlagadda Lakshmi Priyanka | EDP_25_01_10 | Government | Regular Employee with Government | Male | Andhra Pradesh |
| 10 | Allu Aparajita | EDP_25_01_11 | Government | Regular Employee with Government | Female | Andhra Pradesh |
| 11 | Muddada Poojitha | EDP_25_01_12 | Government | Regular Employee with Government | Female | Andhra Pradesh |
| 12 | Jarugumalla Kiran Kumar | EDP_25_01_13 | Government | Regular Employee with Government | Female | Andhra Pradesh |
| 13 | Kancherla Nagamani | EDP_25_01_14 | Government | Regular Employee with Government | Male | Andhra Pradesh |
| 14 | Singavarapu Abraham Naveen | EDP_25_01_15 | Government | Regular Employee with Government | Female | Andhra Pradesh |
| 15 | Mukku Pavan Kumar | EDP_25_01_16 | Government | Regular Employee with Government | Male | Andhra Pradesh |
| 16 | Kuntigorla sambasivarao | EDP_25_01_17 | Government | Regular Employee with Government | Male | Andhra Pradesh |
| 17 | Shaik Shamabhanu | EDP_25_01_18 | Government | Regular Employee with Government | Male | Andhra Pradesh |
| 18 | Gaurav Kumar | EDP_25_01_19 | Student | Student | Female | Andhra Pradesh |
| 19 | Vinmrakumar Gupta | EDP_25_01_20 | Student | Student | Male | Chhattisgarh |
| 20 | Ambuj Srivastav | EDP_25_01_21 | Student | Student | Male | Chhattisgarh |
| 21 | Ansuman Panda | EDP_25_01_22 | Student | Student | Male | Maharashtra |
| 22 | Lohithyasarmitha A | EDP_25_01_23 | Student | Student | Male | Andhra Pradesh |
| 23 | S Sri Vaishnavi | EDP_25_01_24 | Student | Student | Female | Andhra Pradesh |
| 24 | Rituja Gudla | EDP_25_01_25 | Student | Student | Female | Andhra Pradesh |
| 25 | Chokarappu Sahithi | EDP_25_01_26 | Student | Student | Female | Andhra Pradesh |
| 26 | V Ravi Kiran | EDP_25_01_27 | Government | Regular Employee with Government | Female | Andhra Pradesh |

### Registered and Not Attended

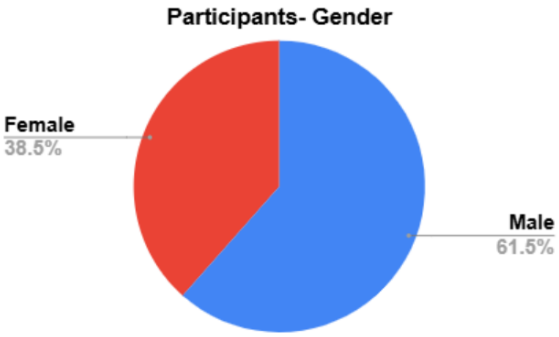
| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Rohini. N | EDP_25_01_05 | Research Scholar | Researcher | Female | Karnataka |

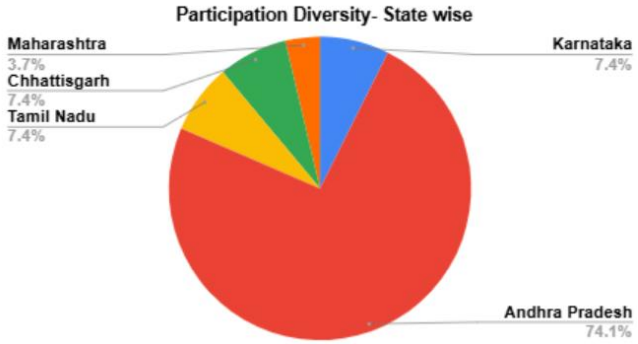
## Participant Diversity

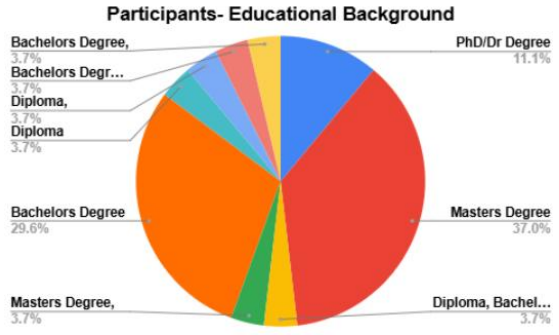
The Programme's participant pool was predominantly male (61.5%), with females representing 38.5%.

