EE 2370  
Design and Analysis of Signals and Systems  
Fall 2004

Catalog Description: This course introduces students to standard mathematical tools for analyzing and designing various continuous-time signals and systems. Frequency domain design and analysis techniques are studied as well as the Fourier and Laplace Transforms. Applications to be studied include modulation and demodulation in wireless communications, audio effects in music, and analog to digital conversion (i.e. Sampling theory). Prerequisites: MATH 1337, 1338, 2343 EE 2350. Corequisite: EE 2170.

Time: Lecture: MWF 10:00-10:50

Location: Junkins 112

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 Signal Operations
      II. Complex Arithmetic
      III. The Fourier Series
      IV. The Fourier Transform
      V. LTI Systems and Convolution
      VI. Frequency Response: The Sinusoidal Steady-State Response
      VII. The Laplace Transform
      VIII. Poles and Zeros: Stability of LTI Systems
      IX. Transfer Functions and Partial Fraction Expansions
      X. Sampling Continuous-Time Signals

Grading Policy: Homework Assignments 10%
                 Attendance: 5%
                 Four Exams: 60%
                 Final Exam: 25%
Some course rules and expectations:

- Homework assignments are due one week after they are assigned.
- No late homeworks will be accepted.
- On Fridays we will have small group problem solving sessions.
- Attendance will be taken. More than five unexcused absences will result in a 5% reduction in the score used to determine the final grade.
- Adherence to the SMU Honor Code will be strictly enforced.
- Calculators having high-end functionality such as numerical integration will not be allowed during tests.

The following items have to do with common courtesy and respect for your classmates and professor:

- Please arrive/exit class on time, late arrivals and early exits can be a distraction to others.
- Please do not use cell phones or other communications devices while in class.
- Please minimize talking during lecture as this can be very disruptive to those around you who are trying to listen to the lecture.
- One page note sheets will be allowed on each test\(^1\). Your work area should otherwise be completely cleared of books and additional notes during a test.

**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.

\(^1\)On the final exam, all earlier note sheets can be used
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.