

IF562 : Highway Geometric design

CREDITS = 5 (L=3, T=2)

M. Tech First year, 2nd Semester

Teaching and Assessment Scheme:

Teaching Scheme			Credits	Assessment Scheme				
L	T	P		Theory		Practical		Total Marks
			ESE	CE	ESE	CE		
3	2	0	5	70	30	30	20	150

Course Contents:

Unit No.	Topics	Teaching Hours
1	Introduction and roadway function, Design controls: vehicles and drivers, Design controls: speed, volume and access, Route layout, Design of roadway cross-section, Estimate earthwork volumes. Calculate required sight distances for road segments and intersections, Design of vertical curves and horizontal curve. Environmental considerations, and context sensitive solutions, Sight distance, horizontal and vertical alignment, Intersection design considerations Earthwork Supplemental, Safety assessment tools.	42
	TOTAL HOURS	42

Reference books:

- American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 5th Edition, 2004.
- Federal Highway Administration (FHWA), U.S. Department of Transportation, *Flexibility in Highway Design*, Publication Number FHWA-PD-97-062, 1997