योजना तथा वास्तुकला विद्यालय, विजयवाड़ा
School of Planning and Architecture, Vijayawada
An Institute of National Importance, Ministry of Education, Govt. of India

Department of Planning,
Lecture Plan, Odd Semester, AY 2024-25

Name of Course: SMART MOBILITY (MTP214)

Programme & Sem:	Masters in Transport Planning, III Sem
Course Duration:	22 July 2024 - 14 Nov 2024
Course Coordinator:	Mr. SANDEEP PEEKE, Assistant Professor, Dept. of Planning,SPAV
Number of Credits:	03
Subject Category:	Theory
Total Periods/Week:	03 (Refer Time Table for Details)
Internal Assessment	50 (minimum pass marks 40%)
End Evaluation	50 (minimum pass marks 40%) - Written Exam.
Total Marks	100 (to be converted to CGPA credit pattern as per regulations)

Subject Objective: To provide a comprehensive overview of the intelligent transport systems (ITS) and traffic control systems for providing versatile and smart mobility solutions to cater future travel demand.

Week	Lecture / Session Topic (Teaching-Learning Objective aimed)	Unit and Assignment
Week 1 (26 July)	Concepts and components of smart mobility, role of ITS in smart mobility and smart cities; PPPs as a tool to implement smart mobility projects;	Unit 1: Smart Mobility Assignment 1a: Review on research articles related to application of smart mobility.
Week 2 (02 Aug)	smart mobility solutions for differently-abled; Integration of smart and green mobility.	
Week 3 (09 Aug)	Definition, concepts, types of Intelligent Transport System (ITS); ITS technology, software, equipment, Traffic management, emergency and incident management	Unit 2: Intelligent Transport System Assignment 1b: Review and Presentation of various case studies of ITS in Transportation
Week 4 (16 Aug)	public transport system, terminal and depot management system, parking infrastructure management,	
Week 5 (23 Aug)	commercial vehicle management, Highway surveillance, case studies.	

योजना तथा वास्तुकला विद्यालय, विजयवाड़ा
School of Planning and Architecture, Vijayawada
An Institute of National Importance, Ministry of Education, Govt. of India

Department of Planning,
Lecture Plan, Odd Semester, AY 2024-25

Week 6-7 (27 Aug - 8 Sep)	Field Trip	
Week 8 (13 Sep)	Presentation of various case studies in ITS	Unit 2: Intelligent Transport System Assignment 1b: Review and Presentation of various case studies of ITS in Transportation
Week 9 (17- 21 Sep)	Mid- Semester Assessment week	
Week 11 (27 Sep)	Available and emerging traffic control system technology, Area traffic control, urban traffic control system technology	Unit 3: Application of ITS in-Transport Infrastructure Assignment 2a: Review and presentation of various optimization techniques in traffic mobility
Week 12 (4 Oct)	transportation system management, highway control and incident management Intelligent vehicle highway system,	
Week 13 (11 Oct)	**Special/ Guest Lecture:** *Applications of ITS Technologies in Transportation Planning*	
Week 14 (18 Oct)	highway surveillance, Traffic regulation andenforcement; optimisation of public transport for smartmobility; terminal management; parkingmanagement.	
Week 16 (25 Oct)	Costing of ITS, ITS benefits assessment economic and financial analysis of ITS. Implementation	Unit 4: Performance, Implementation and Evaluation of ITS Assignment 2b: Classroom exercise of various example problems on Economic and Financial Analysis
Week 17 (1 Nov)	Case studies, institutional and organizational issues.	
Week 18 (08 Nov)	Application of ITS in demand management, transport supply provision, shared mobility.	Unit 5: Case Studies on Smart Mobility

Reference books:

1. Button, K. J., Hensher, D. A. (2001), *Handbook of Transport Systems and Traffic Control,* Elsevier Science, United Kingdom.
2. Sarkar, P., Jain, A.K. (2017), *Intelligent Transport Systems,* PHI Learning Private Limited, New Delhi.
3. Smart Urban Mobility: Transport Planning in the Age of Big Data and Digital Twins

योजना तथा वास्तुकला विद्यालय, विजयवाड़ा
School of Planning and Architecture, Vijayawada
An Institute of National Importance, Ministry of Education, Govt. of India

Department of Planning,
Lecture Plan, Odd Semester, AY 2024-25

Note:

1. Any other closed holidays as declared by SPAV shall supersede the above lecture plan. Holidays shown above may alter as per Notice from time to time.
2. Assessment Sessions may be re-scheduled, with prior intimation.
3. Reading lists provided is not exhaustive and is subject to addition – students are advised to follow progression of class to keep abreast of the new reading lists, if any.