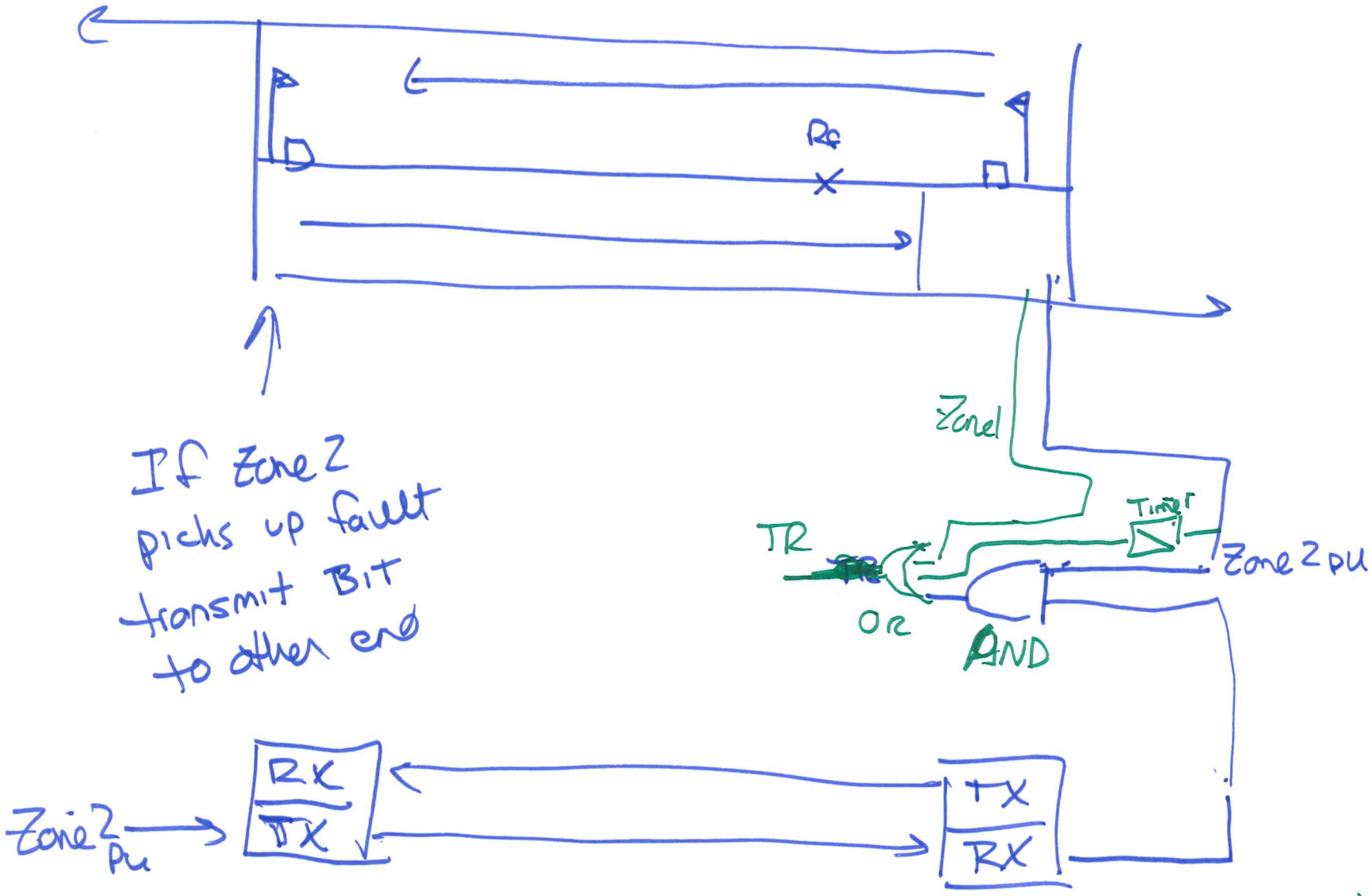
ECE 526

PROTECTION OF POWER SYSTEMS II

SESSION no. 1



If Zone 2 picks up fault transmit BIT to other end

Permissive Overreaching Transfer Trip (POTT)

