

Gopal Krishna College of Engineering and Technology
Goura Hari Vihar, PO: Raniput, Jeypore-764005

Lesson Plan (2025-2026)

Name of the Subject: Water Supply & Sanitary Engineering

Subject Code: CIPC2007

Name of the Faculty: Pabani patra

Branch: Civil Engineering

Semester: 4th Semester

No. of Weeks: 12 Weeks

Semester Duration: Feb to April

Week	Class Day	Chapter
Module 1 (Week 1-3)		
1st	1st	Sources of water
	2nd	Per capita demand and design period
	3rd	Population forecasting and fluctuation in demand
2nd	1st	General requirements for water supply
	2nd	Types of intakes
	3rd	Pumping and transportation of water
3rd	1st	Physical characteristics of water
	2nd	Chemical and biological characteristics of water
	3rd	Necessity of treatment and drinking water standards

Module 2 (Week 4-6)		
4th	1st	Screening and plain sedimentation
	2nd	Sedimentation aided with coagulation
	3rd	Filtration
5th	1st	Disinfection
	2nd	Softening of water
	3rd	Removal of colour, taste and odour
6th	1st	Removal of iron and manganese
	2nd	Fluoridation and defluoridation
	3rd	Ion exchange, electro-dialysis and RO

Module 3 (Week 7-9)		
7th	1st	Quantity and characteristics of wastewater
	2nd	Effluent discharge standards
	3rd	Primary treatment of wastewater
8th	1st	Screening and grit removal
	2nd	Sedimentation and coagulation
	3rd	Basis of microbiology
9th	1st	Suspended culture and attached culture systems
	2nd	Secondary clarification and disinfection
	3rd	Sludge treatment and disposal

Module 4 (Week 10-12)		
10th	1st	Introduction to solid waste management
	2nd	Source, classification and characteristics of MSW
	3rd	Collection, storage and transportation of MSW
11th	1st	Waste minimization
	2nd	Reuse and recycling
	3rd	Biological treatment methods
12th	1st	Thermal treatment methods
	2nd	Landfill methods
	3rd	Revision

Books

1. Environmental Engineering (Volume I & II) by S.K. Garg – Khanna Publishers.
2. Environmental Engineering (Volume I & II) by B.C. Punmia – Khanna Publishers.
3. Environmental Engineering by H.S. Peavy, D.R. Rowe and G. Tchobanoglous, McGraw Hill.