Course Syllabus

Course Information

Course Number: CE/EE/TE 3302.502

Course Title: Signal and Systems

Term: Fall 2016

Professor Contact Information

Name; Soudeh A. Khoubrouy, PhD
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Office hours: TBD (Check e-Learning) and by appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Co-requisite: EE/CE/TE 3102 Signals and Systems Laboratory
Pre-requisite: ENGR 3300

Course Description

In this course, fundamentals of continuous and discrete-time signal processing are introduced. Linear system analysis including convolution, impulse response, Fourier series, Fourier transform, sampling, and z-transform will be covered.

Student Learning Objectives/Outcomes

After completing this course, students are expected to be able to:
- *Apply the convolution theorem for continuous time signals*
- *Evaluate the Fourier Series of periodic signals*
- *Determine the Fourier Transform of energy signals*
- *Make use of Fourier Transform Properties*
- *Analyze a discrete time LTI system using discrete linear convolution*
- *Use z-transform for analyzing discrete time signals and systems*
- *Convert a continuous time signal to the discrete time domain and reconstruct using the sampling theorem*

Required Textbooks and Materials

S. Soliman & M. Srinath, *Continuous and Discrete Signals and Systems, 2nd edition.* Prentice- Hall ISBN 0-13-518473-8

Suggested Course Materials

- A.V. Oppenheim et al., "*Signals & Systems,*" 2nd Edition, Prentice Hall, 1997.
- J.H. McClellan et al., "*Signal Processing First,*" Prentice Hall, 2003.
- C.L. Phillips et al., "*Signals, Systems and Transforms*," 3rd Edition, Prentice Hall, 2003.

Assignments & Academic Calendar

Homework: Weekly assignments will be posted on e-Learning. Working through these assignments will help you do well in quizzes and exams. You are encouraged to work and learn in groups in doing the homework problems but you need to submit each set of assignments individually and mention the name(s) of your team-mate(s) if there is any.

Quizzes: The quizzes must be individual efforts. They also represent your attendance in the class. Being absent in a quiz you will lose the whole credit for that quiz.

Exams: There are two mid-term exams and a comprehensive in-class final exam. The exams must be individual efforts.

Students have one week to review graded homework, quizzes, exams or projects with the professor for any possible grading corrections. After one week no changes will be allowed.

Tentative Schedule

Dates	Topics	
August 23, 25, 30, September 1	Chapter 1	Continuous Time (CT) Signals
September 6, 8, 13, 15, 20	Chapter 2	CT Systems
Mid-Term Exam 1		
September 22, 27, 29, October 4	Chapter 3	Fourier Series
October 6, 11, 13, 18, 20, 25, 27	Chapter 4	Fourier Transforms (and Fourier Analysis of DT Signals)
Mid-Term Exam 2		
November 1, 3, 8, 10, 15	Chapter 6	Discrete Time (DT) Signals and Systems
November 17, 29, December 1, 6	Chapter 8	Z-Transform
Final Exam		

Grading Policy

The evaluation of the student's work is the instructor's professional judgment and not subject to negotiation. The grades for this class will consist of:

- *Homework*   *10%*
- *Quizzes*   *15%*
- *Min(Mid-term 1, Mid-term 2, Final)*   *15%*
- *Median(Mid-term 1, Mid-term 2, Final)*   *25%*
- *Max(Mid-term 1, Mid-term 2, Final)*   *35%*

Final grades will be assigned according to the following scale:
100-90 A; 89-80 B; 79-70 C; 69-60 D and below 60 F.

Course & Instructor Policies

- *On-time class attendance is mandatory.*
- *No make up exams or quizzes will be administered.*
- *All assignments will be due on the assigned dates. Late assignments turned in after the deadline will be penalized 30%. No credit is given to assignments submitted after solution availability.*

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.