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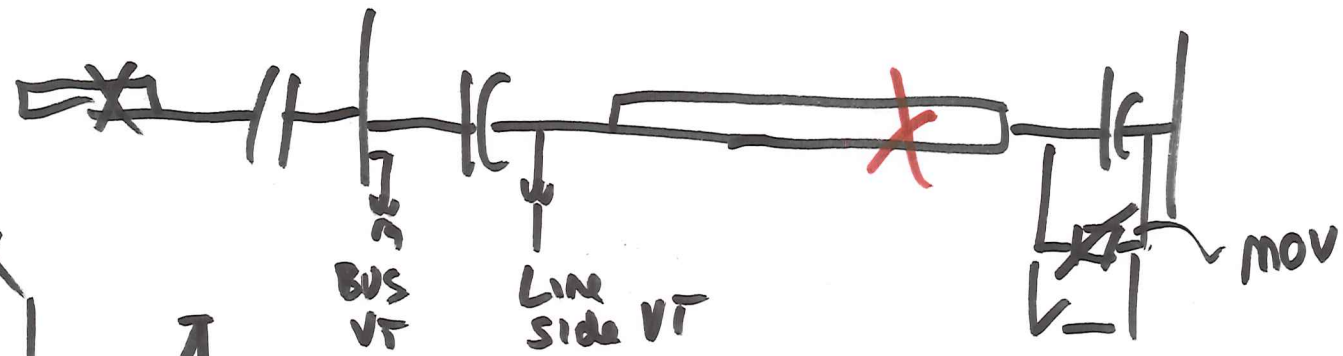

