

GOKARAJU RANGARAJU
INSTITUTE OF ENGINEERING AND TECHNOLOGY
ENVIRONMENTAL ENGINEERING LAB

Course Code: GR18A3011
III Year. I Semester

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Course Objectives: The objectives of this course is to make the student to

1. Develop the knowledge in various parameters of water.
2. Identify the significance to conduct experiments on water purity.
3. Explain current environmental issues through laboratory experiments.
4. Build the students to excel in experiment research Programme or to succeed in industry
5. Develop problem solving and laboratory skills using modern instrumentation

Course Outcomes: After completion of this course, students will be able to

1. Summarize the knowledge of physical, chemical and biological parameters of water and their importance.
2. Develop the social responsibility to eradicate water borne diseases.
3. Identify the methods to control environmental pollution.
4. Classify the water quality parameters in written reports.
5. Improve the various quality control aspects of industrial effluents by performing the different lab tests.

List of Experiments

1. Determination of pH and Turbidity
2. Determination of Conductivity and Total dissolved solids.
3. Determination of Alkalinity/Acidity.
4. Determination of Chlorides.
5. Determination and Estimation of total solids, organic solids and inorganic solids.
6. Determination of iron.
7. Determination of Dissolved Oxygen.
8. Determination of Nitrogen.
9. Determination of total Phosphorous.
10. Determination of B.O.D
11. Determination of C.O.D
12. Determination of Optimum coagulant dose.
13. Determination of Chlorine demand.
14. Presumptive coliform test.

NOTE: At least 8 of the above experiments are to be conducted.

TEXT BOOKS:

1. Chemistry for Environmental Engineering by Sawyer and Mc. Carty.
2. Standard Methods for Analysis of water and Waste Water – APHA.