

Digital Control of Mechanical Systems

Course Code:

ME 451

Course Type:

Area Elective

Credits:

3

Theoric:

3

Practice:

0

Laboratory Hour:

0

ECTS:

5

Prerequisite Courses:

System Dynamics and Control [1]

Course Language:

English

Course Content:

Modeling and analysis of mechanical systems. Linear discrete dynamic systems and Z-transform theory. Design of digital filters. Numerical methods. Design of digital control systems using transform techniques and state-space methods. Input-output interfacing. Microprocessor implementation of controllers. Sample-data systems. Quantization effects. Real-time control.