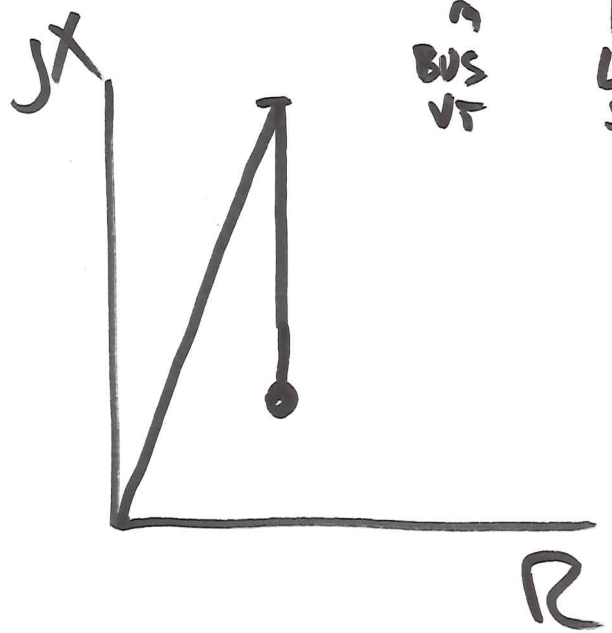

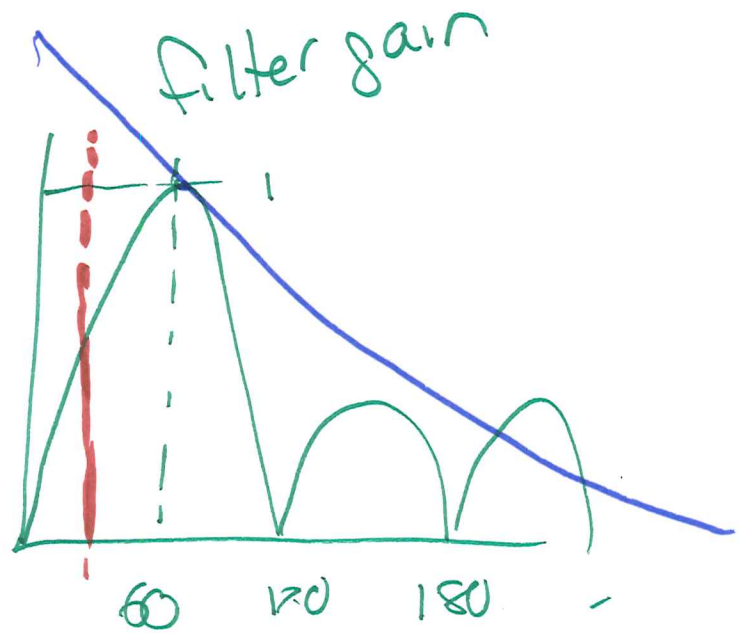

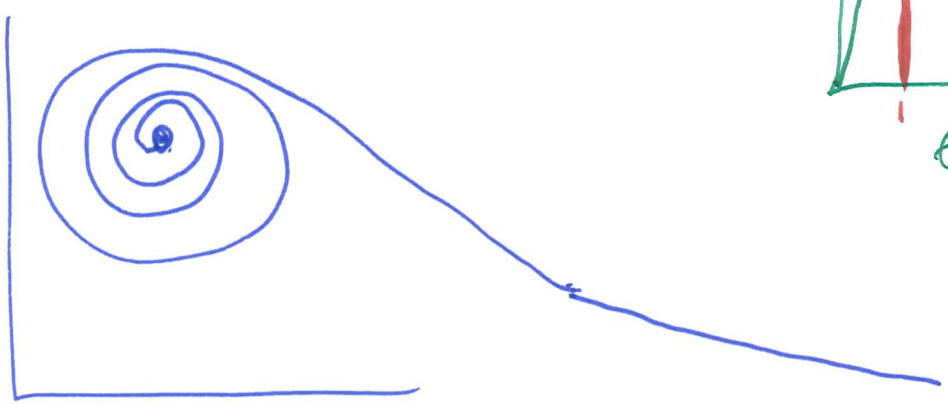

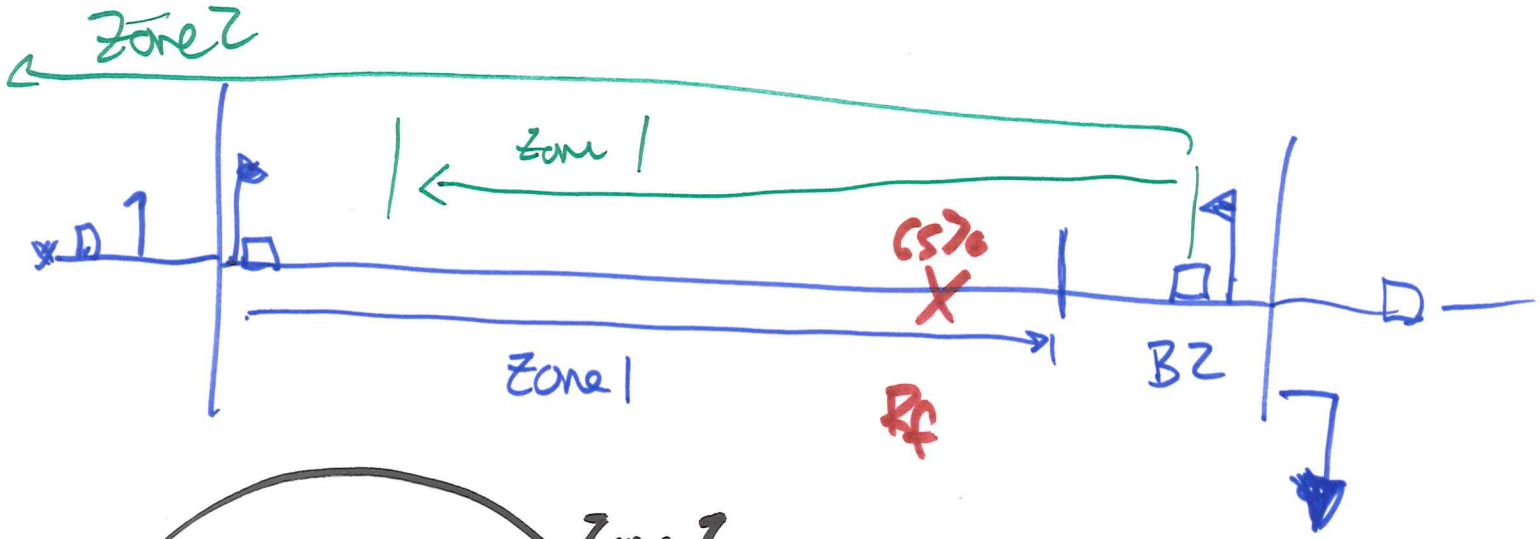

