

EEL 3135 Introduction to Signals and Systems

Section 0100

1. Catalog Description

Credits: 3

Difference equations, discrete convolution, the Z transform, discrete and fast Fourier transforms. State-space theory of discrete-time systems.

2. Pre-requisites and Co-requisites

3020 and MAC 2313; Coreq: MAP 2302.

3. Course Objectives

To provide analytical background and skills necessary for modern applications of computers in communications, control, and signal processing.

4. Contribution of course to meeting the professional component (ABET only)

5. Relationship of course to program outcomes (ABET only)

6. Instructors

Jose Principe

NEB 451

392-2662

principe@cnel.ufl.edu

www.cnel.ufl.edu/principe/principe.html

Office hours T 5th & 6th periods

R 7th & 8th periods

7. Class web site: www.cnel.ufl.edu/3135/eel3135.htm

8. Teaching Assistant

Jamie Unger-Fink

NEB 222

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Office hours M Noon-1:30 W Noon-1:30

9. Meeting Times

Section 0100 T 2-3 R 3

10. Class/laboratory schedule

There is no laboratory for this course.

11. Meeting Location

Section 0100 Larsen 239

12. Material and Supply Fees

None

13. Textbooks and Software Required

- *Signal Processing First*, by James H. McClellan, Ronald W. Schafer, Mark A. Yoder, Prentice-Hall 2003 (ISBN 0-13-090999-8)
- You will be required to use some numerical/graphical software package; most of you will probably use Matlab, which is available in the ECE student computer lab, so you need not purchase it (it is available at a student discount).

14. Recommended Reading

None

15. Course Outline

The following topics will be covered in the order stated; the number of class periods devoted to each is approximate.

Text Chapter	Topics	Classes
1,2	Intro, sinusoids, intro to computer use	4
3	Spectra of periodic signals: Fourier series	5
4, 11, 12	Sampling theory and practice	5
	EXAM 1	
5	Finite impulse response filters; linear time invariant systems and impulse response	5
6	Sinusoidal response of LTI systems; frequency response of FIR filters	4
7	The z -transform; application to filters	5
	EXAM 2	
8	Infinite impulse response filters	5
9	Basics of continuous-time signals and systems	2
10	Frequency response of continuous-time systems	4

16. Attendance and Expectations

- Attendance is optional. Anything discussed in class or any topic for which there has been a homework problem or a handout may appear on quizzes and exams.
- No food or drink allowed in the classroom. (UF policy)
- All cell phones, pagers, alarms, or any other device that beeps, buzzes, or rings, must be turned off during class unless you have the instructor's prior permission.
- No laptop use during class without prior permission.
- No grades will be given by phone, e-mail, or surrogate.

17. Grading

- Your grade will be calculated from homework assignments (approximately weekly), quizzes (six quizzes), two in-term exams, and a final exam. The lowest homework score and the lowest quiz score will be discarded.
- The times and places of the exams will be announced later. The quizzes will be given at the beginning of the class period.
- Homework is due at the beginning of the class period on the due date. The grader will be asked to grade two or three randomly chosen problems on each assignment so that homework will be quickly returned to you; complete solutions will be available on the class web page.
- The components of your grade carry the following weights:
Homework 10% (drop lowest)
Quizzes 15% (drop lowest)
Exam1 25%
Exam2 25%
Final 25%

18. Grading Scale

Grades will be calculated from a curve after all homework, quiz, and exam scores are in.

19. Make-up Exam Policy

Make-up quizzes and exams will not be given except in cases of documented medical emergencies. No late homework will be accepted.

20. Honesty Policy – All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

21. Accommodation for Students with Disabilities – Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

22. UF Counseling Services – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

23. Software Use – All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator.

Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.