EE 541 Power System Protection II

C O U R S E I N F O R M A T I O N

Prerequisites	Academic Year &Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Lab.	
EE 442	5	9 or 10	2	2	0	3

C O U R S E A I M

Presenting recent developments in the area of microprocessor relays and protection systems. Introduces students to hardware that is suitable for use in digital relays. Introduces students to relaying algorithms and protection techniques. Outlines and mentions the role of microprocessors and computer control in power system protection.

C O U R S E W E E K L Y C O N T E N T S

1 Introduction: static/ digital vs electromechanical relays
2 Relaying practices
3 Components, detectors and applications
4 Hardware of digital relay (1)
5 Hardware of digital relay (2)
6 Mathematical background for digital protection (1)
7 Mathematical background for digital protection (2) + Midterm Exam
8 Digital O.C. relay
9 Digital distance relay
10 Digital protection of rotating machines
11 Digital protection of transformers
12 Digital bus bar protection
13 Integration of protection and control in substations
14 Traveling wave based protection
15 Recent topics in digital protection

S T U D E N T G R A D I N G & A S S E S S M E N T

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20 Midterm	← 10 MARKS To be freely distributed among possible assessments →					30
8 to 12	← 20 MARKS →						20
13 to 15	← 10 MARKS →						10
16 or 17	40 Final						40
Total	Exams	Assign.	Quizzes	Reports	Present.	Lab.	100

R E F E R E N C E S

Textbook A.T. Johns & S.K. Salman, “Digital Protection for Power System”.

Other M. Chander, “Power System Protection and Switch Gears”, New Age International Limited Publishers, 2002.