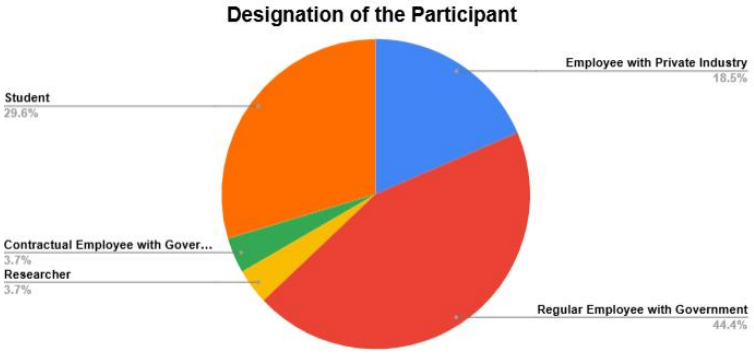
Most participants were from Andhra Pradesh (74.1%), while Karnataka, Chhattisgarh, and Tamil Nadu each accounted for 7.4%, and Maharashtra 3.7%.
In terms of education, the majority held a master's degree (37%), followed by Bachelor's degree holders (29.6%) and PhD/Doctorate holders (11.1%), with other qualifications less represented.
Nearly half of the participants were regular government employees (44.4%), alongside students (29.6%) and private industry employees (18.5%), while contractual government employees and researchers comprised a small fraction (3.7% each).

Overall, the participants were largely male, well-educated, primarily from Andhra Pradesh, and predominantly engaged in regular government employment, with a notable proportion of students.



## PARTICIPANT FEEDBACK

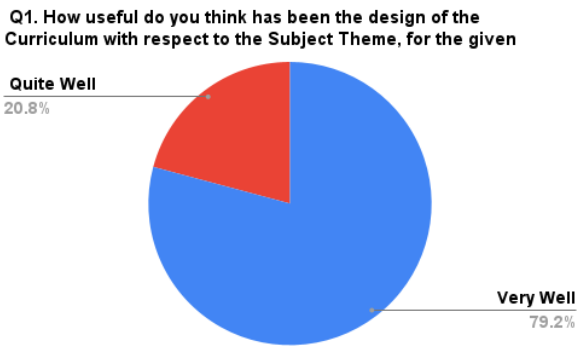
Participant feedback for the Executive Development Programme (EDP) on Traffic Management & Simulation Techniques for Transport Planning was collected through a Google Form circulated by AMRUT-CUPCB–SPAV. The responses reflect a highly positive reception of the sessions, training structure, and hands-on simulation activities.

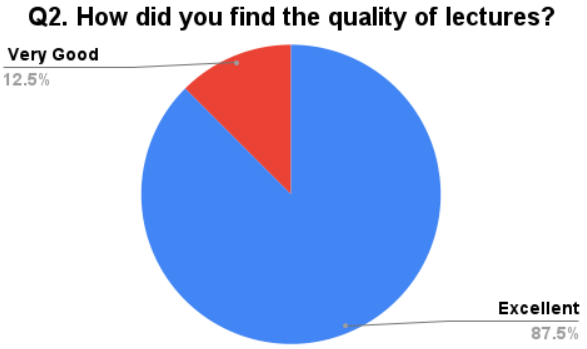
Overall, participants appreciated the balance between conceptual lectures and practical simulation exercises, noting that the programme offered a comprehensive learning experience that progressed from foundational knowledge to advanced, applied techniques. The structured introduction to traffic management, followed by stepwise demonstrations and simulation modelling exercises, enabled participants to build both theoretical understanding and practical competence.

Participants particularly highlighted the hands-on simulation sessions using AIMSUN and PTV Vissim, noting that these exercises made the workshop more engaging and helped them connect theoretical lecture content with real-world applications. The practical components including simulation building, traffic flow analysis, and scenario-based problem solving, were consistently rated as the most valuable part of the programme.