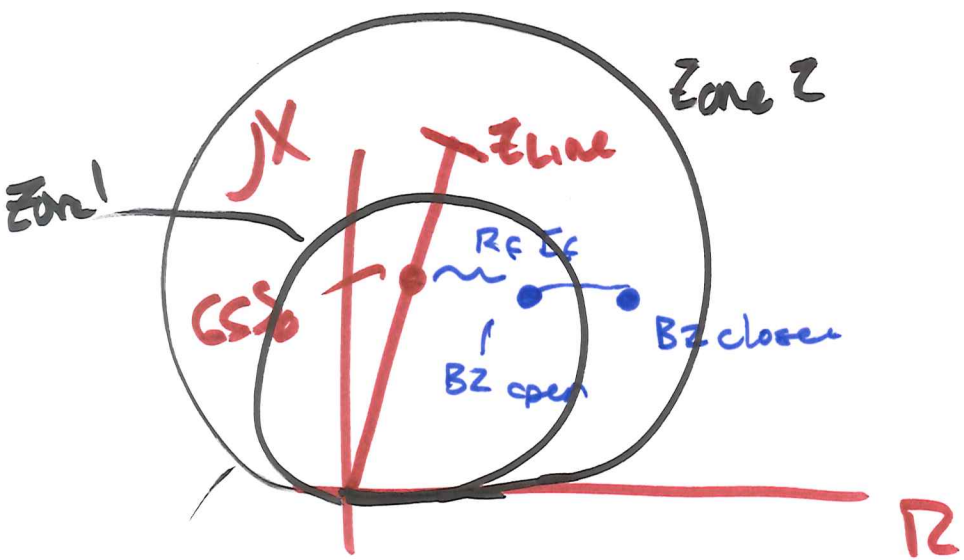

Mho circle
(modified impedance)

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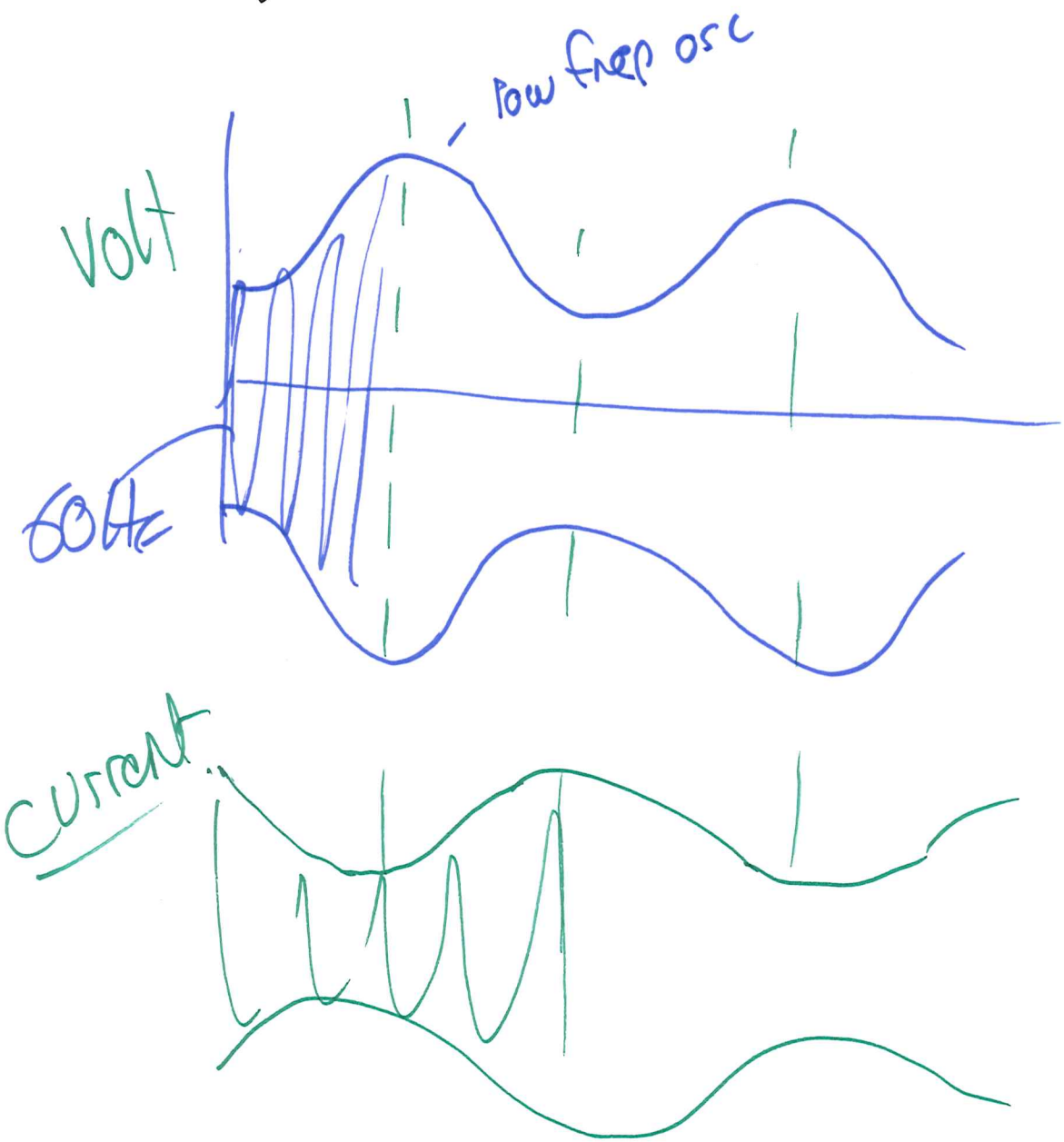

