CE668A: Environmental Quality and Pollution Monitoring Techniques   2-0-4-0 [10]

Course Contents:
General principles of sample collection and data analysis; Gravimetric methods for solids analysis in water and wastewater; Determination of color, odor, taste; turbidity by nephelometric methods; Titrimetric methods for determination of environmental parameters; acid-base titrations, precipitation titrations, complexometric titrations, oxidation-reduction titrations. Spectrophotometric methods for determination of environmental parameters; Atomic Absorption spectroscopy for determination of metals; Determination of nitrogen, phosphorus and chemical oxygen demand (COD) in sewage; Biochemical oxygen demand (BOD) in sewage; MPN test for microbial pollution; plate counts; confirmatory tests; Sampling techniques for air pollution measurements; analysis of particulates and common chemical air pollutants like oxides of nitrogen, oxides of sulphur, carbon monoxide, hydrocarbon; Introduction to advanced instruments for environmental analysis