SUBJECT NO-AE40019, SUBJECT NAME- AUTOMATIC CONTROL OF AIRCRAFT

LTP- 3-0-0,CRD- 3

SYLLABUS :-

Prerequisites: AE21006, AE31007

3 - 0 - 0: 3 CreditsSystem, open loop and closed loop control, typical objectives of control analysis of linear invariant systems: governing equations, input-output approach, free and forced-responses, impulse response, frequency response, transfer function and its graphical representation, Role of transfer function in stability, transient and forced responses, block diagram algebra and signal flow graph; Analysis of feedback control system; common control objectives, typical system layout, classical stability and error analysis; Modern approach using state variables; design of control systems: classical approach root locus and bode plot, modern approach regulator problem. Introduction to sampled data and digital systems analysis: general configuration and models, free and forced responses; dynamics of sensors and actuators used in aerospace systems, Longitudinal and lateral stability augmentation and autopilot systems, Automatic landing system.