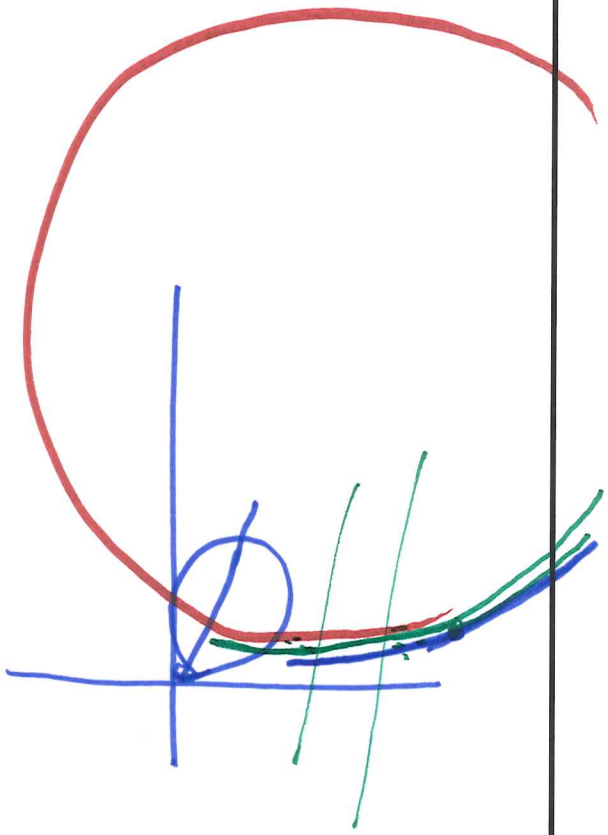

GRADING:

