EE471 – Electrical Power Systems (Required Course)

Code and Name: EE 471 Electrical Power Systems.
Credit Hours: 3 (Lecture: 3, Tutorial: 1)

Textbook:
- Electrical Power Systems, Ashfaq Hussain, fifth Edition, CBS Publishers & Distributors, 2007.

Other References:
-

Course Description:
Load characteristics – under-ground power cables – dielectric stress – grading - insulation of overhead transmission lines– transmission line parameters – inductance and capacitance – short lines - medium lines – long lines

Pre-requisites: EE 222.
Co-requisites: None.

Course Learning Outcomes:
With relation to ABET Student Outcomes (SOs: 1-7)

1. Evaluate the characteristics of power systems. (1)
2. Design efficient under-ground cables. (2)
3. Define the insulation requirements from overhead transmission lines. (1)
4. Calculate the inductance of overhead transmission lines. (1)
5. Calculate the capacitance of overhead transmission lines. (1)
6. Calculate the efficiency of overhead transmission lines. (1)

Topics to be covered:

- Load Characteristics.
- Power Cables.
- Line Insulators and Supports.
- Line Parameters.
- Short and Medium Lines.
- Long Transmission Lines.
- System Neutral Grounding.

Grading Policy:
The grading for the course are 60% coursework and 40% Final Exam. The coursework consists of two Midterm Exams, where each midterm exam is worth 20%. It also includes quizzes, homework, and projects for the remaining 20% that is modified by the course instructor.