Course Outline
SE 420: Digital Control Systems
Term: Fall 2025

Instructor: Dušan M. Stipanović
Lectures: Tuesdays and Thursdays 8.00-9:20am in 206 Transportation Building and via Canvas
Office hours: Tuesdays 9:20am-10:20am in 105 Transportation Building and via Zoom
Email: dusan@illinois.edu
Phone: 217-244-0907
Course material: Canvas (https://canvas.illinois.edu)

Lab Instructor: Daniel J. Block
Email: d-block@illinois.edu
Lab location and hours: 3075 ECE Building, MW 2:00-4:50pm

Teaching Assistant: Samuel Folorunsho
Email: sof3@illinois.edu

Text: *Lecture Notes* are available in pdf via Canvas (https://canvas.illinois.edu).

Topics:
- Introductory Digital Control
- Discrete Systems Analysis
- Sampled-Data Systems
- Discrete Equivalents
- Design Using Transform Techniques
- Design Using State-Space Methods
- Discrete-Time Systems: Special Topics such as Neural Networks and Machine Learning

Grade composition (subject to changes):
- One midterm exam on Thursday 10/16/2025, 15%.
- Final exam: 30%.
- Homework assignments: 35%.
- Lab assignments: 20%.

General information: Each lecture will be recorded and posted on Canvas. Lecture notes will be created in OneNote and also posted on Canvas. Homework will be assigned every other week. Late assignment submissions will not be accepted, in general.