The expertise of the resource people was also appreciated. Participants acknowledged the clarity of explanations, relevance of case studies, and exposure to emerging technologies such as AI-based traffic simulation, ITS applications, and smart mobility frameworks. This combination of expert lectures and advanced tools provided participants with insights into both current practices and future directions in traffic management.

The feedback reflects that the EDP successfully met its objectives by delivering a well-designed curriculum, maintaining high instructional quality, and offering highly valuable practical exposure that enhanced participants' professional understanding of traffic management and simulation techniques.

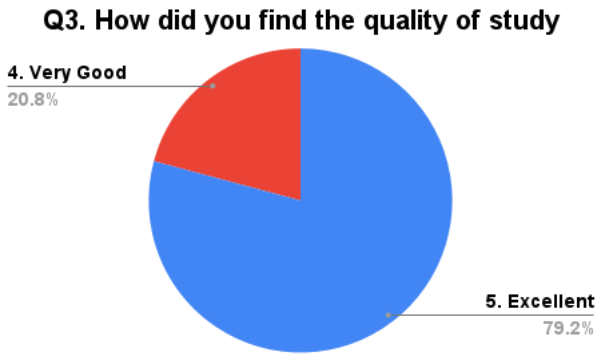


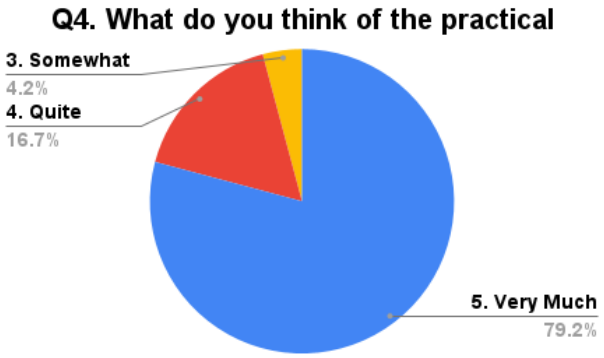



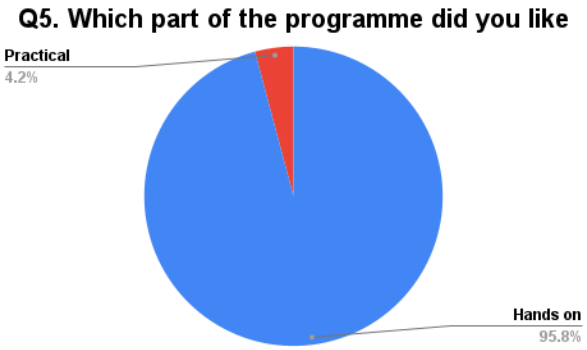

A large majority of respondents rated the curriculum as either "Very Well Designed" (79.2%) or "Quite Well Designed" (20.8%), indicating that the programme content was perceived as well-organized, relevant, and appropriately structured for the duration of the EDP.

Similarly, the quality of lectures received strong appreciation, with 87.5% rating them "Excellent" and

the remaining 12.5% rating them “Very Good.” This demonstrates the effectiveness of the resource persons in delivering clear, insightful, and engaging sessions that supported participant learning across multiple thematic areas.




Participants responded positively to the study materials, with nearly four-fifths rating them “Excellent” and the remainder selecting “Very Good.” This indicates that the documents, guides, and reference materials distributed were helpful and supported the learning outcomes effectively.

Regarding practical applicability, a strong majority (79.2%) felt the programme was “Very Much” applicable to real-world scenarios, with others rating it “Quite” or “Somewhat” applicable. This highlights the success of the EDP in bridging theory with hands-on practice, especially through simulation-based exercises.

Question 5 further reinforces this, with an overwhelming 95.8% of participants identifying the hands-on simulation sessions as the segment they liked the most. This clearly demonstrates that the interactive, exercise-driven components of the programme were the most impactful and engaging aspect for the participants.

Collectively, the responses to these three questions show that the practical modules particularly those involving AIMSUN and VISSIM simulations were the defining strength of the EDP, significantly enhancing participant engagement and professional skill development.


*Figure 26: Group Photo – DAY 2-EDP Participants and SPAV Trainers:* Traffic Management & Simulation Techniques for Transport Planning


*Figure 27: Group Photo – DAY 3-EDP Participants and SPAV Trainers:* Traffic Management & Simulation Techniques for Transport Planning

## VALEDICTORY & CERTIFICATE DISTRIBUTION

The valedictory session marked the formal conclusion of the Executive Development Programme. The PI, Co-PI, and the training team collectively felicitated the participants by presenting them with their participation certificates and momentos, acknowledging their successful completion of the EDP and their active engagement throughout the programme.

