

EE 334: Power Systems (Spring 2020)
EE Department, IIT Bombay
Instructor: Prof. A. M. Kulkarni

Instructor Office: Power Systems Lab, Ground Floor, EE Department, IIT Bombay.

Instructor Contact: anil@ee.iitb.ac.in

Head TA(s) Contact: kkgajjar@iitb.ac.in,  +919925774394 (Kevin Gajjar),
kaustavd@iitb.ac.in,  +919874262783 (Kaustav Dey).
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:

1. Electric Energy Systems Theory by Olle Elgerd.
2. Electric Power Systems by Cory, Weedy.

Grading Policy:

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

Tutorials: Practice problems. No submission/grading. The problems will be posted on Moodle and it will be discussed in class.

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

Tutorial and Quiz schedule is given below.

Date	Topic
23.01.2020	Quiz 1
30.01.2020	Tutorial 1
06.02.2020	Quiz 2
13.02.2020	Tutorial 2
20.02.2020	Quiz 3
05.03.2020	Tutorial 3
12.03.2020	Quiz 4
19.03.2020	Tutorial 4
26.03.2020	Quiz 5
02.04.2020	Tutorial 5
09.04.2020	Quiz 6
16.04.2020	Tutorial 6
23.04.2020	Final Discussion: Doubt Clearing

Course Outline:

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

Field Trips:

1. Generating Station Visit
2. IITB Distribution Substation Visit
3. HVDC Converter Station Visit (Tentative).