

UG

Course Code: **CH412**

Credit: **3**

Version: **1**

Prerequisite Course: **Nil**

Department: **Chemical Engineering**

Course Name: **Advanced Process Control**

L-T-P: **3-0-0**

Approved on:

Control systems with Multiple loops: Cascade control, split range control, Feed-forward and Ratio control. Adaptive and Inferential control systems.

Multiple input multiple output (MIMO) control systems; Interaction and Decoupling of control loops; Digital Control systems, Z- Transforms, Discrete-time response of Dynamic Systems, Design of Digital feedback control systems, Process Identification and Adaptive control; Model predictive control.

Books

1. Stephanopoulos, G., "*Chemical Process Control*", Prentice Hall of India, New Delhi, 1990.
2. Seborg, E., Edgar, J. F. and Mellichamp, D. A., "*Process Dynamics and Control*", John Wiley, 1989.
3. Astron, K. J. and Wittenmark, B., "*Computer Controlled Systems*", Prentice Hall, 1994.
4. Coughanowr, D. R., "*Process Systems Analysis and Control*", 2nd Ed., McGraw Hill, NY, 1991.