Following the distribution ceremony, Dr. Pavan delivered the Vote of Thanks, expressing gratitude to all resource persons, organizers, and participants for their contribution to the success of the programme. He highlighted the collaborative efforts of the academic and administrative teams and appreciated the enthusiasm and dedication shown by the participants during all sessions, particularly the hands-on simulation exercises.

After the formal proceedings, a group photograph was taken to commemorate the occasion. Selected photographs from the valedictory session are included below as a visual record of the concluding event.



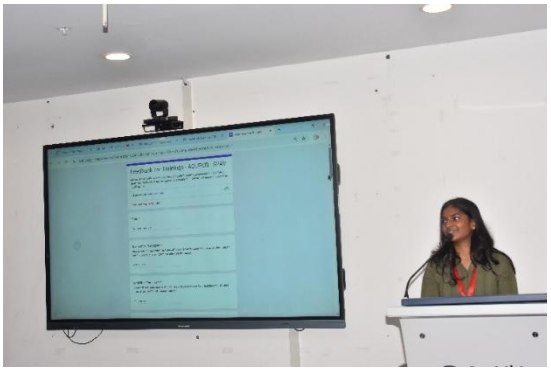






Executive Development
Program on
Traffic Management
&
Simulation Techn
for Transport Pla

# PARTICIPANT TESTIMONIALS

| | |
|---|---|
|  | *"As a professor, I'm interested in transportation planning, I found the advanced simulation software training incredibly valuable for enhancing my curriculum. This program successfully bridged the gap between academic theory and practical application, equipping me with new tools to better prepare my students. I will strongly encourage all my students to attend future Executive Development Programmes held by A-CUPCB at SPAV."* |
| *"I deeply appreciate the efforts put forth by the organizing team to deliver this high-quality Executive Development Program. The dedicated software sessions offered essential, practical insights, which were the highlight of the three days. I am now highly motivated to explore more advanced tools in travel demand modelling and other related simulation software."* |  |
|  | *"The hands-on session using the Aimsun & Vissim software was immensely beneficial for my ongoing research, providing immediate practical application. I also want to thank the team for the excellent arrangements and warm hospitality provided throughout the program at SPAV. The expertly curated sessions perfectly match my needs, and I look forward to continuing my software learning based on this strong foundation."* |
| *"Although I am just a Bachelors student with no prior knowledge of transport planning, the program was designed in a way that made every topic remarkably easy to grasp. I appreciated how the team taught the complex material, especially the clear and effective approach to software learning. The engaging hands-on exercises were particularly helpful, making the entire experience inspiring and relevant"* |  |

## Participants Attendance

**DAY 1- Date:** 29-10-2025, Wednesday **Morning Session**- Session I and II

AMRUT Centre of Urban Planning for Capacity Building
A-CUPCB-SPAV

Executive Development Program

3-Day Training Program (29-31 October 2025)

Traffic Management & Simulation Techniques for Transport Planning

DAY-01

Attendance Sheet

Date: 29/ 10 / 2025 Wednesday Session: Morning Session [Session I & II]

| S No | Name of the Participant | Signature |
|---|---|---|
| 1 | Dr. Shravan A Kanalli | |
| 2 | Dr.Siva Rama Krishna Uppuluri | |
| 3 | Sudharsanamurthy P | |
| 4 | Badake Sanju Kumar | |
| 5 | Rohini. N | |
| 6 | Chiranjeevi Tadi | |
| 7 | A Lakshmoji | |
| 8 | Monica Sree Yarlagadda | |
| 9 | BDNV Prasad Manepalli | |
| 10 | Yarlagadda Lakshmi Priyanka | |
| 11 | Allu Aparajita | |
| 12 | Muddada Poojitha | |
| 13 | Jarugumalla Kiran Kumar | |
| 14 | Kancherla Nagamani | |
| 15 | Singavarapu Abraham Naveen | |
| 16 | Mukku Pavan Kumar | |
| 17 | Kuntigorla sambasivarao | |
| 18 | Shaik Shamabhanu | |
| 19 | Gaurav Kumar | |
| 20 | Vinmrakumar Gupta | |
| 21 | Ambuj Srivastav | |
| 22 | Ansuman Panda | |
| 23 | Lohithyasarmitha A | |
| 24 | S Sri Vaishnavi | |
| 25 | Rituja Gudla | |
| 26 | Chokarappu Sahithi | |

