

## Hybrid Class of EECE202 Network Analysis I & EECE208 Intro to Electrical Eng Lab

### A . Information for students

#### 1. What is a "hybrid" course?

Combination of Lecture class and Lab class into a single course

#### 2. Why "hybrid" course?

Bridging the gap between concept/theory and real world application

Instant verification of the concept by experimentation

Active engagement in student-to-student and student-to-instructor

#### 3. What is the goal of the "hybrid" course?

Learning enhancement by "learning by practice"

Learn more and keep longer

Discovery of knowledge

#### 4. How do we implement the "hybrid" course?

Lecture

Mobile Studio: HP tablet PC + Instrumentation Card

Breadboard (your own)

#### 5. How is the weekly schedule of the "hybrid" class?

A total of 6 hours will be used for the "hybrid" class.

No distinction between 202 and 208 hours.

M (12:10 - 3 PM): 3 hrs

T (12:40 - 2 PM): 1 1/2 hrs

R (12:40 - 2 PM): 1 1/2 hrs

\* Occasionally, T or R will be used as a recitation or problem solving session.

\*\* A few early classes will be dedicated to get familiar with traditional lab equipment

#### 6. How do I get grade from the "hybrid" class?

The single "hybrid" class still has two classes; therefore, the grade earned from the hybrid class becomes the same grade for both EECE202 and EECE208<sup>1</sup>.

#### 7. What happens if I register only one of the courses?

Two courses are co-requisite; you must register both courses. .

#### 8. Who is the teacher of the hybrid course?

It is done by team-teaching

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<sup>1</sup> This policy is still pending with possible minor change

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### **B. Hybrid Course Information**

#### **0. Are you in the correct class?**

This course's pre-requisite is Physics I (and Lab)

This course's co-requisite is Differential Equations.

#### **1. Objective of the hybrid course**

Understanding of the basic circuit theory and its application

#### **2. Content of the hybrid course**

DC sources - independent and dependent

Resistors (R) and equivalent resistance

Circuit simplification - series and parallel, Thevenin/Norton equivalent circuit

Circuit analysis methods - voltage divider, current divider, node voltage, mesh current

Inductors (L) and Capacitors (C)

Transient behavior of R-L-C circuits

Operational Amplifiers

Circuit Simulation tool - PSpice

#### **3. Assignments, Exams, and Project**

Several homework assignments

A few exams

Project

#### **4. Course Web-Site**

Syllabus, class notes, tutorials, etc.<sup>2</sup>

Textbook:

"Electric Circuits"

by James Nilsson and Susan Riedel

Prentice-Hall (or Addison-Wesley for 4th and 5th Editions)

Edition  $x^3$ . (  $\forall x : x \geq 5$  )

#### **5. Classroom (new)**

LKD 3121

#### **6. Suggestions for success in the class**

Do not miss class

Come early

Do not leave class with question unasked

Engineering course also has an art component--- > Solve end-of-chapter problems

Use all your channels and mediums to answer your questions - visit, email, phone, etc

Read the textbook, at least occasionally

Submit your assignments on time

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<sup>2</sup> Until revision and update, you can browse around <http://www.hirstbrook.com/classnotes.html>

<sup>3</sup> My recent check showed me that even 4th edition is almost identical. So the equation goes like  $x \geq 4$ .