EE 334
POWER SYSTEMS

Instructor: Prof. A. M. Kulkarni

Where To Meet

- **Instructor Office:** Power Systems Lab, Ground Floor, EE Department, IIT Bombay.
- **Instructor Contact:** anil@ee.iitb.ac.in

Teaching Assistants

- kaustavd@iitb.ac.in, +919874262783 (Kaustav Dey)
- kkgajjar@iitb.ac.in, +919925774394 (Kevin Gajjar)
- Power Systems Lab, Ground Floor, EE Department, IIT Bombay.

Lecture Schedule

- Monday (11:30 AM – 12:30 PM): Lecture
- Tuesday (8:30 AM – 9:30 AM): Lecture
- Thursday (9:30 AM – 10:30 AM): Tutorials/Quiz (see below for details).

Reference Books

- Elgerd, O.I. (1973), Electric Energy Systems Theory: An Introduction, Tata McGraw-Hill, New Delhi.

- Weedy, B.M, Cory, B.J, Jenkins, N, Ekanayake, J. B. and Strbac, G (2012), Electric Power System, John Wiley & Sons, Chichester.

- **General Reading:** Padiyar, K.R (2014), Understanding the Structure of Electricity Supply, B.S.Publications, Hyderabad.

Grading Policy

- Quiz (Best 4): 25%
- MidSem Exam: 25%
- EndSem Exam: 50%

Tutorials

- Practice problems.
- No submission/grading.

In Class Quizzes

- MCQ/MSQ type questions.
- All quiz papers will be weighted equally.
- Best 4 out of all 6 quizzes will be considered.

Course Outline

- Review of single-phase and three-phase AC circuits.
- Electric Power Supply Systems
- Transformers.
- Synchronous Generators and Associated Controllers.
- Power Electronic Conversion Systems.
- Renewable Technologies: Wind, Solar and Storage.
- Transmission Lines.
- Power System Operation, Control and Protection.

Field Trips

- Generating Station Visit
- IITB Distribution Substation Visit
- HVDC Converter Station Visit (Tentative).