AMRUT Centre of Urban Planning for Capacity Building
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Executive Development Program

3-Day Training Program (29-31 October 2025)

Traffic Management & Simulation Techniques for Transport Planning

**Attendance Sheet**

**Date:** 29 / 10 / 2025 Wednesday **Session:** Afternoon Session [Session III, IV]

| S No | Name of the Participant | Signature |
|---|---|---|
| 1 | Dr. Shravan A Kanalli | |
| 2 | Dr.Siva Rama Krishna Uppuluri | 29/10/25 |
| 3 | Sudharsanamurthy P | |
| 4 | Badake Sanju Kumar | |
| 5 | Nonani. N | |
| 6 | Chiranjeevi Tadi | |
| 7 | A Lakshmoji | |
| 8 | Monica Sree Yarlagadda | |
| 9 | BDNV Prasad Manepalli | |
| 10 | Yarlagadda Lakshmi Priyanka | |
| 11 | Allu Aparajita | |
| 12 | Muddada Poojitha | |
| 13 | Janugumalla Kiran Kumar | |
| 14 | Kancherla Nagamani | |
| 15 | Singavarapu Abraham Naveen | |
| 16 | Mukku Pavan Kumar | |
| 17 | Kuntigoria sambasivarao | |
| 18 | Shaik Shamabhanu | |
| 19 | Gaurav Kumar | |
| 20 | Vinmrakumar Gupta | |
| 21 | Ambuj Srivastav | |
| 22 | Ansuman Panda | |
| 23 | Lohithyasarmitha A | |
| 24 | S Sri Vaishnavi | |
| 25 | Rituja Gudla | |
| 26 | Chokarappu Sahithi | |

AMRUT Centre of Urban Planning for Capacity Building
A-CUPCB-SPAV

Executive Development Program

3-Day Training Program (29-31 October 2025)

Traffic Management & Simulation Techniques for Transport Planning

DAY-02

Attendance Sheet

Date: 30/ 10 / 2025 Thursday

Session: Morning Session [Session 5&6]

| S No | Name of the Participant | Signature |
|---|---|---|
| 1 | Dr. Shravan A Kanali | |
| 2 | Dr.Siva Rama Krishna Uppuluri | |
| 3 | Sudharsanamurthy P | |
| 4 | Badake Sanju Kumar | |
| 5 | Rohini. N | |
| 6 | Chiranjeevi Tadi | |
| 7 | A Lakshmoji | |
| 8 | Monica Sree Yarlagadda | |
| 9 | BDNV Prasad Manepalli | |
| 10 | Yarlagadda Lakshmi Priyanka | |
| 11 | Allu Aparajita | |
| 12 | Muddada Poojitha | |
| 13 | Jarugumalla Kiran Kumar | |
| 14 | Kancherla Nagamani | |
| 15 | Singavarapu Abraham Naveen | |
| 16 | Mukku Pavan Kumar | |
| 17 | Kuntigorla sambasivarao | |
| 18 | Shaik Shamabhanu | |
| 19 | Gaurav Kumar | |
| 20 | Vinmrakumar Gupta | |
| 21 | Ambuj Srivastav | |
| 22 | Ansuman Panda | |
| 23 | Lohithyasamitha A | |
| 24 | S Sri Vaishnavi | |
| 25 | Rituja Gudla | |
| 26 | Chokarappu Sahithi | |
| 27 | V Ravi Kiran | |

AMRUT Centre of Urban Planning for Capacity Building
**A-CUPCB-SPAV**

Executive Development Program

3-Day Training Program (29-31 October 2025)

