

**INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI**  
**PROFORMA FOR NEW COURSE**

1.	Title of the Course	Traffic Engineering and Road Safety
2.	Course Number	CE5109
3.	Status of the Course	Core
4.	Structure of Credits	3-0-0-3
5.	Offered To	PG
6.	New Course/Modification to	New
7.	To be Offered by	Department of Civil and Environmental Engineering
8.	To take effect from	July 2019
9.	Prerequisite	Nil
10.	Whether approved by the Department	Yes
11.	<b>Course Objective:</b> This course would enable the students to understand the basic traffic flow variables, their measurements and relationships. The students will be able to analyze a variety of traffic facilities and evaluate capacity and level of service (LOS). The students will get exposed to design of traffic rotary and traffic signal at intersections. The students will be introduced to road safety audit procedures and practice.	
12.	<b>Course Content:</b> Traffic stream characteristics; Traffic measurement procedures; Probability and statistics in traffic engineering; Capacity and level of service: uninterrupted flow, interrupted flow; Traffic signs and road markings; Traffic rotary and signal design; Traffic demand and management techniques; Road accidents: causes, scientific investigations and data collection; Statistical methods of analysis of accident data; Safety in road design: operating the road network for safety, highway operation and countermeasures; Road safety audit: principles-procedures and practice, code of good practice and checklists.	
13.	Text book(s): 1. Roess R P, Prassas E S and McShane W R, <i>Traffic Engineering</i> , Pearson (2010). 2. Ogden K W, <i>Safer Roads: A Guide to Road Safety Engineering</i> , Ashgate Publishing Ltd., Aldershot (1996).	
14.	Reference(s): 1. Kadiyali L R, <i>Traffic Engineering and Transport Planning</i> , Khanna Publishers (2011). 2. Khisty C Jand Lall B K, <i>Transportation Engineering</i> , Prentice Hall of India (2002). 3. IRC: SP-088, <i>Manual on Road Safety Audit</i> , Indian Roads Congress (2010).	