Credits and Contact Hours: 3;
MWF Period 5 (11:45-12:35), NEB 202.

Course Instructor: Dr. Fred Taylor, Professor Emeritus, 441 NEB
Contact: fjt@ece.ufl.edu (include EEL3112 in subject line)

Assistant: Office hours: TBA

Class Web Site: lss.at.ufl.edu (e-Learning in Canvas)

Textbook: Nilsson and Riedle, Prentice Hall (Pearson)

Optional Supplemental Material:
- Signal Processing First, McCellan, Schafer, and Yoder (EEL3135)
- UF or Student Version of MATLAB with Simulink (public domain MATLAB clones also available)
- Publisher website (www.pearsonhighered.com/nilsson)

Specific Course Information

- **Catalog Description:** Continuation of EEL 3111 with emphasis on circuit-enabled applications, convolution, Fourier and Laplace transforms
- **Prerequisites:** EEL 3111 - Circuits 1: EEL 3135-Introduction to Signals & Systems, EEL 3105: Analytical Methods in Electrical Engineering
- **Spice** (Itsfree free version)

Specific Goals for the Course

**Specific Instructional Outcomes:** The topics covered are part of the underlying foundational theory of electrical/electronic systems along with developing design and implementation skills.

List of Topics

- Review of elementary circuit theory.
- Continuous-time linear systems including zero-state and zero-input responses, impulse response, and convolution.
- Laplace transform and their application to circuits, system analysis, system functions, poles, zeros, natural mode of operation, and stability
- Spectra of periodic signals using a Fourier series. Response of linear time invariant (LTI) systems to periodic signals.
Presentation

EEL3112 material will be presented using a *studio format* meaning:

1. Each class begins with review of the previous lesson’s Challenge Problem
2. New material is presented.
3. A new Challenge Problem is presented based on the new material.
4. Repeat.

Assessment

Anticipate 4 scheduled in-class examinations.

Score = best 3 of 4 exams:

Therefore, Exam #4 is essentially optional.

All make-up exam requests will require evidence of a medical condition or official University of Florida travel or business.

Calendar

A day-by-day calendar of activities is docked on the Canvas web site.

Canvas resources:

Syllabus, calendar (.PPT), lessons (.PPT), supplemental notes, announcements, grades, assigned problems and solutions, etc.