Traffic Management & Simulation Techniques for Transport Planning

**Attendance Sheet**

Date: 30/ 10 / 2025 Thursday Session: Afternoon Session (Session-7&8)

| S No | Name of the Participant | Signature |
|---|---|---|
| 1 | Dr. Sheavan A Kanalli | |
| 2 | Dr.Siva Rama Krishna Uppuluri | 30/10/25 |
| 3 | Sudharsanamurthy P | |
| 4 | Badake Sanju Kumar | |
| 5 | Rohini. N | |
| 6 | Chiranjeevi Tadi | |
| 7 | A Lakshmoji | 30/10 |
| 8 | Monica Sree Yarlagadda | |
| 9 | BDNV Prasad Manepalli | 30/10/25 |
| 10 | Yarlagadda Lakshmi Priyanka | |
| 11 | Allu Aparajita | |
| 12 | Muddada Poojitha | |
| 13 | Jarugumalla Kiran Kumar | |
| 14 | Kancherla Nagamani | 30/10/25 |
| 15 | Singavarapu Abraham Naveen | |
| 16 | Mukku Pavan Kumar | |
| 17 | Kuntigoria sambasivarao | 30/10/25 |
| 18 | Shaik Shamabharu | |
| 19 | Gaurav Kumar | |
| 20 | Vinmrakumar Gupta | |
| 21 | Ambuj Srivastav | |
| 22 | Ansuman Panda | |
| 23 | Lohithyasarmitha A | |
| 24 | S Sri Vaishnavi | |
| 25 | Rituja Gudla | |
| 26 | Chokarappu Sahithi | |
| 27 | V. Ravi Kiran | V. Ravi Kiran |

AMRUT Centre of Urban Planning for Capacity Building
A-CUPCB-SPAV

Executive Development Program

**3-Day Training Program (29-31 October 2025)**

Traffic Management & Simulation Techniques for Transport Planning

DAY-03

**Attendance Sheet**

**Date:** 31/ 10 / 2025 Friday **Session:** 1 Morning Session [Session - 9, 10, 11]

| S No | Name of the Participant | Signature |
|---|---|---|
| 1 | Dr. Shravan A Kanalli | |
| 2 | Dr.Siva Rama Krishna Uppuluri | |
| 3 | Sudharsanamurthy P | |
| 4 | Badake Sanju Kumar | |
| 5 | Rohini. N | |
| 6 | Chiranjeevi Tadi | |
| 7 | A Lakshmoji | 31.10.25 |
| 8 | Monica Sree Yarlagadda | |
| 9 | BDNV Prasad Manepalli | |
| 10 | Yarlagadda Lakshmi Priyanka | |
| 11 | Alla Aparajita | |
| 12 | Muddada Poojitha | |
| 13 | Janugumalla Kiran Kumar | |
| 14 | Kancherla Nagamani | |
| 15 | Singavarapu Abraham Naveen | |
| 16 | Mukku Pavan Kumar | |
| 17 | Kuntigorla sambasivarao | |
| 18 | Shaik Shamsbhanu | |
| 19 | Gaurav Kumar | |
| 20 | Vinmrakumar Gupta | |
| 21 | Ambuj Srivastav | |
| 22 | Ansuman Panda | |
| 23 | Lohithyasarmitha A | |
| 24 | S Sri Vaishnavi | |
| 25 | Rituja Gudla | |
| 26 | Chokarappu Sahithi | |
| 27 | V. Ravi Kiran | |

AMRUT Centre of Urban Planning for Capacity Building
A-CUPCB-SPAV

Executive Development Program

3-Day Training Program (29-31 October 2025)

