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| 1.  | Title of the course  | Transportation Engineering                        |
| 2.  | Course number  | CE308L  |
| 3.  | Structure of credits   | 3-1-0-4   |
| 4.  | Offered to   | UG  |
| 5.  | New course/modification to   | Modification To CE3206/8                          |
| 6.  | To be offered by   | Department of Civil and Environmental Engineering |
| 7.  | To take effect from  | July 2022   |
| 8.  | Prerequisite   | Nil   |
| 9.  | <b>Course Objective(s):</b> This project-based learning course presents fundamental knowledge regarding various aspects of transportation engineering, including, but not limited to: highway planning, pavement technology, traffic engineering, and geometric design. The course is designed to provide junior engineering students exposure to many elements of transportation engineering and technological activities in order to aid in the design, analysis, and solving several transportation-related problems.   |   |
| 10. | <b>Course Content:</b> Highway planning: alignment, land-use – transportation interaction, urban transportation planning, parking, travel demand management and modeling; Pavement technology: pavement systems and types, materials, mixtures, design, analysis, performance criteria, performance tests, MoRTH specifications, IRC guidelines, AASHTO methods; Geometric design: sight distance, horizontal and vertical alignments, superelevation, extra-widening; Traffic engineering: fundamental parameters and relations of traffic flow, traffic data collection, traffic stream models, capacity and level of service, traffic signs and road markings, traffic intersections, traffic signal design |   |
| 11. | <b>Textbook(s):</b><br>1. Khanna S K, Justo C E G and Veeraragavan A, Highway Engineering, Nem Chand & Brothers (2015).<br>2. Chakraborty P and Das A, Principles of Transportation Engineering, Prentice Hall India Learning Private Limited (2012).  |   |
| 12. | <b>Reference(s):</b><br>1. Roess R P, Prassas E S and McShane W R, Traffic Engineering, Pearson (2011).<br>2. Papacostas C S and Prevedouros P D, Transportation Engineering and Planning, Pearson (2010).<br>3. Kadiyali L R, <i>Traffic Engineering and Transport Planning</i> , Khanna (2011).  |   |