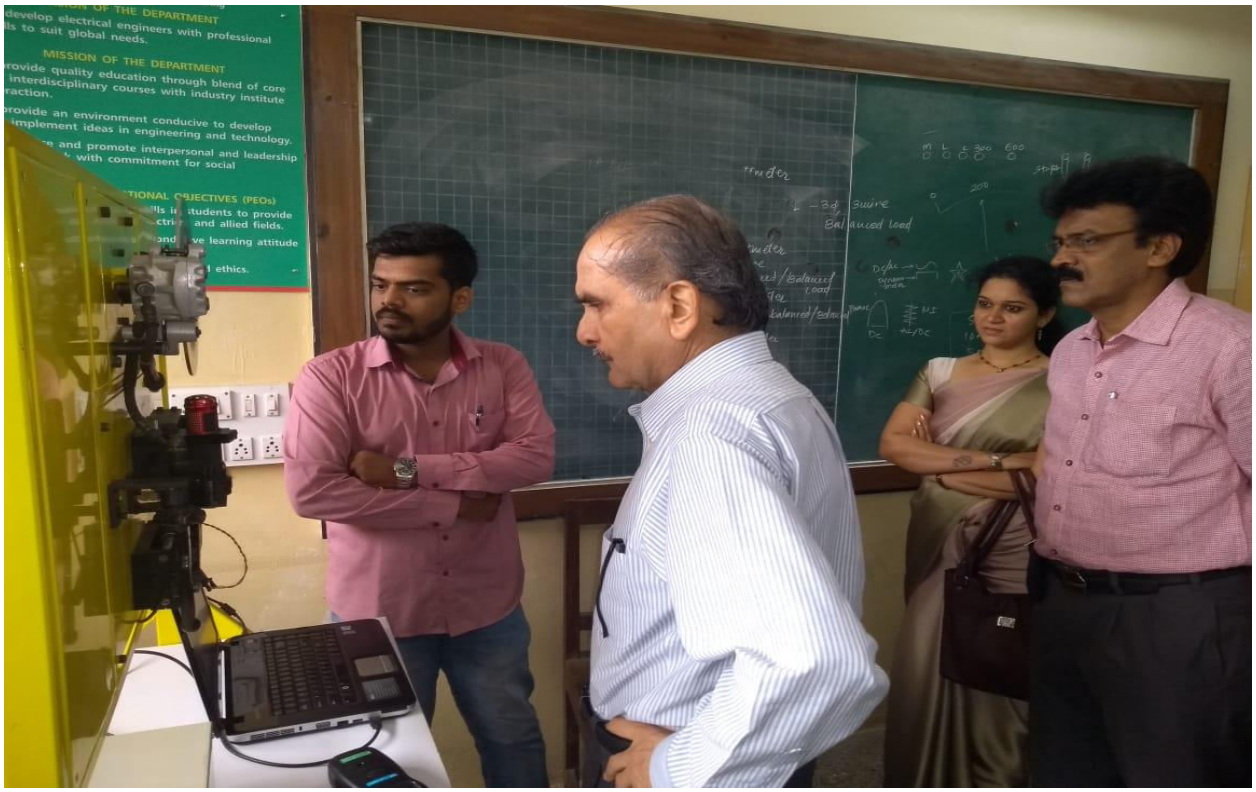
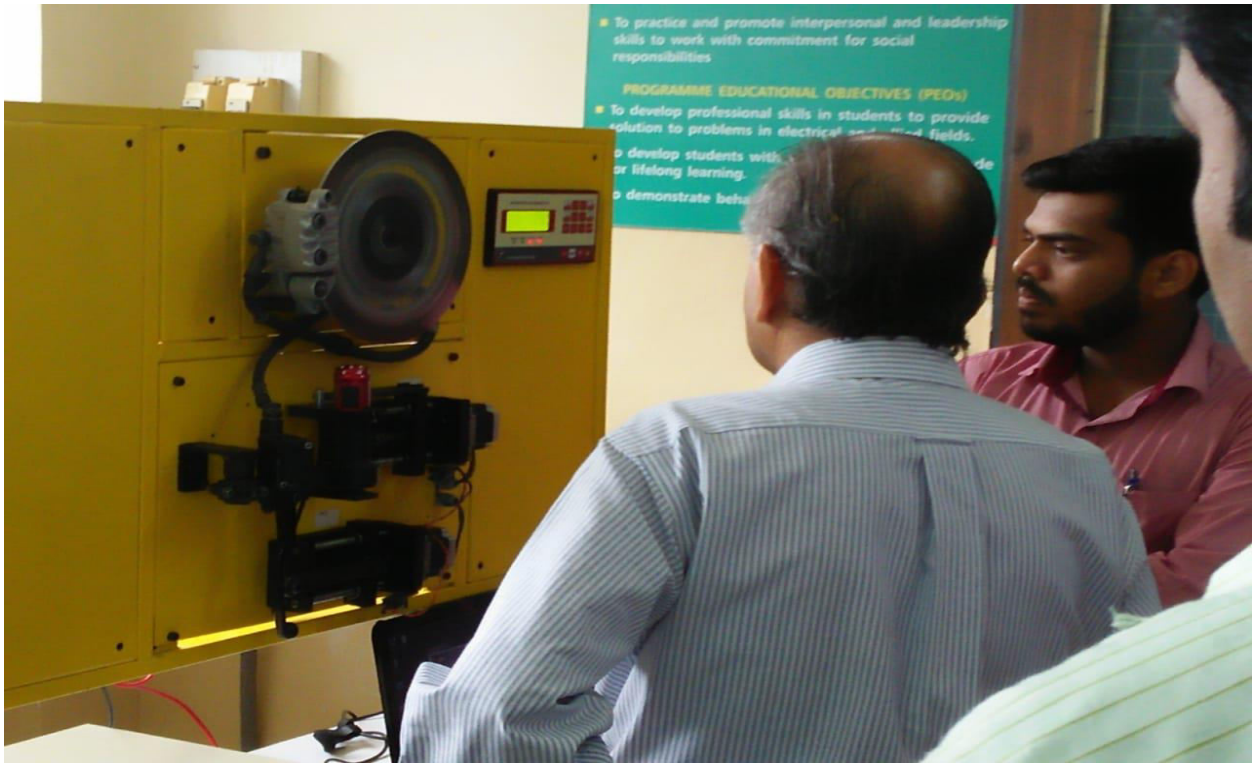
Innovations in the Department of Electrical Engineering

