

## ES413 “Digital Control Systems”

### 1.) **Course Objectives:**

- a.) To develop an understanding of the effects of sampling
- b.) To gain a working knowledge of Z-transform theory
- c.) To understand the similarities and differences between continuous time and discrete time systems
- d.) To design, simulate, and implement digital control systems
- e.) To design, simulate, and implement digital filters for aid in sensing and parameter estimation

2.) **Course Description:** Analysis, design and simulation of digital filters. Analysis, design and laboratory testing of digital controllers for continuous processes using digital and analog computers and servo system hardware.

3.) **Textbook.** *Control Systems Engineering*, by Norman S. Nise, 6<sup>th</sup> edition.

4.) **Credits:** 2-2-3