

DEPARTMENT OF CIVIL ENGINEERING

Course Outline for the Session July-Oct 2026-27 (Odd Semester)

Faculty Name: Bharathi B

Subject with code: Intelligent Transportation Systems – BCV714A

Semester with section: 7th – A

Modules	Class No	Topics proposed to be covered	Portion to be covered in %	Remarks
Module 1	1	Introduction to Intelligent Transportation Systems (ITS) -Definition –	20.00	
	2	Role and Responsibilities		
	3	Advanced Traveller Information System		
	4	Fleet Oriented ITS Services		
	5	Electronic Toll Collection		
	6	Critical issues		
	7	Security		
	8	Safety		
Module 2	9	Architecture-Techniques	40.00	
	10	– ITS Architecture Framework		
	11	Hardware Sensors		
	12	Vehicle Detection Vehicle Detection		
	13	Dynamic Message Sign		
	14	GPRS		
	15	GPS		
	16	Toll Collection		
Module 3	17	Video Detection	60.00	
	18	Virtual Loop – Cameras		
	19	-- ANPR – IR Lighting		
	20	Integrated Traffic Management – Control Centre		
	21	Junction Management Strategies		
	22	ATMS – Advanced Traveler Information Systems (ATIS)		
	23	Route Guidance – Issues - Historical – Current – Predictive Guidance		

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	24	Route Guidance – Issues - Historical – Current – Predictive Guidance.		
Module 4	25	Travel Information	80.00	
	26	Pre Trip and Enroute Methods		
	27	Basic ATIS Concepts- Smart Route System		
	28	Data Collection		
	29	Dissemination to Travelers		
	30	Evaluation of Information		
	31	Value of Information – Business Opportunities		
	32	Value of Information – Business Opportunities		
Module 5	33	Automated Highway Systems	100.00	
	34	Vehicles in Platoons		
	35	Integration of Automated Highway Systems		
	36	ITS Programs in the World		
	37	Overview of ITS implementations in developed countries		
	38	Overview of ITS implementations in developed countries		
	39	ITS in developing countries		
	40	ITS in developing countries		

List of Text Books

1. Intelligent Transport Systems, Intelligent Transportation Primer, Washington, US, 2001.
2. Henry F.Korth, and Abraham Siberschatz, Data Base System Concepts, McGraw Hill, 1992.
3. Turban E., "Decision Support and Export Systems Management Support Systems", Maxwell Macmillan, 1998.
4. Sitausu S. Mittra, "Decision Support Systems – Tools and Techniques", John Wiley, New York, 1986.
5. Cycle W.Halsapple and Andrew B.Winston, "Decision Support Systems – Theory and Application", Springer Verlag, New York, 1987
6. ITS Hand Book 2000: Recommendations for World Road Association (PIARC) by Kan Paul Chen, John Miles.