ECE 330 Power Circuits & Electromechanics, Spring 2019

Instructors:
Section N – MWF (2-2:50 pm) in 2017 ECEB – Jonathon Schuh, Office Rm. 4066 ECEB
Section C – MWF (3-3:50 pm) in 2017 ECEB – Peter W. Sauer, Office Rm. 4046 ECEB

Teaching Assistants:
Sid Nigam Office Rm. 4038-31 ECEB

Office Hours:
Sauer: Thursday 3-5 pm or by appointment (in 4034 ECEB)
Schuh: Thursday 10-12 am or by appointment (in 4034 ECEB)
Nigam: Wednesday 5-7 pm or by appointment (in 4034 ECEB)

Course Text: Power Circuits and Electromechanics (Paperback Version) by M.A. Pai, Stipes Publishing, Champaign

Course Outline	**Hrs**
1. Review of phasors, complex power	3
2. Three phase circuits, three phase power, wye-delta conversion	4
3. Magnetic circuits, self and mutual inductance, Maxwell's equations	5
4. Ideal transformers, practical transformers, equivalent circuits	4
5. Electromechanical systems, energy, co-energy, energy cycles, computation of forces	6
6. Dynamic equation, numerical integration of electromechanical systems	4
7. Equilibrium points, linearization, stability	3
8. Synchronous machines	3
9. Induction machines	3
10. Other machines	3
11. Exams and review	4

Exams: **Combined at night (7 to 8:30pm) (Tentative dates: Wed, Feb 20, and Wed, Apr 3)**
Final: **Combined – Tentative date: 8:00-11:00 a.m., Monday, May 6**

Evaluation (Quiz and exam scores will be posted on compass2g):
Two hour exams 25% each
Final exam 35%
In-class quizzes 15%
+/- grading will be adopted for the final grades

Course Website: http://courses.engr.illinois.edu/ece330