

INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
PROFORMA FOR NEW COURSE

1.	Title of the Course	Transportation Engineering
2.	Course Number	CE3206
3.	Status of the Course	Core
4.	Structure of Credits	3-1-0-4
5.	Offered To	UG
6.	New Course/Modification to	New
7.	To be Offered by	Department of Civil & Environmental Engineering
8.	To take effect from	July 2018
9.	Prerequisite	Nil
10.	Whether approved by the Department	Yes
11.	Course Objective: 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.	
12.	Course Content: 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.	
13.	Text book(s): 1. Khanna S K, Justo C E G and Veeraragavan A, <i>Highway Engineering</i> , Nem Chand & Brothers (2015). 2. Chakraborty P and Das A, <i>Principles of Transportation Engineering</i> , Prentice Hall India Learning Private Limited (2012).	
14.	Reference(s): 1. Roess R P, Prassas E S and McShane W R, <i>Traffic Engineering</i> , Pearson (2011). 2. Papacostas C S and Prevedouros P D, <i>Transportation Engineering and Planning</i> , Pearson (2010). 3. Kadiyali L R, <i>Traffic Engineering and Transport Planning</i> , Khanna (2011).	