ECE 3337 Signals and Systems Analysis , Summer-3, 2016

Course Website: http://www.uh.edu/~hebert

Time/Place: 12:00 pm – 1:50 pm T,W,Th in room CBB 118

1st class meeting: Tues June 7 (21 class meetings).

Last day to drop with no grade: Thurs June 9.

Semester holidays: none

Last day to drop with a grade of W: Thursday July 7.

Last class meeting: Thursday July 21.

Pre-requisites: ECE 2300 circuit analysis, ECE 3321 Engineering Math I

Co-requisites: None

Instructor: Dr. Tom Hebert, N316, (office) 713-743-4448, (fax) 713-743-4444, (e-mail) thebert@uh.edu . Office hrs: TWTh 11:00 am - 12:00 noon or E-mail for meeting.

Teaching Assistant: TBD

Course text: "Signals and Systems" – Ziemer, Fannin, 4th edition.

References: "Complex Variables" – Spiegel, (Schaum's Outline Series);
"Signals and Systems - Hsu, (Schaum's Outline Series),
"Applied Fourier Analysis" – H. Hsu (Hartcourt Brace).

Homeworks: approximately 12.

Midterm: Thurs, June 30. Formula sheet will be provided. No books, phones, calculators.

Final: Tues July 26, 2:00 - 4:50 pm. Formula sheet will be provided. No books, phones, calculators.

Grade weightings: HWs 4%, Projects 1%, 1st midterm 46%, final 49%.

Academic Honesty Policy:

Students in this course are expected to follow the Academic Honesty Policy of the University of Houston. It is your responsibility to know and follow this policy.
Students should write and debug their own programs. Your proficiency in these skills will be evaluated on the tests. In programming, each and every character in your program needs to be correct for the program to operate correctly. If you get stuck on a program, take a break, and then look it over again. Do not hesitate to consult with your classmates, seek their assistance when needed, and be a source of information for them as well. The online community of programmers around the world all operate in a similar fashion. There are many, many online messageboards for programmers to help each other out. For those in the workplace, these messageboards remain a valuable resource.

Religious Holy Days:

Students whose religious beliefs prohibit class attendance or the completion of specific assignments on designated dates may request an excused absence. To do this, you must submit a request for the excused absence, in writing, to Dr. Hebert no later than 5 pm on Thursday June 9. For more information, see the Student Handbook.

Students with Disabilities:
Students with recognized disabilities will be provided reasonable accommodations, appropriate to this specific course, upon documentation of the disability with a Student Accommodation Form from the Center for Students With Disabilities. You must submit the form to Dr. Hebert no later than 5 pm on Thursday June 9. For more information, see the Student Handbook.

ECE 3337 Engineering Analysis I, Summer-3, 2016

	Topics	References
1	Fundamentals: complex variables, complex functions	Notes and Appendix C
2	Complex derivatives and Integrals	Notes and Appendix C
3	Introduction to Signals and Systems	Chapt 1
4	Differential equations for system representation	Chapt 2.1-2.2
5	Superposition, impulse response	Chapt 2.3, 2.5
6	Convolution	Chapt 2.4, handout
7	Stability, frequency response	Chapt 1.5, 2.7-2.8
8	Periodic signals, Fourier series, symmetry	Chapt 3, handout
9	Fourier transform, signal representation in the Fourier domain	Chapt 4, handout
10	Applications, modulation, sampling	Handouts, Notes
11	Laplace transforms	Chapt 5, 6
12	Circuit analysis using Laplace transforms, transfer functions	Chapt 6.4
13	Digital sampling, the sampling theorem	Handout, Notes
14	Review for final	

Expected Course Outcomes:
Students who successfully complete this course will meet the following course outcomes.

> This course contains concepts that will allow you to form a true engineering view of hardware/software/mechanical/industrial systems (circuits, power plants; even your stereo system) through the system's transfer function and impulse response. You will acquire mathematical tools important to the analysis of engineering systems: convolution, Fourier series, complex functions, and Fourier transforms. You will apply these fundamental concepts throughout your engineering career.

Evaluation of learning outcomes:
Exams, Homework, Project.