ECE 221
Electric Circuit Analysis

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Classrooms

- We will use the distance learning technology to enable attendance in multiple classrooms
  - DLC 204: seats 48 students, room from which I will teach
  - DLC 304: seats 32 students, 2-way audio & video
  - SEAS 54: seats 32 students, 1-way audio & video (no questions)
  - MPEG2: On-campus broadcast to desktops (full screen, high quality), uses streamplayer 2 client installed in general access labs, 1-way audio & video
  - Windows Media Stream: 1-way audio & video, need fast connection
  - Windows Media Archive: 1-way audio & video, posted within 24 hours of lecture, can skip forwards and backwards
  - Video Tape Archive: available at reference desk in Millar Library within 24 hours of class

Lecture Overview

This Time
- Class overview & logistics
- Prefixes
- Definitions: Current, Voltage, Power, & Energy
- Passive sign convention
- Circuit elements
- Ideal Sources

My Background

- Ph.D. 1999
- Teaching in PSU ECE dept. two years
- Third time teaching this course
- Research area: Biomedical signal processing (see http://bsp.pdx.edu)
Bookstore Options
- The bookstore has two options for the text book
  - ISBN 0-07-249444-1: Includes text, and e-Text, $114.65
- You get more for less with the second option
- I don’t know what caused this

Course Resources
- Text: Fundamentals of Electric Circuits
  - Concise
  - Many examples
  - Problems of moderate difficulty
  - Others listed on web site
  - Students liked text this last year
- Lecture notes (second draft)
- Distance learning classroom
- Web site: http://ece.pdx.edu/~ece2xx/ECE221
- ECE 201 Labs
- Feedback on all encouraged (email preferred)

Course Web Site
URL: http://ece.pdx.edu/~ece2xx/ECE221
- Syllabus
- Lecture notes
- Online lectures
- Errata
- Homework assignments & solutions
- Previous course web pages (old exams)
- Grades

Lecture Notes
- Lecture slides were created last year
- Posted on the class web site
- I will be updating them this term
- Watch for updates as late as 5 pm the day before lecture
- Updates will not be drastic, so old notes should suffice in most cases
- Workspace is provided for examples that will be filled in during lecture
### Homework & Online Lectures
- Homework solutions will be posted shortly after assigned
- Previous students have used the solutions as a learning tool
- Lectures will also be posted online
- Both will be password protected
  - User name: ECE221
  - Password: Norton

### 6-digit Codes
- I use 6-digit codes to post your grades online and for anonymous identification on exams
- Email code to me this week
- Can be any character that you can send via a plain-text email
- Remember it for exams

### Homework Assignment 1
- Email me 6-digit code
- Read Chapters 1 & 2
- Problems
  - Ch. 1: 1, 2, 8, 10, 11, 15, 17, 21, 22, 32
  - Ch. 2: 11, 12, 28, 31, 34, 41, 50, 55, 63, 70
- Assignment posted on the class web site
- Solutions will be posted soon
- Due on Wednesday, Oct. 3

### Logistics: Text & Workbook Errata
- Each error worth 50% of a homework
- Find two errors = can skip an assignment
- Cannot receive more than full credit for homework
- Typos and grammar do not count
- Must be first to email me
- Known errata are posted on the web site
- New HW will be assigned this term, so expect errors in the HW solutions
**Suggestions for Good Performance**

- Attend the review sessions
- Work through the practice problems
- Work through problems on the CD
- Ask questions
- Review lectures
- Keep caught up
- Pay careful attention to exam topics
- Work through previous exams
- General rule: If you can solve the homework problems and exam problems from previous terms, you’ll do well on the exams

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**Scientific Calculators**

- Strongly encouraged
- Recommended features
  - Manipulate complex numbers
  - Solve simultaneous linear equations
  - Programmable
- Favorites: HP 48, HP 49, TI 89, TI 92
- Can use during exams for ECE 221, but not for ECE 222 or ECE 223

**General Comments on Class**

- Challenging
- Rapid pace (but slower than last year)
- Relatively high rate of attrition
- Many new abstract concepts
- One of the most important classes in the curriculum
- Conceptual foundation for ECE