EENG 2620 - Signals and Systems

Course Description:

Introduction to continuous-time and discrete-time signals and systems. Some elementary continuous-time and discrete-time signals in engineering applications. Characteristics and properties of continuous-time and discrete-time signals and systems. Analysis of linear time-invariant systems using differential and difference equations and their characterization using Fourier transform, Laplace transform and transfer function. Examples and applications to linear control systems.

Learning Objectives:

Students will

1. Understand types and describe elementary properties of continuous-time and discrete-time signals and systems

2. Analyze continuous-time and discrete-time linear time-invariant systems using differential and difference equations

3. The characterization of linear time-invariant systems using Fourier transform, Laplace transform and transfer function

4. Describe some elementary applications of the techniques above to linear control systems

Lecture:

Tu, Th, 11:30 AM - 12:50 PM

Location: NTDP B140

Instructor:

Dr. Yusheng Wei, Assistant Professor in Electrical Engineering

Office: NTDP B261

Email: Yusheng.Wei@unt.edu

Office Hours: Tu 15:30 PM - 17:30 PM or by appointment

Grader:

TBD

Email: TBD

Office Hours: TBD

Office Hours Location: TBD

Textbook:

Signals and Systems, Alan V. Oppenheim, Alan S. Willsky, S. Hamid Nawab, 2nd Edition, Prentice Hall

Dynamic Systems: Modeling, Simulation, and Control, Craig A. Kluever, 2015

Lecture notes and other supplementary materials are posted on Canvas.

Grading Policy:

Homework: 30%

Midterm Exam: 30% (in class)

Final Exam: 40% (in class)

General Policies:

- Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

- ADA Accommodation Statement. UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodation at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.
- Emergency Notification & Procedures. UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.