



IIT Mandi Proposal for a New Course

Course number : CE306P
Course Name : Environmental Engineering Lab
Credit : 1
Distribution : 0-0-2-1
Intended for : UG
Prerequisite : None
Mutual Exclusion: None

1. Preamble:

The present course aims at introducing the standard test procedures required for the students to understand environmental pollution by characterizing air, water and soil media. The course presented has experiments related to water and waste water characterization, titration methods to determine the anion and cation compositions. It also has experiments to determine air and soil pollution and ways to quantify and check the fate of contaminants.

2. Course Modules with quantitative lecture hours:

Experiments:

1. Determination of solids
2. Jar Test for determining optimum coagulant dosage
3. Determination of acidity
4. Determination of alkalinity
5. Determination of hardness
6. Determination of Dissolved Oxygen
7. Determination of B.O.D. of wastewater sample
8. Determination of C.O.D. of wastewater sample
9. Tests for Coliforms, Fecal, Total Coliforms
10. Soil contamination (adsorption) studies
11. Introduction to advanced analytical instruments
12. Determination of bulk and size-segregated PM_{2.5}
13. Determination of ionic species in PM_{2.5}
14. Determination of heavy metals in PM_{2.5}

3. Laboratory/practical/tutorial Modules: The course is entirely laboratory-based.

4. Text books:

- a. Sawyer, N.C. and McCarty, P.L., 'Chemistry for Environmental Engineering 5th Edn', McGraw- Hill Book Co., New York, 2003.



- b. APHA, 'Standard Methods Examination of Water and Wastewater', American Public Health Association, Washington DC, 1998.

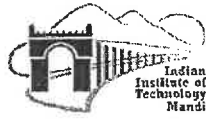
5. References: None.

6. Similarity with the existing courses:

(Similarity content is declared as per the number of lecture hours on similar topics)

S. No.	Course Code	Similarity Content	Approx. % of Content
None			

7. Justification of new course proposal if cumulative similarity content is >30%: NA



This proposal is reported in52nd.....th Board of Academics on ..21/11/23..

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Date:

Note: School is responsible for the Course Code. Academic Office provides the IC Course Code.