Catalog Description: This course introduces students to standard mathematical tools for analyzing and designing various signals and systems in both continuous and discrete time. Heavy emphasis is given to frequency domain design and analysis techniques as well as the Laplace Transform and Z-Transform. Other topics include the Sampling Theorem, the Fast Fourier Transform, and introductory spectral estimation techniques. Prerequisites: MATH 1337, 1338. Corequisite: EE 2170.

Time: Lecture: T, Th 11:00-12:20

Location: Junkins 113

Instructor: Carlos E. Davila

Text: C. Davila, Course Notes for EE 2370

Recommended Text: S. S. Soliman and M. D. Srinath, Continuous and Discrete Signals and Systems, Prentice Hall

Topics: I. Continuous-Time Signals and Systems
- Continuous-Time Signals
- Fourier Series of Periodic Signals
- Complex Form of the Fourier Series
- The Fourier Transform
- LTI Systems and Convolution
- Sampling Continuous-Time Signals

II. Discrete-Time Signals and Systems
- Discrete-Time Signals
- LSI Systems and Convolution
- FIR and IIR Filters
- Discrete-time Fourier Transform
- Z-Transform
- Stability, Causality, and Use of the Z-Transform
Grading Policy: Homework Assignments 10%
Four Exams: 60%
Final Exam: 30%

Homework assignments are due one week after they are assigned. No late homeworks will be accepted.

Electrical Engineering Program Objectives

SMU Incomplete Grades Policy

An Incomplete (I) may be given if the majority of the course requirements have been completed with passing grades but for some justifiable reason, acceptable to the instructor, the student has been unable to complete the full requirements of the course. Before an (I) is given, the instructor should stipulate, in writing, to the student the requirements and completion date that are to be met and the grade that will be given if the requirements are not met by the completion date. The maximum period of time allowed to clear the Incomplete grade is 12 months (except for graduate thesis and dissertation courses). If the Incomplete grade is not cleared by the date set by the instructor or by the end of the 12-month deadline, the (I) may be changed to an F or to another grade specified by the instructor. The grade of (I) is not given in lieu of an F, WP, or other grade, each of which is prescribed for other specific circumstances. If the student’s work is incomplete and the quality has not been passing, an F will be given. The grade of (I) does not authorize the student to attend the course during a later semester. Graduation candidates must clear all Incompletes prior to the deadline in the official University Calendar, which may allow less time than 12 months. Failure to do so can result in removal from the degree candidacy list and/or conversion of the (I) to the grade indicated by the instructor at the time the (I) was given.

Statement Regarding Disability

Disability Accommodations: If you need academic accommodations for a disability, you must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities (214-768-4563), to verify the disability and to establish eligibility for accommodations. Then you should schedule an appointment with the professor to make appropriate arrangements.