ECE473 CONTROL OF POWER SYSTEMS
Course Outline

Instructor:	Dr. Cliff Grigg
Office:	D206
Phone:	Ext. 8333 (campus) 299 4525 (home)
Required Text:	Course Notes for ECE473 - Cliff Grigg
Recommended Texts:	Power Generation Operation & Control - Wood & Wollenberg Modern Power System Analysis - Kothari & Nagrath

Grading: Grades will be assigned according to the following schedule:

90 - 100	A
85 - 90	B+
80 - 85	B
75 - 80	C+
70 - 75	C
65 - 70	D+
60 - 65	D
Below 60	F

3 Tests	60 (20 each)
Labs	20
Homework	20
Total	100

Webpage: http://www.rose-hulman.edu/class/ee/HTML/ECE473/

Attendance: All students are expected to attend **all** lectures unless they have a valid reason for absence. Illness is not an acceptable reason for absence (or missing a test) unless accompanied by medical certification. All students are **REQUIRED** to perform every laboratory; missing a lab without making it up will result in failure of the course. Work missed (including tests) due to unauthorized absence may not be made-up. Tests missed due to authorized absence will be made-up by the final exam grade.

Honor Code: Both tests and the final exam must be the student's own work. Failure to comply with this requirement results in an automatic course failure for all parties concerned, and recommendation for further disciplinary action. **NO SECOND CHANCES** Students are encouraged to do homework together and to study together, bear in mind that outright copying of homework solutions is counter-productive to learning the material.

Tests and exams: You will be permitted to use all personal notes written in your own handwriting (but not homework solutions or textbooks) during the tests. However, no time will be allocated for referring to notes etc. In other words, you should prepare for tests as though they were closed-book so that you can finish on-time; reference material should only be a back-up. Laptop computers that are not networked can also be used.

Control of Power Systems

Calendar

class	date	subjects	reading	due
01 M	Dec. 02	Introduction, Overview and Optimization Techniques	notes	
02 W	04	Economic Dispatch	notes	
03 F	06	Accounting for Transmission Losses	notes	
04 M	09	Lab 1	notes	**HW 1**
05 W	11	Introduction to Unit Commitment	notes	
06 F	13	Application of Unit Commitment	notes	
07 M	16	Dynamic Programming	notes	**HW 2**
08 W	18	Lab 2	notes	
09 F	20	Introduction to Load-Frequency Control	notes	
10 M	Jan. 06	Lab 3 - Introduction	notes	**HW 3**
11 W	08	Modeling of Governor Action	notes	
12 F	10	Lab 3 - Completion	notes	
13 M	13	Turbine & Network Dynamics	notes	**HW 4**
14 W	15	**Test 1**	notes	
15 F	17	Lab 4	notes	
16 M	20	Dynamic Model of Two Interconnected Areas	notes	
17 W	22	Lab 5	notes	**HW 5**
18 F	24	Underfrequency Load Shedding	notes	
19 M	27	Secondary Load-Frequency Control	notes	
20 W	29	Lab 6	notes	**HW 6**
21 F	31	Control of Voltage & Reactive Power	notes	
22 M	Feb. 03	Brushless Exciters	notes	
23 W	04	**Test 2**	notes	**HW 7**
24 F	06	Lab 7	notes	
25 M	10	Introduction to State Estimation	notes	
26 W	11	Maximum Likelihood Estimation	notes	**HW 8**
27 F	13	Examples	notes	
28 M	17	More Examples	notes	
29 W	19	State Estimation Applied to AC Networks	notes	**HW 9**
30 F	21	**Test 3**	notes	