Memorial University of Newfoundland

Faculty of Engineering and Applied Science

Fall Semester 2011

ENGI 9847 Computer and Control Methods in Power Systems

Instructor: B. Jeyasurya (EN-3045); jeyas@mun.ca

COURSE OUTLINE

- Review of basic Power System Concepts
- Transmission Lines: Steady-state Operation (2 Labs. on Lines)
- Power Flow Studies (2 Labs. on PowerWorld Simulator)
- Sparsity Techniques/ Ordering Schemes
- Economic Dispatch & Optimal Power Flow
- Network Reduction and Power System Stability
- Special Topics in Power Systems

Software Tools: Matlab and **PowerWorld Simulator** will be extensively used.

Reference Texts

1. Power System Analysis and Design, Glover/Sarma/Overbye, Cengage Learning, 2012.
2. Power System Analysis, J.D.Grainger and W.D.Stevenson, McGraw-Hill, 1994.
3. Power System Stability and Control, P.Kundur, McGraw-Hill, 1994

Course Material: online.mun.ca
Scheme of Evaluation:

Assignments (5)	10%
Tests (2)	40%; (75 mins; October 3 and November 16)
Project	10%
Final (Closed Book; 2:30 hrs)	40%

Selection of papers for review (Inform by email): Sept. 23, 2011
Project Selection by: Sept. 28, 2011 (Submit one page proposal)
Paper Discussion: October 17, 2011
Progress report on project: October 31, 2011 (email)
Project Presentation: November 28 and 30, 2011
Project Report Due: December 2, 2011
Office Hours: Mondays 3:00 – 5:00 p.m.