

Traffic Awareness & Road Safety			
Course Code	2BAT208	Scheme	2026-27
Type of Course	HSMC	Semester	02
Teaching Hours/Week (L:T:P)	01	CIE Marks	50
Total Hours of Pedagogy per semester L /T/S/P/SL&TW:	14	SEE Marks	
Credits	-	Total Marks	50
Examination type (SEE)	CIE	Exam Hours	-
Course objectives: To Introduce the concept, principles, tools and aids of Road Safety and Civic Sense to the students of B Arch. To acquaint them with the design and safety standards for roads. Also inculcate the practice of safe road behaviour and civic sense among them.			
Teaching-Learning Process (General Instructions) These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes. 1. Use of theory, activities, sketches, drawings, assignment and tutorial for teaching. 2. Evaluation by quiz, tests, classroom activities.			
Module-1			
1) Introduction to Road Safety. Road as an active space, Types of users, User behaviour, Sensory Factors like Vision and Hearing in User Behaviour. Types of Vehicles: Heavy Vehicles, Light Motor Vehicle, Two Wheelers, Auto- Rickshaw, Bicycles and Cycle Rickshaws, Non Motorised Vehicles. Vehicle Characteristics: Dimensions, Weight, Turning Radii, Braking Distance, Lighting System, Tyres, etc. Types of Hazards: Conflicts and Accidents.			
Module-2			
2) Typology of Roads: Components and Design Road Classification: National Highways, State Highways, District Roads (MDR and ODR), Village Roads. Urban Road Classification: Expressways, Arterial, Sub-Arterial, Collector, Local, Service Roads, One-Way, Two-Way etc. Mountainous Roads. Speed Limits of Road types. Design of Roads: Cross Sectional Elements- Right of Way, Carriageway, Median, Shoulders, Side Walks, Lanes, Cycling Track, Green Strip, Curbs, Camber, etc. Spatial Standards for the Cross-Section Design. Relationship between Road design and Road Safety.			
3) Intersections Types of Road Intersections: Basic forms of at-grade Junctions (T, Y, Staggered, Skewed, Cross, Scissors, Rotary, etc. Grade Separated Junctions (with or without interchange): Three –Leg, Four-Leg, Multi-Leg, etc. Design of Intersections: Design and Spatial Standards for Traffic Islands, Turns, Turning Radii, Directional Lanes, Pedestrian Crossings, Median Openings, Traffic Calming Components like Speed Breakers and Table-Top Crossings etc. Design Considerations for Diverging, Merging and Weaving Traffic. Location and Design for Traffic Signals.			

Module-3
4) Pedestrian Circulation and Barrier Free Design Requirement of Pedestrian Infrastructure: Sidewalks and footpaths, Recommended Sidewalk widths, Pedestrian Crossing, Pedestrian Bridges, Subways, Cycle Tracks, etc. Barrier free design: Location and Design Standards for Ramps for wheel Chair Access, Other Provisions like Tactile for Visually Challenged etc. Safety Provisions: Pedestrian Railings, Anti-skid Flooring, Pedestrian Signal, Walk Button, etc.
Module-4
5) Traffic Signs and Road Markings Types of Traffic Signs: Principles and Types of Traffic Signs, Danger Signs, Prohibitory Signs, Mandatory Signs, Informatory Signs, Induction Signs, Direction Signs, Place Identification Signs, Route Marker Signs, etc. Reflective Signs, LED Signs, Static and Dynamic signs. Standards for Traffic Signs: Location, Height and Maintenance of Traffic Signs. Types of Road Markings: Centre Lines, Traffic Lane Lines, Pavement Edge Lines, No Overtaking Zone Markings, Speed Markings, Hazard Markings, Stop Lines, Pedestrian Crossings, Cyclist Crossings, Route Direction Arrows, Word Messages, Marking at Intersections, etc. Material, Colour, and Typography of the Markings. 6) Traffic Signals, Traffic Control Aids, Street Lighting Traffic Signals: Introduction, Advantages and Disadvantages Signal Indications: Vehicular, Pedestrian and Location of the Signals. Signal Face, Illustration of the Signals, Red, Amber, Green Signals and its significance, Flashing Signals Warrant of Signals, Co-ordinated Control of Signals. Traffic Control Aids: Roadway Delineators (Curved and Straight Sections) Hazard Markers, Object Markers, Speed Breakers, Table Top Crossings, Rumble Strips, Guard Rails and Crash Barriers etc. Street Lighting: Need for Street Lighting, Type of Lighting, Illumination Standard, Location and Intermediate Distance.
Module-5
7) Road Accidents Nature and Types of Road Accidents (Grievously Injured, Slightly Injured, Minor Injury, Non injury, etc) The Situation of Road Accidents in India (yearly), Fatality Rates, etc Factors (and Violations) that cause accidents. Prevention and First Aid to Victims. Collision Diagrams and Condition Diagram exercises. Traffic Management Measures and their influence in Accident Prevention. 8) Road Safety and Civic Sense Need for Road Category of Road Users and Road Safety Suggestions. Precautions for Driving in Difficult Conditions (Night, Rain, Fog, Skidding Conditions, Non Functional Traffic lights, etc.) Type of Breakdowns and Mechanical Failures. Accident Sign (Warning Light, Warning Triangle, etc.) Introduction to Concept of Civic Sense and its relationship to Road Safety: Importance of Civic Sense, Road Etiquettes and Road User Behaviour, Rules of Road, Right of the Way. Providing Assistance to Accident Victim. Sensitisation against Road Rage. 9) Traffic Regulations, Laws & Legislations

