

High-Level Goals for ECE 301: Signals and Systems

Michael Zoltowski

- Black-Box characterization of both Analog & Digital Systems for Design Purposes (Chap. 1)
 - Convolution re-hash for CT (Continuous-Time) Systems (Chap. 2)
 - NEW: Discrete-Time Convolution for DT (Discrete-Time) Systems (Chap. 2)
- The Fourier Transform (Chap. 4) and the DT Fourier Transform (Chap 5)
 - Examine how the energy of a signal is distributed as a function of frequency.
 - Examine how a system responds as a function of frequency.
- Sampling Theory: the basics of ADC's and DAC's (Chap. 7)
- Explain the benefits of Digital-based Storage and Transmission over Analog-based Storage and Transmission
- Laplace-Transform for CT=analog Systems: what is the equivalent for DT=digital Systems?
Answer: Z-Transform (Chap. 10)