Department of Mechatronics Engineering

Course Name: Advanced Control Systems
Class: BE Mechatronics Engineering
Course Code: 417550 C (2019 Course)

Course Outcomes:

On completion of the course, the students will be able to

1. Compute pulse transfer and time response of digital control systems.

2. Realize pulse transfer function and investigate stability of digital control systems using pole locations, Jury stability test, bilinear transformation and Routh stability test.

3. Compute state model from pulse transfer function, pulse transfer function from state model and state transition matrix of digital control systems.

4. Investigate state controllability, state observability and design state regulator, full order state observer and optimal state regulator for digital control systems.

5. Investigate stability of continuous and discrete time LTI systems represented in state space using Lyapunov method.

6. Analyze non-linear systems using describing function and phase plane method