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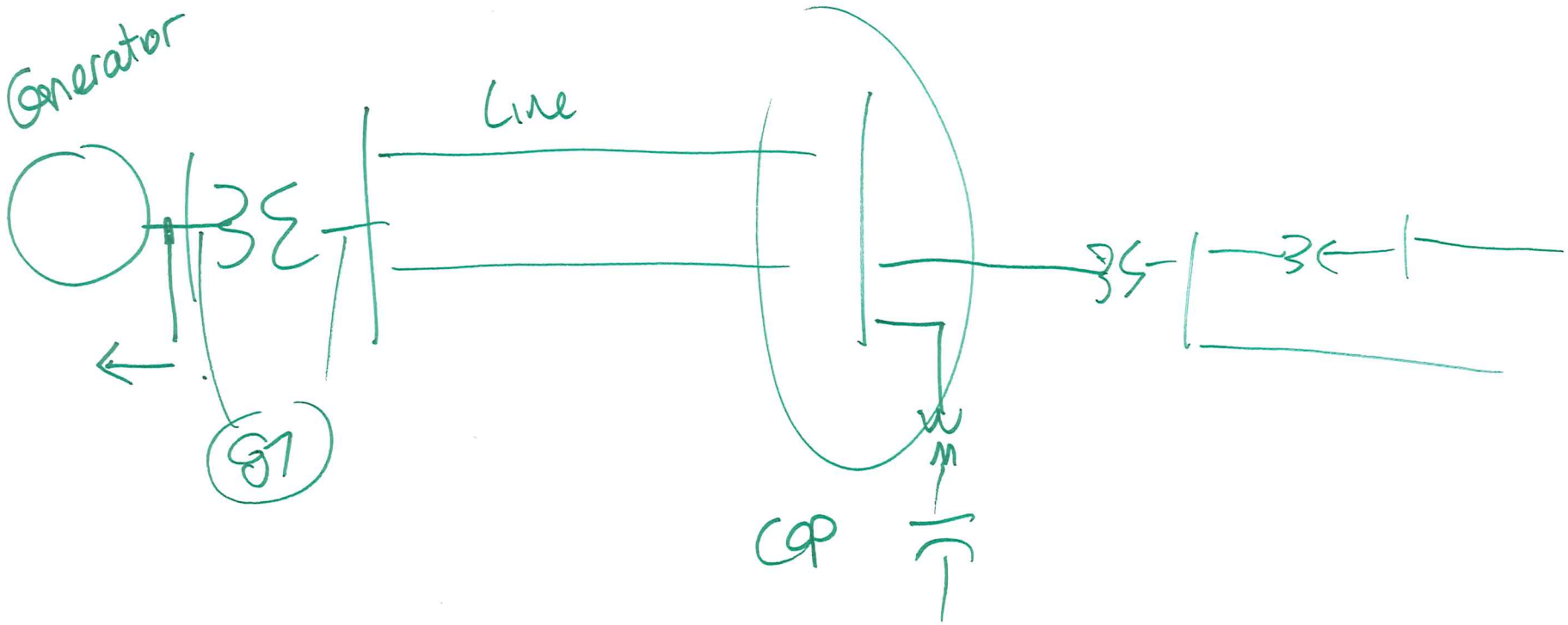
Item	Percent of Grade	A: 90-100
Homework/Labs	24%	B: 80-89
Exam 1	38%	C: 70-79
Final Exam	38%	D: 60-69
		F: < 60

COURSE OUTLINE

Topic	Chapter/Book
1 Introduction/Welcome	Notes
2. Finish Transformer Protection Superimposed quantities	9.19-24/B and 16/NPAG Notes
3. Line Protection A. Distance Protection Basics B. Polarization of Distance Elements C. Phase Distance Schemes D. Ground Distance Scheme E. Supervising element (lab 1)	 Parts 12-13/B , 11-13/NPAG and notes
F. Fault Type Selection Logic	12-13/B and 10/NPAG
G. Communication Aided Distance Protection H. Line Current Differential Protection (labs 2) G. Series Capacitor Protection I. Single Pole Tripping J. Mutual Impedance	 12.26/B and 13.6/NPAG 12/B and notes
4. Out of Step Protection	14/B and 20/NPAG
5. Performing fault studies	Notes
6. Fault Location	Notes
7. Generator Protection (possible lab 3)	8/B and 17/NPAG
8. Motor Protection	11/B and 19/NPAG
9. Distributed Generation, Wind and PV Collectors	8/B and Notes
10. Wrap up	

1. Exams may given as "take homes"
2. Note: homework assignments and projects will require software tools, especially MathCAD.


Generator
Line
CP
T