Traffic Management & Simulation Techniques for Transport Planning

DAY-03

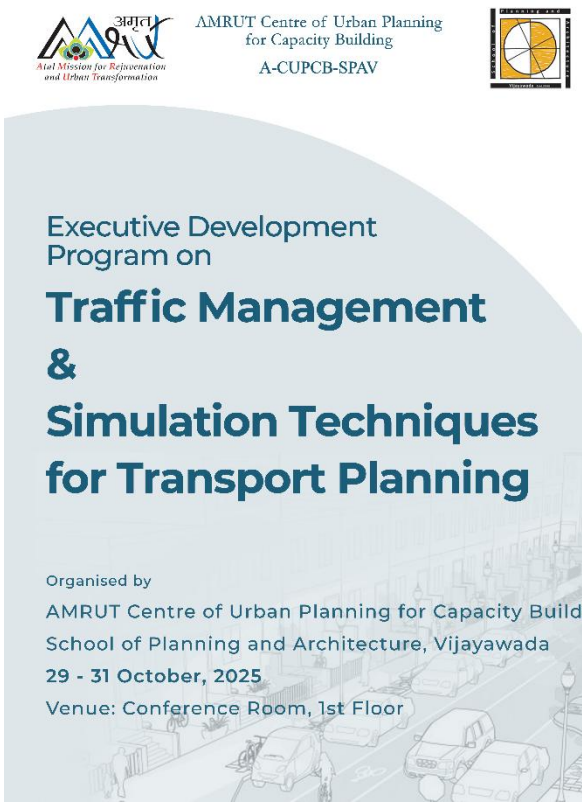
Attendance Sheet

Date: 31 / 10 / 2025 Friday

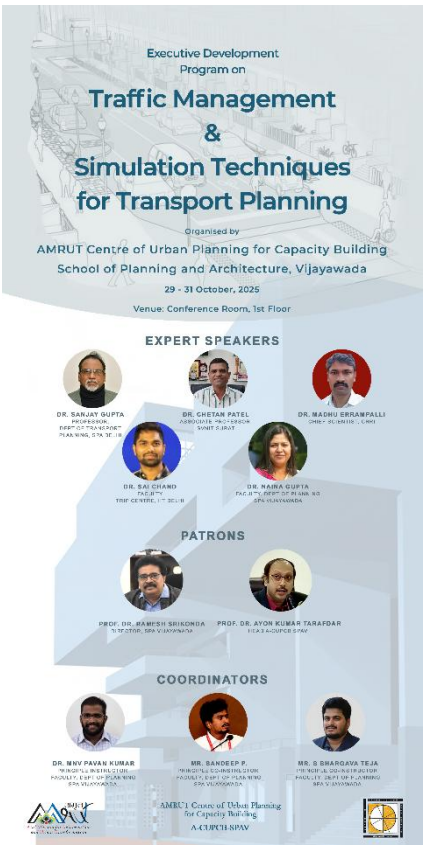
Session: Afternoon Session [Session-11, 12]

| S No | Name of the Participant | Signature |
|---|---|---|
| 1 | Dr. Shravan A Kanalli | |
| 2 | Dr.Siva Rama Krishna Uppuluri | |
| 3 | Sudharsanamurthy P | |
| 4 | Badake Sanju Kumar | |
| 5 | Rohini. N | |
| 6 | Chiranjeevi Tadi | |
| 7 | A Lakshmoji | |
| 8 | Monica Sree Yarlagadda | |
| 9 | BDNV Prasad Manepalli | |
| 10 | Yarlagadda Lakshmi Priyanka | |
| 11 | Allu Aparajita | |
| 12 | Muddada Poojitha | |
| 13 | Jarugumalla Kiran Kumar | |
| 14 | Kancherla Nagamani | |
| 15 | Singavarapu Abraham Naveen | |
| 16 | Mukku Pavan Kumar | |
| 17 | Kuntigorla sambasivarao | |
| 18 | Shaik Shamabhanu | |
| 19 | Gaurav Kumar | |
| 20 | Vinmrakumar Gupta | |
| 21 | Ambuj Srivastav | |
| 22 | Ansuman Panda | |
| 23 | Lohithyasarmitha A | |
| 24 | S Sri Valshnavi | |
| 25 | Rituja Gudla | |
| 26 | Chokarappu Sahithi | |
| 27 | V. Ravi Kiran | |

## EDP Brochure





## Program Overview

03 Days
11 Sessions
06 Expert Speakers
05 Institutions
24 Contact Hours
1.5 Credit Equivalent

## Registration Detail

For Registration, Fees, etc Scan/Visit

Register here

Visit :
https://acapcb.spav.ac.in/capacity-building/edp_25_oct/

Registration deadline :
27/10/2025, 05:00 pm

## Executive Development Program Team

### Coordinators

**Dr. MNV Pavan Kumar**
Principle Instructor
Faculty, Dept of Planning SPA Vijayawada

**Mr. Sandeep P.**
Principle Co- Instructor
Faculty, Dept of Planning SPA Vijayawada

**Mr. S Bhargava Teja**
Principle Co- Instructor
Faculty, Dept of Planning SPA Vijayawada

### Patrons

**Prof. Dr. Ramesh Srikonda**
Director, SPA Vijayawada

**Prof. Dr. Ayon Kumar Tarafdar**
Head A-CUPCB SPAV

For further details, contact
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Organized by

योजना तथा वास्तुकला विद्यालय, विजयवाड़ा
School of Planning and Architecture, Vijayawada

Executive Development Program
3-Day Residential Training Program

# Traffic Management & Simulation Techniques for Transport Planning

29 - 31 October 2025

AMRUT Centre of Urban Planning for Capacity Building
A-CUPCB-SPAV

## Purpose of the Programme

Growing congestion and safety concerns on urban roads stress the need for efficient traffic management. Enhancing mobility, cutting travel time, and improving overall urban quality of life require combining traditional methods with modern transport simulation techniques.