Testing Jig for Electric Vehicle battery checking:-



A Industry Institute interaction at the Department of Electrical Engineering was held on 7th July 2018. Industrial experts visited the department and discussed various issues and problems in the field of electric vehicles and battery. Various research opportunities were also discussed. With Mr Atul Oak, the Former CEO of Exide batteries, Expert in electric batteries. Mr. Rama Sundarum, Owner of Propollex firm. He has expertise in electrical vehicles and many other fields. Mr. Jagdish Mohite, expert in electric motors, controller. Mr. Siddarth Mane Technical expert in Propollex who works on research projects/industry projects of, he has expertise in Ultra capacitor based hybrid electrical vehicles.



Electric Vehicular test jig is being established in the Department of Electrical Engineering where many opportunities lie for research and development. The recent trends in development in the electrical vehicle sector, brings opportunities to research scholars in the field of electric vehicles.

A technical discussion was held by the Faculty members of the Electrical Engineering department with Industrial experts. Topics like Electric Vehicles, possibilities for enhancement of battery performance, recent trends in the field of electrical engineering were covered on a whole.

E-Rickshaw an initiative towards green and clean energy at Bharati Vidyapeeth (Deemed to be) University College of Engineering, Pune.

Project based learning:

Practical knowledge is the best way to understand a concept. To motivate the students for gaining practical knowledge, faculty members of Electrical Engineering Department have initiated an activity named 'Project based Learning'. Discussion and Interaction by the faculty member plays a vital role to motivate the students. Application based examples are put-forth in order to develop an idea for selection of a topic. Selection of topic is choice based depending on area of interest under the course 'Fundamentals of Electrical Engineering'. More emphasis is given on best out of waste projects with minimum cost. The activity helps student in developing technical skills, presentation, knowledge of components and its use in the project. Students are motivated to demonstrate a working model of any fundamental topic of their choice under the course with proper guidance. An exhibition is organized under ASEE (Association of Students of Electrical Engineering). Guests (Technical person) are invited in the exhibition, to develop presentation skill in each student. It creates a platform for all students to share and gain more knowledge from other projects. Top three projects are rewarded with certificates considering all aspects presentation skills, application of fundamental concepts, components and its application.

