

**Samrat Ashok Technological Institute, Vidisha**Civil Engineering**Lecture Plan for Session July-Dec/ 2023**

B.Tech Civil (V Sem) with effect from 24.07.2023 to 03.11.2023

**Dr.S.S. Goliya****Subject: CE-1855 (Transportation Engg.-II) Open Course-I**

Lecture/Date	Topic/ Sub-topic	Method of Teaching	CO Mapped	Blooms's level
	<b>Unit-I</b>			
	<b>Highway Planning, Alignment and Geometric Design:</b>			
1	Introduction	Class Teaching	CO1	
2	Principles of highway planning, road planning in India	Class Teaching	CO1	
3	Financing of roads, classification pattern, Requirments	Class Teaching	CO1	
4	Engineering Survey for highway location	Class Teaching	CO1	
	<b>Cross-Sectional Elements :</b>			
5	Width, Camber, Super Elevation, Sight Distances	Class Teaching	CO1	
6	Extra Widening at Curves, horizontal and Vertical curves	Class Teaching	CO1	
7	Numerical Problems	Class Teaching	CO1	
	<b>Unit-II</b>			
	<b>Bituminous &amp; Cement Concrete Pavements:</b>			
8	Design of flexible pavements	Class Teaching	CO2	
9	Design of mixes and stability	Class Teaching	CO2	
10	WBM,WMM,BM,BC, surface dressing	Class Teaching	CO2	
11	Interfacial treatment-seal coat, tack coat, prime coat, wearing coats	Class Teaching	CO2	
12	Grouted Macadam, Bituminous Concrete Specification	Class Teaching	CO2	
13	Construction and Maintenace, Advantages and Disadvantages of rigid pavements	Class Teaching	CO2	
14	General Principles of design, types	Class Teaching	CO2	
15	Construction, maintenance and joints, dowel bars and tie bars.	Class Teaching	CO2	
16	Brief Study of recent developments in cement concrete pavement design	Class Teaching	CO2	
17	Fatigue and Reliability	Class Teaching	CO2	
	<b>Unit-III</b>			

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	<b>Low-Cost Roads, Drainage of Roads, Traffic Engg. &amp; Transportation Planning:</b>			
18	Principle of Stabilization, Mechanical Stabilization	Class Teaching	CO2	
19	Requirements, Advantages, disadvantages and uses	Class Teaching	CO2	
20	Quality Control, Macadam Road types, specifications	Class Teaching	CO2	
21	Construction, maintenance and causes of failures	Class Teaching	CO2	
	<b>Surface and Sub-surface Drainage, Highway Materials:</b>			
22	Properties and Testing etc.	Class Teaching	CO2	
23	Channelized and Unchanneled intersection	Class Teaching	CO2	
24	At grade and grade separated intersections	Class Teaching	CO2	
25	Description, rotary-design elements	Class Teaching	CO2	
26	Advantage and Disadvantages, marking, signs and signals, Street Lighting	Class Teaching	CO2	
27	Principles of planning, inventories, Trip Generation, Trip Distribution	Class Teaching	CO2	
28	Model Split, Traffic Assignment, Plan Preparation	Class Teaching	CO2	
	<b>Unit-IV</b>			
	<b>Airport Planning, Runway and Taxiway:</b>			
29	Airport Site Selection, Air Craft Characteristics and their effects on runway alignments	Class Teaching	CO3	
30	Wind Rose Diagram, basic runway length and corrections	Class Teaching	CO3	
31	Classification of Airport	Class Teaching	CO3	
	<b>Geometrical Elements:</b>			
32	Taxiways and Runways	Class Teaching	CO3	
33	Pattern of runway capacity	Class Teaching	CO3	
	<b>Unit-V</b>			
	<b>Airport, Obstructions, Lightning, and Traffic Control:</b>			
34	Zoning Regulations, Approach Area,	Class Teaching	CO3	
35	Approach Surface-Imaginary, Conical, Horizontal	Class Teaching	CO3	
36	Rotating Beacon, boundary lights, approach lights	Class Teaching	CO3	

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37	Runway and Taxiway lighting etc	Class Teaching	CO3	
38	Instrumental landing System	Class Teaching	CO3	
39	Precision Approach Radar	Class Teaching	CO3	
40	VOR Enroute Traffic Control	Class Teaching	CO3	