



Department of Planning.
Lecture Plan, Odd Semester, AY 2025-26

Name of Course: **Planning for Physical Infrastructure (PLN214)**

Programme & Sem:	Bachelor of Planning - II Year IV Sem.
Course Duration:	20 July 2026 – 11 November 2026
Course Coordinator:	Mr. Jayakaran V, Assistant Professor, Department of Planning.
Number of Credits:	03
Subject Category:	Core Theory Subjects
Total Periods/Week:	03
Internal Assessment	50 (minimum pass marks 50%)
End Evaluation	50 (minimum pass marks 50%)
Total Marks	100 (to be converted to CGPA credit pattern as per regulations)

Subject Objective: To impart basic knowledge sets on infrastructure, its relation to planners in settlement planning and design considerations of infrastructure planning.

Week	Lecture / Session Topic (Teaching-Learning Objective aimed)	Unit and Assignment
Week 1 (20-24 July)	Definition of Infrastructure and its components, role of physical planner in planning the utilities and services;	UNIT – I <u>Introduction and Basic Concepts</u> Assignment I – 5 marks
Week 2 (27-31 July)	Objectives of utilities and services planning and implications for public health and environmental protection; Hydrological cycle; Introduction to the institutions related to infrastructure services.	
Week 3 (03-07 Aug)	Water supply sources, treatment system and types, distribution system and types, pressure requirements	UNIT – II <u>Water Supply System</u>
Week 4 (10-14 Aug)	Water requirements for domestic and non-domestic purposes of a settlements, firefighting, seasonal variations in demand and factors affecting water demand	
Week 5 (17-21 Aug)	Standards of water demand per capita, variations of water demand and consumption, requirements of distribution and storage; pipe network analysis.	
Week 6-7 (22 Aug - 5 Sep)	Field Trip	
Week 8 (07-11 Sep)	Estimating storm run-off, Dry Weather Flow (DWF) and Storm Weather Flow (SWF), run-off co-efficient, rainfall intensity, time of concentration; Gravity flow, hydraulic gradient line, Manning's formula and nomographs, full flow and partial flow	UNIT – III <u>Storm Water System</u> Assignment II – 10 marks



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Week 9 (14-18 Sep)	Layout and design of storm water system; General considerations, inlets, self-cleansing velocity, non-scouring velocity, physical layout-design principles, data requirement; Rain water harvesting.	
Week 10 (21-25 Sep)	Mid- Semester Assessment week (Time Bound Closed Book Test)	(20 Marks)
Week 11 (28 Sep-2 Oct)	On-site detention, design procedure for on-site detention; Low-cost appropriate technologies for sanitation; Sanitary sewer system, sewer network, materials used	UNIT – IV <u>Sanitation</u>
Week 12 (05-09 Oct)	Sewer system location and layout, data needs and procedure of planning.	
Week 13 (12-16 Oct)	Quantity of sewage, standards for Indian cities, sewer appurtenances; Sewer pumping and forced main manholes.	
Week 14 (19-23 Oct)	Solid waste and types, municipal solid waste management rules 2000 and 2013;	UNIT – V <u>Solid Waste Management</u> Assignment III -15 marks
Week 16 (26-30 Oct)	Composting process, Indore and Bangalore methods,	
Week 17 (02-06 Nov)	Concepts of re-use and recycle, e-waste and bio-medical waste generation and treatment methods.	

Reference books:

1. CHEEO, "Manual on Water Supply and Treatment" & "Manual on Sewerage and Sewage Treatment" & "Manual on Solid Waste Management", Ministry of Urban Development, New Delhi.
2. Nathan, Jerry A (2008), Basic Environmental Technology, Water Supply, Waste Management and Pollution Control, Fifth Edition, Vol 1, Pearson Prentice Hall, New Delhi.
3. The Secretariat for Infrastructure (2010), Definition of Infrastructure, Government of India, New Delhi. <http://www.infrastructure.gov.in/pdf/doi.pdf>
4. Dr. B.C. Punmia, Ashok K. Jain & Arun K. Jain, "Environmental Engineering Vol I & II" Laxmi Publication. 2010. (BOOK).

Note:

1. Any other closed holidays as declared by SPAV shall supersede the above lecture plan. Holidays shown above may alter as per Notice from time to time.
2. Assessment Sessions may be re-scheduled, with prior intimation.
3. Reading lists provided is not exhaustive and is subject to addition – students are advised to follow progression of class to keep abreast of the new reading lists, if any.