

Wastewater management - Web course

COURSE OUTLINE

This course is specially designed for Post graduate students of Environmental Engineering or other equivalent degree programme.

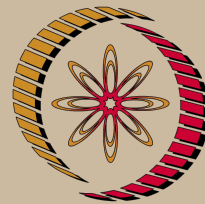
The course content supports the collection system used for sewage, estimate the sewage discharge, conventional ways of sewage treatment, advanced methods currently introduced for treatment of sewage, and sludge handling and treatment.

Also, the concept of decentralized sewage treatment will be introduced with possible reuses of the treated sewage.

The students attending this course will get overview of the wastewater management, and will have a fair idea for hydraulic design of various components of the sewerage scheme.

COURSE DETAIL

Sl. No.	Topic	No. of Hours
1.	INTRODUCTION.	2
2.	SEWER PIPES.	1
3.	QUANTITY OF SEWAGE.	3
4.	ESTIMATION OF STORM WATER FLOW.	2
5.	DESIGN AND CONSTRUCTION OF SEWERS.	2
6.	SEWER APPURTENANCES.	1
7.	SEWAGE AND STORM WATER PUMPING STATION.	1
8.	CHARACTERISTICS OF SEWAGE.	2
9.	INTRODUCTION OF SEWAGE TREATMENT.	1
10.	PRIMARY SEWAGE TREATMENT.	3
11.	SECONDARY SEWAGE TREATMENT.	2



NP-TEL

NPTEL

<http://nptel.iitm.ac.in>

Civil Engineering

Pre-requisites:

1. Basic knowledge of hydraulics is necessary.

Additional Reading:

1. Environmental Engineering, Davis & Cornwel, McGraw Hill.
2. Water Supply and Sewerage, McGhee, McGraw Hill.

Coordinators:

Dr. M.M. Ghangrekar
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12.	AEROBIC TREATMENT METHODS.	9
13.	ANAEROBIC TREATMENT.	4
14.	SLUDGE TREATMENT.	2
15.	TERTIARY TREATMENT OF SEWAGE.	4
16.	ON-SITE SANITATION.	1
17.	DECENTRALISED SEWAGE TREATMENT & REUSE.	2
	Total	42

References:

1. Wastewater Engineering, Metcalf & Eddy, Inc., McGraw Hill Wastewater Treatment Plants, S.R. Qasim, CRC Press Manual on Sewerage and Sewage Treatment, CPHEEO, Ministry of Urban Development, Govt. of India.