SPA Vijayawada offers a three-day Executive Development Program on "Traffic Management Methods Using Traditional Techniques and Transport Simulation Software." The course blends conventional strategies with advanced simulation tools to study traffic flow, improve safety, and reduce delays. It is designed for both professionals and academicians seeking to strengthen expertise in transportation.

Participants will learn traffic flow analysis, level of service evaluation, and practical use of simulation software. The program also introduces smart mobility and Intelligent Transportation Systems (ITS), preparing attendees to tackle evolving urban transport challenges through effective planning, research, and application.

## Target Audience

- Urban and Transport Planners
- Architects & Engineers
- DTCP & Municipal Planners
- Municipal Engineers
- Development officers
- Academicians
- Young Planners
- Researchers

## LEARNING OUTCOMES

- Understand fundamental and advanced traffic management principles.
- Become proficient in traditional traffic management techniques.
- Build and analyze traffic simulations through hands-on use of (Aimsun/Vissim) software.
- Integrate simulation results into planning and policy.
- Implement effective solutions for real-world traffic challenges.

## Programme Structure

| Day 1 – Traffic & Transport System Management | |
|---|---|
| Welcome and Program Overview | Dr. Pavan Kumar |
| Session I : Traffic and Transport Infrastructure | Dr. Pavan Kumar |
| Session II : Traffic and Transport System Management | Prof. Dr. Sanjay Gupta |
| Session III : Traffic Management Techniques | Mr. S Bhargava Teja |
| Session IV : Simulation Software for Traffic Management | Dr. Naina Gupta |

| Day 2 – Traffic Simulation Software application in Traffic Management (Hands on session) | |
|---|---|
| Session V : Application of Traffic Simulation Software | Dr. Sai Chand |
| Session VI : Hands-On Exercise on Traffic Management using Simulation -I | |
| Session VII : Hands-On Exercise on Traffic Management using Simulation-II | Dr. Pavan Kumar |
| Session VIII : Advanced Traffic Simulation | |

| Day 3 – Application of AI, ML and Intelligent Transportation System in Traffic Management | |
|---|---|
| Session IX : Integrating Traffic Management in City Planning | Dr. Chetan Patel |
| Session X : Future Trends in Traffic Simulation | Mr. Sandeep P |
| Session XI : Intelligent Transport Systems (ITS) and its Application | Dr. Madhu Errampalli |
| Concluding / Valedictory session | Dr. Pavan Kumar / Mr. Sandeep P / Mr. S Bhargava Teja |

AMRUT Centre of Urban Planning for Capacity Building
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**Reading Material Compendium for**

**Executive Development Programme**

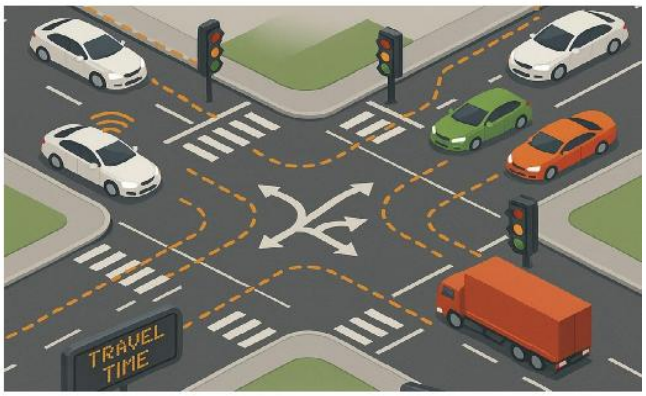
**on**

**Traffic Management & Simulation Techniques for Transport Planning**

**(Reference for Participants)**

**(29th October – 31st October 2025)**

**A-CUPCB -SPAV**

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**Executive Development Programme on Traffic Management & Simulation Techniques for Transport Planning.**

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Atal Mission for Rejuvenation and Urban Transformation

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