1st Year students presenting their project topic to Principal Dr A. R. Bhalerao

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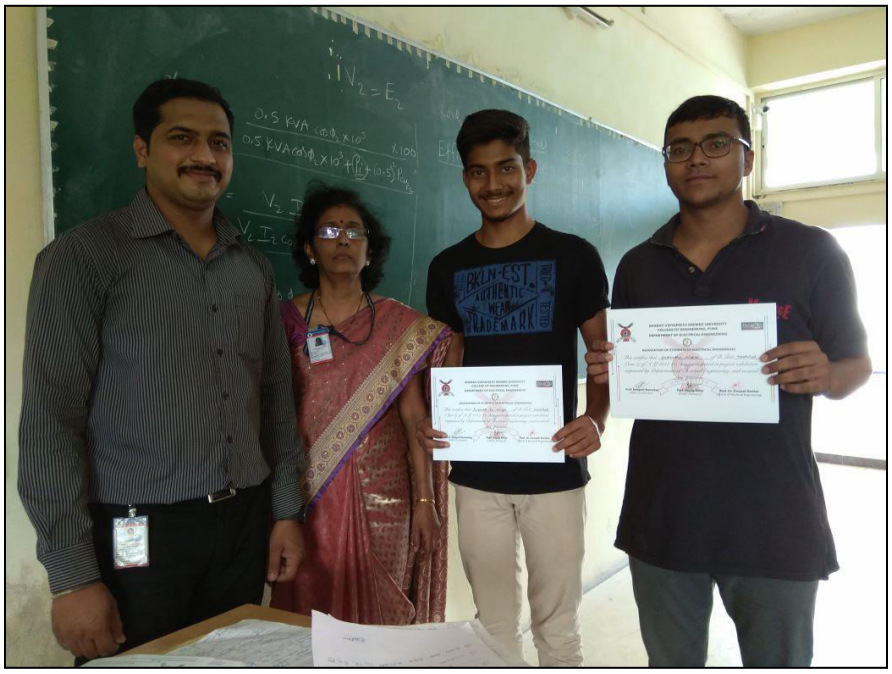
1st Year students presenting their project topic to Chief guest Mr Dinesh. D. Jagdale



Certificate distribution to students with outstanding project work

Computing Facilities:

Computing Lab: Separate computing lab with advanced computing tools have been developed and strengthened by addition of software's such as ETAP, Lab View, MATLAB and Elipse-SCADA, ANSYS etc.

Saturday at BV:

Senior Industry personnel are selected to mentor the students. Eminent personalities are invited from industries on Every Saturday to discuss with third year and final year students regarding placement opportunities and industrial environment.

Professional Skill Development (PSD):

Six courses have been added in revised Programme Curriculum as PSD I-VI courses, from Sem I to Sem VI. Under this course students are able to develop their soft skills and aptitude, which helps them to perform better at placement.

MOUs:

MOUs have been signed with industries which helped students to perform their experimentation for projects, to visit and observe the process.

In-plant training:

Students of Sem VII undergo industrial training of 45 days. It is an integral part of the Curriculum. The students get an overview of the industrial work along with enhanced technical skills. Students are able to interact with various industry people and are able to work in groups. This develops professionalism and team work among students.

Guest Lectures:

Experts from Industry, Power Sector, Research Organizations, Peer Academic Institutions, Competitive Examination Cells, NGOs are invited to guide the students on Technical knowledge, soft skill development, Preparation for competitive examinations such as GATE, IES, GRE, TOEFL etc.

Virtual Lab:

Virtual lab facility is introduced and made available to the students. This facilitates the students to learn and perform practicals virtually.

Department Library:

It consists of CD's, NPTEL videos and basic Electrical Engineering software which includes presentation and videos on different Electrical engineering topics. Departmental library with

approximately 600 books specialized for electrical engineering. The previous project reports are also available for the reference of students.

NPTEL Lecture Series:

NPTEL Lecture Series are made available for the students, more than 1200 lecture series of NPTEL is available for the students to enhance their technical knowledge.

Diploma in Network security:

An addition to the degree syllabus is the introduction to 'Diploma in Network security'. This value added program has been designed and offered right from the first semester so as to get familiar with the security of data, cyber laws.

The research culture is followed in the department of Electrical Engineering, where faculties and students are motivated to carry research work in their applied field. The table shows the research grants given to various researchers.

Research Projects in the Department

Sr. No.	Principal Investigator	Grant Received in Rupees	Project Title
1	Dr. Deepak Bankar	2,97,500/-	Study of suitability of different generators and its power quality analysis for wind power applications.
2	Dr. Deepak Bankar	2,98,000/-	Dynamic behavior of the DFIG used in wind power applications under grid fault conditions
3	Mrs. Anagha Soman	30,000/- + 2,98,800/-	Design & development of dual stator cage rotor induction machine
4	Mr. Suyog Hirve	37,460/-	Single phase ball milling machine and its analysis on Super capacitor
5	Mr. Nachiket Kulkarni	2,70,000/-	Applications and enhancements of cloud computing technique in electrical grid to improve grid performance.
6	Dr. Rajesh Holmukhe	2,99,000/-	Development of ultra-capacitor based electricity vehicle system
7	Mr Y.B. Mandake	12,500/-	Underground Cable Fault Detection System by IEEMA
	TOTAL	**15,43,260/-**	