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

Annual Report 2018-2019

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 this year 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 2018-2019.

Academic Activities:

Curriculum:

The department has revised 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. New 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.

Guest Lectures:

The following guest lectures were arranged for B. Tech. and M. Tech. students during AY2018-2019. These lectures were delivered by experts from industry and reputed academic institutes to update students with advances in technology:

- "Scheme of Auto Change over using Electromechanical relays" by Mr. Sachin Khare from L & T on 08/10/2018.
- "Introduction to Motor Protection using Digital Relays" by Mr. Harshad Divekar from L & T on 08/10/2018
- "Power System Oscillations monitoring using WAMS" by Dr. Gopal Gajjar, Sr. Research Scientist from IIT, Bombay on 09/10/2018.
- "Combined cycle gas based power plant" by Mr V.B. Agashe, Consultant on 06/03/2019.
- "Bus Bar Protection Scheme" by Mr. Shrotri, Consultant on 01/04/2019
- "Stakeholder Management" by Mr. Suvedh Jayvant from TISS on 03/04/2019
- "Cost Management" by Mr. Suvedh Jayvant from TISS on 03/04/2019

- "International Conventions on Climate Change" By Mr. Suvedh Jayvant from TISS on 10/04/2019

We have organized discussion on Effectiveness of MERC in association with Urja Prabodhan Kendra on 14/01/2019.

Industry visits arranged:

- POSOCO for B. Tech. Students.

T.Y. B. Tech. Students visited Govardhan Eco Villege Palghar. Such visits help to inculcate awareness towards environment

Workshop for students

The department has organized the following workshops in the AY 2018-2019:

- Beginners Guide to Python on 01/09/2019-02/09/2019
- Advanced Processors on 06/10/2019
- Android Application Development on 13/10/2019-14/10/219
- Introduction to Electronic hardware design with PCB layout on 19/01/2019-20/01/2019

Research Activities

Apart from publications by faculty and students in international journals and conferences our faculty Dr. Sangeeta Daingade received Mumbai University Minor Research Grant of Rs 35,000/- for the project "DSP based control of SRM".

Faculty interaction with outside world:

The following faculty attended workshops at IIT Bombay in the AY 2018-2019

- CEP course: IT Enabled learning for STEM attended by Prof. Ushma Shah Duration 10/09/2018-12/09/2018)
- CEP course: Electromagnetic fields and waves: Pedagogy and computation attended by Prof. Vishal Dake (Duration 12/11/2018-16/11/2018)
- CEP Course: Scientific computing with Python for Electrical Engineers attended by Dr. Sangeeta Daingade and Dr. Swati Lavand (Duration 11/02/2019-15/02/2019)

Supporting staff:

- One day workshop on Civil Defence at SPCE on 06/04/2018 is attended by our supporting staff Mr. Nilesh Pujari, Mr. Rajendra Govalkar, Mr. Santosh Shelar, Mr. Vinod Tambvekar, Mr. Israr Saudagar, Mr. Tanveer Diwan, Mr. Pravin Ambokat.
- Two days workshop on "Personal Effectiveness for Enhancement of day to day work" at SPCE on 14/02/2019 and 15.02/2019 is attended by Mr. Nilesh Pujari and Mr. Tanveer Diwan.
- One day workshop on "Planning and Execution of Work" at SPCE on 01/12/2018 is attended by Mr. Nilesh Pujari.

Students Achievements:

- Electrical Engineering Students Association (EESA) is active throughout the year. The students conducted and participated in many technical and exta curricular activities like SPECTRA, EESA cup etc. under the guidance of department faculty Mr. Rahul Chavan and Mr. Vishal Dake.
- Forty six students appeared for GATE examination and Nineteen students are qualified in the same.
  Six students are going abroad to pursue MS.
  Five students are selected for MBA
- UG and PG students have published papers in various international conferences.
- Our S. Y. B. Tech. students secured first rank in VJTI Robotics Challenge (VRC) competition during Technovanza VJTI, 2018 (28-30/12/2018). The team members for the same were Mr. Ayush Sagatiya, Mr. Pranav Kumbhar, Mr. Tarang Bavishi, Mr. Rahul Jha, Ms. Divya Shah and Mr. Aditya Bakshi.
- Our students Mr. Akash Jadhav(B. Tech.) and Mr. Rutvik Rathod (S. Y. B. Tech)were the team members for the competition International Robotics Challenge (IRC) organized by IIT, Bombay. The team secured second rank in national as well as international level rounds.

Result Analysis of the AY 2017-2018:

Sr. no	Electrical Class Academic Year 2017-18	Passing Percentage
1	F.Y.B.Tech	64.29%
2	S.Y.B.Tech	77.39%
3	T.Y.B.Tech	83.57%
4	B.Tech	89.61%
5	M.Tech First Year	83.33%
6	M.Tech Second Year	100.00%

Placement:

Total Sixty four 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 2018-2019

- Number of research conferences/seminars attended = 05
- Number of STTP/Workshops attended = 03
- Number of guest lectures arranged = 08
- Number of industrial visits organised = 02
- Number of technical publications in international conferences = 14
- Number of new courses offered in 2018-19 = Regular: 03 Elective: 03 Professional Electives: 05 Open Electives: 02 Value Added: 03
- Number of ICC constituted for courses taught by faculty = 12 UG 02 PG
- Number of faculty completed for SWAYAM/NPTEL portal for certification course = 4
- Number of students appeared for GATE examination = 46

Department Budget and Expenditure in AY 2018-2019

The total expenditure for AY 2018-2019 is Rs. 7,51,152.84/- (Rs. Seven lacs fifty one thousand one hundred and fifty two and Paise eighty four only) out of budgeted amount of Rs 10,00,000/- (Rs. Ten Lacs only). This expenditure is for updation of electrical machines laboratory, purchase of equipments in electronics, embedded system, power electronics and renewable energy laboratories. The amount is also utilised for purchase of consumables, and components required for mini and B. Tech. projects.

Sr. No.	Name of Laboratory	Budget Amount in Rs	Amount Spent in Rs.
1	Electrical Machine Lab	63,500/-	63,500/-
2	Renewable Lab & Electrical Drives Lab	64,250/-	8,238/-
3	Electronics Circuits	63,500/-	63,500/-
4	Microprocessor/ Microcontroller	63,500/-	34,850/-
5	Communication & DSP	63,500/-	56,355/-
6	Switchgear & Protection	63,500/-	10,000/-
7	Control System	63,500/-	63,000/-
8	Power Electronics	63,500/-	63,372/-
9	PLC & Industrial Automation	63,500/-	63,000/-
10	Electrical Measurement	63,500/-	63,500/-
11	Basic Electricity and Electronics/ Digital Electronics	64,250/-	64,250/-
11	Dept. Office	50,000	19,930/-
12	UG Projects	2,50,000/-	1,77,657.84
	Total	**10,00,000**	**7,51,152.84**