Indian Motor Vehicle Act (Chapter VIII: Control of Traffic to be discussed in detail) Regulation Concerning Traffic: Cycles, Motor Cycles and Scooters, Rules for Pedestrian Traffic, Keep to the Left Rule, Overtaking Rules, Turning Rules, Priority Rules, Hand Signals, etc. Speed and Hazard Management. Penal Provisions. National Road Safety Policy, Central Motor Vehicle Rules, State Motor Vehicle Rules. Introduction to
Course outcome (Course Skill Set) 1) The students will be able to learn various aspects of road safety. 2) The students will be able to apply technical details in design of various types of road and road geometrics. 3) The students will be able to understand legislations with respect to road safety. Practices.
Assessment Details (CIE) (methods of CIE need to be defined topic wise i.e.- Studio/ Class room/Tutorial discussions, Reviews, Time problems, test, Seminar or micro project) The weightage of Continuous Internal Evaluation (CIE) is 100% and there is no Semester End Exam (SEE) .The student has to obtain a minimum of 50% marks in CIE and is conducted for 100 marks. Based on the CIE marks grading will be awarded. Continuous Internal Evaluation: Methods suggested: 1. Studio discussions, Reviews, Time problems, CIE tests, Seminar or micro project, Quiz, report writing etc. 2. The class teacher has to decide the course of learning for the subject, in the beginning only. The teacher has to announce the methods of CIE for the subject in advance in writing. Semester End Examination: 1. There is no Semester End Exam (SEE) The CIE marks list generated is to be signed by the internal examiners and submitted to VTU as per the procedure through the Principal of the institution.
Suggested Learning Resources: Books 1. Introduction to Traffic Engineering, R Srinivasa Kumar 2. Traffic Engineering and Transport Planning, L R Kadiyali 3. Book on Road Safety Signage and Signs, Ministry of RoadTransport and Highways, Government of India. 4. MORT&H Pocketbook of Highway Engineers, 2019(Third Revision) 5. Publication by UTTIPEC namely, Street Design Guidelines, UTTIPEC guidelines for Road Marking, UTTIPEC guideline and specification for Crash Barriers, Pedestrian Railing and Dividers, UTTIPEC Standard Type Crossing Design. 6. Street Design Standards as provided in Timesavers, Neuferts etc. Publications by Indian Road Congress.
Web links and Video Lectures (e-Resources): - ī https://ndl.iitkgp.ac.in - ī https://www.youtube.com/watch?v=5sl9kDnFTbg - ī https://www.youtube.com/watch?v=imtg0SYq5IM - ī https://www.youtube.com/watch?v=BZQFNvYMAm8 https://www.youtube.com/watch?v=sCXtcXD17qU
Activity Based Learning (Suggested Activities in Class)/ Practical Based learning 1. Visit to Regional Transport office to observe variety of activities and discussion with officials. 2. Participation in Traffic Surveys. - ī Preparation of a street plan and drawings for pedestrian friendly environment.

