EE 5200 - Lecture 30
Thursday Dec 11, 2003

- Announcements
  - Term Project Presentations: Mon+Thur of finals week.
  - Term Project Report: Due Noon Thursday Dec 18th.
  - Grader will complete by Monday, now grading.
  - Office hrs: 2:00-3:00pm, Mon, Wed, Fri
  - Office: EERC 623. Phone: 906.487.2857

Most Important Today: Course feedback, discussion.

Chapter 13 - Power system operation, economic dispatch
  - Economic dispatch, [B] matrix.

Chapter 16 - Intro to Stability, prep for EE6210.
  - Rotor dynamics
  - H - rotor inertia, WR^2, units used, conversion
  - Swing Equation
  - Faults, clearing, reclosing, equal area criterion

EE6210 - "STAB"
Proposed Term Project Presentations for Local Students:

Total Number of Projects to Present: 7

Problem
- One remote student commuting in on Monday
- One local student leaving town on Monday at 5pm
- Another local student has conflict on Monday

Suggested Solution: Schedule 2 Timeslots

Monday Dec 15th, 10-noon
1. Tom Ernst
2. Thushan Yapa
3. Kevin Way

Thursday Dec 18th, noon-2:00
5. Ajitha
6. Rob Swen
7. Ronveig
8. Anand A.
Course Goals:
- Review & get all local/remote students up to same level
- Basic intro to various software
- Broad foundation for our other EE52xx courses
- From Web Page:

* Good habits in circuit analysis: double subscript notation, active/passive sign convention, visualization via phasor diagrams
* Three phase circuit calculations: source, transformers, transformer design/application, and loads - wye, delta, & zig-zag.
* Synchronous machines
* Transmission lines and cables.

Advanced System Analysis, Operation, Design:
* State Estimation, System Operation, Frequency Control
* Symmetrical Components and Short-Circuit Analysis (Aspen)
* System-Level Stability Analysis (MatLab, T2000, PSS/E?)
  Introduction to Transient Analysis (ATP, MatLab)

RC, RL, RLC
Symm Components - More!
- Sequence Networks -
  - Phase-Shifts thru XfmrS
  - Fault Contributions

AGC = Quicker coverage?

Transient Analysis - Incorporate into start of course w/ phase
  analysis = reduce from 2 wks to 1.
  Use gradually more features during rest of course.

Term Project -
- Proj Report complete by - Week 13-14.
- Review cycle.
- Revised report, pres during finals week.

Exams - 1-2 takehomes. =>
Circuits -
- OK for 1st 2-3 wks
  - Solve for probs
  - Honest w/self
  - 1-2 collect probs/wk on key topics

XFMRS - Review OK.
- Some more advanced is OK.

Synch Mach - More on Synch Mach instead of XFMRS.

T-Lines -: Calcs done in UGrad for T-Lines. Faster Review.
: Cables could be more useful.
: to shift more time away from T-Lines.

Power System Analysis. Software
- Matlab - Proficient: Intro to Blockset?
- ASPEN: Improvements.
- ATP: Introduce at beginning.
- Spreadsheets. - Add this.
= Class Participation incl. e-mail
= Sharing info/questions
= On-time completion.
= Office Hrs.
= Proactive / passive.

Grader =
= Eliminate delays
= Help w/exercises & software.

Scheduling Plan
= More uniform rate of assignments.
  Collect on Tues each week.