INSTRUMENTAL METHODS FOR ENVIRONMENTAL ANALYSIS

Module-I

Principle of instrumentation, Application of Instrumental analysis, Optical analysis, Beer's Law, Spectophotometry, Flame photometer method, Fluorescence, Spectrography, Atomic adsorption spectroscopy, Principle of AAS.

Module-II

Chromatography : Classification, General principle, partitioning , Analyte, Column Chromatography, Thin Layer Chromatography, Application Gas Chromatography(GC), Principle and application of high precision liquid chromatography (HPLC), Ion Chromatography, Mass Spectroscopy

Module-III

Electro chemical methods :-Polarograph, Tube Polarograph, Ion Selective Electrods (ISE meter) Oscilloscopi Polarography, Cyclic votametry. Biosensors for parameter monitoring.

Text Books:-

1. Sawer Mc carty - Chemistry for Environmental Engineers.
2. Barwell C.N. - Fundamental of Molecular Spectroscopy.
3. H. Willand and Deault – Instrumental method of analysis
4. Recsok, R.L and Shields – Modern method of chemical analysis