

SYLLABUS :-

Instrumentation : Static and dynamic characteristic of instruments.

Measurement of temperature, pressure, vacuum, fluid flow rate and level.

Process Control : Modeling considerations for control purposes. State Space and Transfer function models. Dynamic behavior of first and higher order systems. Concept and dynamic behavior of feedback control. Frequency response analysis. Stability analysis of feedback systems. Design of feedback controllers. Feed forward, Ratio, Adaptive and inferential control. Control systems with multiple loops. Text/Reference Books: 1. Process dynamics and control by D. E. Seborg, T. F. Edgar and D. A. Mellichamp. 2. Process systems analysis and control by D. R. Coughanowr and L. B. Koppel. 3. Principles of industrial instrumentation by D. Patranabis. 4. Chemical process control: An introduction to theory and practice by G. Stephanopoulos.