

Bharatiya Vidya Bhavan's
SARDAR PATEL COLLEGE OF ENGINEERING
(Government Aided Autonomous Institute)
Andheri (W), Mumbai 400058
DEPARTMENT OF ELECTRICAL ENGINEERING

Annual Report 2020-2021

Department of Electrical Engineering was established in 1962 with undergraduate programme in Electrical Engineering. In the academic year 2014-2015 we started the post graduate programme in Power Electronics and Power System and in the year 2018-2019 our Ph. D. programme has been approved by University of Mumbai. The intake for these programmes is sixty, eighteen and ten respectively.

The department has an excellent infrastructure. The strength of Department of Electrical Engineering is its faculty, students, supporting staff and alumni. Faculty of the department are motivated by their goal to transform young engineering students to skilled and proficient Electrical Engineers. The department has expertise in the field of power system, electrical machines and drives, electronics, communication engineering and control system.

Vision

Department of Electrical Engineering aspires to produce socially responsible and dedicated electrical engineer by providing conceptual learning that enhances research based activities.

Mission

- To educate through classroom teaching along with intensive practical activities and promote academic excellence with the help of expertise in different fields of Electrical Engineering from industries and academic institutes.
- To promote innovative ideas through seminars and projects.
- To bring awareness of social responsibilities as an Electrical Engineer

This report presents academic activities and the achievements of Electrical Engineering Department in the academic year 2019-2020

Academic Activities:

Curriculum:

The department has the curriculum which is in alignment with AICTE model curriculum. We are offering variety of courses under Professional and Open Electives. The professional electives cover the advanced courses of Electrical Engineering whereas open electives cover interdisciplinary courses. We have the history of an excellent placement and this curriculum will definitely further improve graduate employability. Apart from core, professional and open elective courses, we offer value added courses. These value added courses include introduction to various software like MATLAB, SCILAB, Python, ETAP etc and courses such as PLC and numerical techniques. The elective courses are useful for the students continuing higher studies whereas value added courses are helpful to them while implementing B. Tech. projects. Soft computing courses offered for S. Y. and T. Y. students are useful for understanding many Electrical Engineering concepts. Apart from regular

experiments many of our laboratory courses require to execute mini projects for completion of courses, This gives hands on experience to students which help them to complete final year projects.

Due to pandemic situation teaching in academic year 2020-2021 has been completed in online mode with various innovative ideas implemented for conducting theory/laboratory/ tutorial classes.

Guest Lectures:

The following guest lectures were arranged for students and faculty during AY2020-2021. These lectures were delivered by experts from industry and reputed academic institutes to update students with advances in technology:

- .16 and 32 bit Microprocessors
- Semiconductor Memories
- Machine learning and Artificial intelligence
- PLC and HMI
- Sequel App for BEE and Power Electronics
- Distributed Control System
- Process and Instrumentation diagram and Design Stages in Automation Industries
- To learn Importance of simulation
- Sustainable Development
- Overview of Recent Electrical Machines
- Designing a Discrete Time PID controller with MATLAB based PID tuner for rapid prototyping of Power Electronics Systems
- Power exchanges –Day Ahead and Real Time
- PMU and WAMS

Few laboratory sessions in BEE I and Power System II were conducted by research scholars pursuing Ph. D. from IIT Bombay which helped students to learn new simulation techniques.

Workshop for students

- Neural Network
- AI and Machine Learning using Python
- Beginners Guide to Python

Students Achievements:

- Electrical Engineering Students Association (EESA) is active throughout the year. The students conducted and participated in many online technical and extra-curricular activities like SPECTRA, EESA cup etc. under the guidance of department faculty Mr. Rahul Chavan and Mr. Vishal Dake.
- Thirty nine students appeared for GATE examination and Eight students are qualified in the same.
- PG students have published papers in various international conferences.

Result Analysis:

Sr. no	Electrical Class Academic Year 2019-2020	Passing Percentage
1	F.Y.B.Tech	63.24
2	S.Y.B.Tech	79.45
3	T.Y.B.Tech	89.71
4	B.Tech	100
5	M.Tech First Year	100
6	M.Tech Second Year	100

Placement:

More than sixty percent students are placed at various companies like L and T, Siemens, Jacob Engineering, Lodha Group, TATA Power, Reliance Industries etc.

Summary of AICTE/TEQIP Mandate Information during 2020-2021

- Number of research conferences attended online = 06
- Number of STTP/Workshops attended online by faculty=23
- Number of workshops conducted for students=02
- Number of guest lectures arranged = 13
- Number of technical publications in international conferences = 06
- Number of new courses offered in 2020-2021 = Regular: 02 Professional Electives: 01
- Number of ICC constituted for courses taught by faculty = 04 UG
- Number of students appeared for GATE examination = 39