



FIRST SEMESTER 2021-2022

Course Handout Part II

Date: 20-08-2021

In addition to Part-I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the course.

Course No. : CHE F411
Course Title : Environmental Pollution Control
Instructor-in-Charge : Dr. Srikanta Dinda

Scope of the Course:

This course gives the scope to students to understand what is environment and what are the different ways by which environment can pollute. This course will emphasis four major types of pollution namely air, water, soil and noise pollution. In each types, the course will give insight about sources of pollution, analysis of pollutants, and controlling methods of those pollutants along with some design aspects of few related equipment.

Learning outcomes:

After studying this course, students will be able to

- Have the knowledge about the details of various pollutants
- Estimation of pollutant concentration
- Gather knowledge on equipment that are used or can be used to reduce/control a specific pollution.
- Basic idea about the design aspects of few equipment

Textbooks:

1. Rao, C.S., Environmental Pollution Control Engineering, New Age International 2nd Ed., 2006
2. Mackenzie L Davis, David A Cornwell. Introduction to Environmental Engineering, Fourth Edition. McGraw Hill, 2010

Reference books

1. Peavy, H.S., Rowe, D.R. and Technobanolous, G., "Environmental Engineering" McGraw Hill, 1985.

Course Plan:

Lecture No.	Learning objectives	Topics to be covered	Chapter in the Text Book
1-2	An Overview of Env't. pollution and its control	Overview of environment & its impacts	T1-Ch. 1 & T2-ch.1
3-5	Sources and Effects of air pollution	Types of air pollutants, Effect of air pollution, Air pollution laws and standards	T1-Ch. 2 & T2-ch-9



6-9	Meteorological Aspects of Air Pollutant Dispersion	Concept of dispersion of pollutants in atmosphere, Understanding of air dispersion models	T1-Ch. 3&T2-ch-9
10-12	Air Pollution Sampling and Measurement	Details of air pollutant samplers	T1-Ch. 4&T2-ch9
13-16	Air Pollution Control Methods & Equipment (Control of particulates)	Principles of air pollution control methods, Problems related to these methods (control of particulates)	T1-Ch.5 &T2-ch-9
17-20	Control of Specific Gaseous Pollutants	Various control techniques for criteria pollutants such as SO ₂ , NO _x , CO and hydrocarbons	T1-Ch. 6&T2-ch-9
21-22	Source and Classification of Water Pollutants	Introduction to water pollution, Types of water pollutants, standards of water pollution	T1-Ch.7&T2 ch-7
23-26	Wastewater Sampling and Analysis	Sampling methods, concepts of DO, BOD, COD, TOC, inorganic substances, physical characteristics of water	T1-Ch. 8&T2-ch8
27-32	Wastewater Treatment (Primary and Secondary & advanced treatment)	Concept of primary and secondary treatment techniques and over view of advance treatment methods	T1-Ch. 9&T2-ch-8
33-35	Solid Waste Management	Classification of solid waste & Various disposal methods	T1-Ch.10&T2-ch11
36	Hazardous Waste Management	Classification of Hazardous waste	T1-Ch.11 &T2 ch-12
37-39	Noise Pollution	Understanding of noise pollution & its impact on environment	T2 ch-10

Evaluation Scheme:

Component	Duration	Weightage (%)	Date & Time	Nature of Component
Midsemester Exam	90 min	30	18/10/2021 11.00 - 12.30PM	OB
Quizzes &/class test	-	15		CB
Assignments &/seminars	-	15		OB
Comprehensive Exam.	120 min	40	11/12 AN	OB

- **Chamber Consultation Hour:** To be announced in the class.
- **Minimum marks required to secure a valid grade is above 15% of total marks.**
- **Notices:** All notices concerning this course will be displayed on the Notice Board or CMS/ via email communication
- **Make-up Policy:** Make-up for the test (mid/ compre) may be granted only with prior permission and valid justification from the Instructor-in-charge.
- **Academic Honesty and Integrity Policy:** Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

INSTRUCTOR-IN-CHARGE
Dr. Srikanta Dinda

