



E5209 Jan 3:0

Overvoltages in Power Systems

Instructor

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Teaching Assistant

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Department: Electrical Engineering

Course Time: M-W-F 9:00-10:00

Lecture venue: HV Engg building classroom

Detailed Course Page: -

Announcements

Classes start from 3-Jan

Brief description of the course

This course gives a time-domain treatment of the phenomenon of overvoltage in transmission lines. Gives a clear exposure to students about why and how overvoltage/overcurrent can be generated in a system, discusses several methods of computing it. Students with B.Tech/B.E degree in core electrical engg can take the course, few lab experiments are also included to prove what is taught in the class.

Prerequisites

Preferable to have background of basic course in high voltage engg., but, not mandatory.

Syllabus

transients on transmission lines, method of computation, PSPICE exercises, background of EMTP, Lightning, overvoltage due to lightning and switching, VFTO, insulation behaviour, protection of apparatus, surge arresters, and insulation coordination

Course outcomes

* time-domain treatment of overvoltage on transmission lines

* methods to compute it

* analyse overvoltage data or phenomenon in systems, networks

* protection against overvoltage

Grading policy

50% sessional marks (2-tests, mini project, assignments, programs)

50% final exam (closed book)

ALL tests are OPEN BOOK tests.

Assignments

tutorial exercises on PSPICE on a weekly basis

Resources

books (K. Ragaller, Surges in high voltage networks)

IEEE and AIEE Transactions papers