EE6510 POWER SYSTEM OPERATION AND PLANNING

Academic Unit: 3.0
Prerequisite: Nil
Effective: Acad Year 2006/07
Last update: January 2006

OBJECTIVE

The objective of this course is to impart to the students the knowledge relevant to power system planning and operations. The course will provide in-depth coverage of all essential aspects of power system operation and planning including load forecasting, generation scheduling, network operation, probability and reliability, generation planning and transmission planning.

DESIRED OUTCOME

The knowledge gained in this course should enable the participants to understand the important functions and issues involved in different activities associated with power system operation and planning. It will provide the fundamental concepts and techniques required to deal with all the issues in power system planning and operation functions. The knowledge gained will also serve as an excellent starting point for graduate students interested in conducting research in various aspects of power systems.

OTHER RELEVANT INFORMATION

This course is designed for graduate level study. Therefore, a good understanding of power system fundamentals and engineering mathematics is the recommended prerequisite for the course.

CONTENT

Forecasting and Scheduling. Network Application Functions. Probability and Reliability. Generation and Transmission Planning.

ASSESSMENT SCHEME

Continuous Assessment	20%
Final Examination	80%

TEXTBOOKS

1. Wood A J and Wollenberg B F, Power Generation, Operation and Control, Second Edition, John Wiley & Sons, Inc., 1996.
2. Billinton R and Allan R N, Reliability Evaluation of Power Systems, Second Edition, Plenum Press, 1996.

REFERENCE

1. Billinton R and Allan R N, Reliability Evaluation of Engineering Systems, Second Edition, Plenum Press, 1992.