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SPARK

YEARLY NEWSLETTER DEPT OF EEE



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DEPARTMENT VISION & MISSION



DEPARTMENT VISION

The Electrical engineering Program emphasizes design, innovation, real world applications of evolving technologies, and simulation of real time systems along with developing entrepreneurial capabilities by providing excellent Electrical Engineering Education.

DEPARTMENT MISSION

The Electrical engineering Programme emphasizes design, innovation, real world applications of evolving technologies, and simulation of real time systems along with developing entrepreneurial capabilities by providing excellent Electrical Engineering Education.



PRINCIPAL'S DESK



It is with profound sense of pride and pleasure that we present you this very special volume of SPARK. Every page unfolds a plethora of the abundant creative and literary talents of our ever enthusiastic students. You can feel the pulse of this great institution as the pages reveal our students' capabilities. SPARK is truly the systematic product of a team of people. I am delighted to present you through these pages our students' thoughts, attitudes and aspirations. These young shining stars with their well embedded roots and spreading wings are the promise of a great tomorrow. This institution serves as a spring board from where they can unleash their true potential. I encourage everyone to go through this wonderful masterpiece of MGITians, whose quality ideas and contributions made this edition of SPARK colorful and readable.

Prof. K. Jaya Sankar

Principal

HOD'S DESK



The department of Electrical and Electronics Engineering was established in the year 2002 with an objective to develop professionals through quality education with an intake of 120 students. The EEE Department at Mahatma Gandhi Institute of Technology prepares students in this field using new-age information and computer-intensive technologies. The B.Tech. and M.Tech programs are designed to achieve a balance between depth of knowledge acquired through specialization and breadth of knowledge gained through exploration. The courses offered by the department provide a comprehensive foundation in the core topics of EEE coupled with an area of specialization relevant to emerging engineering challenges. The faculty in the department is a rich blend of personnel with industrial and professional experience. The dedicated staff members have sound knowledge in emerging areas like Power systems, power electronics, microelectronics, and control engineering, etc. The breadth and depth of the research interests of the academic staff ensures a high standard of lecture courses and provides excellent opportunities for challenging and stimulating final year projects. All faculty supplement their delivery using videos, animations overhead projectors. The faculty keeps up with the latest technologies by publishing in reputed journals and presenting at various national and international conferences. The students are not far behind. The students have made us proud by winning the best project award in National level technical project exhibitions. The EEE Department also holds several guest lectures, seminars and workshops. These provide a platform for the staff and students to share their views and experience among industrialists, fellow researchers, and academicians in the emerging areas of electrical engineering. On employability, graduates of the institute consistently appear as the first choice of employers. Studying EEE will lead to potential careers in the areas of Research & Development (R&D), design, systems analysis, control and manufacturing, quality assurance and testing. The department boasts of having many Assistant Engineers and Assistant Executive Engineers working in the electricity department of both Telangana and Andhra Pradesh governments. Students pursuing master's abroad have made us proud by taking up niche positions in various companies.

Dr. P Ram Kishore Kumar Reddy
HOD Dept. of EEE

STUDENTS DESK

MGIT is a wonderful place for all the students seeking the right career. My college has given me and all my friends a lot of opportunities to get the right job. The staff at MGIT is very supportive and really takes a lot of pain to develop the students. I am thankful to my faculties, staff and management of MGIT for my success

-Sai Sisir

The department is equipped with adequate infrastructure to support academic, research and extra-curricular activities for the all-round development of our students with more than 20 well-qualified, skilled and experienced faculty members. The department frequently organizes workshops, talks and faculty development programs regularly for the benefit of the student and faculty community. The department has an impressive placement track record of the students placed in reputed organizations.

- D. Naveen

TECHNICAL EVENTS

ONE DAY WORK SHOP ON “POWER ELECTRONICS APPLICATIONS IN RENEWABLE ENERGY”

Workshop Content

1. Power Electronics in Renewable Energy
2. Solar Panel Power Electronics
3. Design a Solar Panel Layout for Your Home
4. Power Electronics Convertors Using Solar Pv Systems

Events

1. CERTIFIED CERTIFICATES WITH HOLOGRAM will be provided to you by the end of the workshop which will add value during placements.
2. Special discount for college students to join summer and winter training programs
3. Assured knowledge POWER ELECTRONICS by the end of the workshop



WEBINAR ON RECENT TRENDS IN ELECTRICAL ENGINEERING

OVERVIEW



Career opportunities in electrical engineering remain extremely lucrative even today. Professionals who pursue a career in electrical engineering often study at a top electrical engineering college in Maharashtra. These colleges offer 100% placement assistance through placement drives to help students connect with global companies. So, make sure to analyse your career goals before choosing the right branch of engineering for higher education.

TWO DAYS WORKSHOP "IOT BASED APPLICATIONS IN ENGINEERING"



IN THIS COURSE, STUDENTS HAVE LEARNED TO PRACTICE VARIOUS SKILLS AND CONCEPTS OF INTERNET OF THINGS USING ARDUINO BOARD. IN PARTICULAR, STUDENTS REVISITED AND IMPLEMENTED CONCEPTS FROM INTERNET OF THINGS USING ARDUINO BOARD. THEY ALSO LEARNED APPLICATIONS AND USE CASES OF IOT IN INDUSTRY AND PRACTICED THOSE USING ARDUINO BOARD.

The 2 day workshop was comprised of activities such as using Arduino board, programmatically blinking LED and blinking LED on the user input using button. They also learned the concepts of PIR Sensor which has many practical applications across sectors.

One day event on Technical Paper Presentation



TITLES

- Adaptive Piezoelectric energy harvesting circuit
- Advancements in Inverter Technology for Industrial Applications
- Wireless power theft monitoring
- Artificial intelligence in power station
- Application of micro-controller in vehicle monitoring and security system
- Artificial Neural Networks Based Power System Restoration
- Automated Advanced Distribution System



S.N O:	NAME OF THE FACULTY	PROGRAMM E	TOPIC	PLACE	DATE(S)
01	Dr.P.Ram Kishore Kumar Reddy	Webinar	Future Opportunities In Industrial Robotics & Industry 4.0	IIT Kanpur and IIT Madras	25-07-2019 to 23-10-2019
02	Dr.P.ChandraSekhar	Course	“Basic Electric Circuits”	AGIIT, Bengaluru	16-05-2020
03	Dr.P.Nagasekhar Reddy	Coursera	Electric Power Systems	The State University of New York	12-05-2020
04	N.Madhuri	FDP	Artificial Intelligence & deep learning	Edux Labs	20-04-2020 to 24-04-2020
05	B Narsimha Reddy	Coursera	Linear Circuits 1: DC Analysis	Coursera	30-06-2020
06	P. Veera BhadraKumari	FDP	SCILAB - An Open Source Substitute for MATLAB	JNTUH, Hyderabad	25-05-2020 to 30-05-2020
07	P. Pradyumna	FDP	SCILAB	JNTUH CES, Sultanpur , Sangaredy	25-05-2020 to 30-05-2020

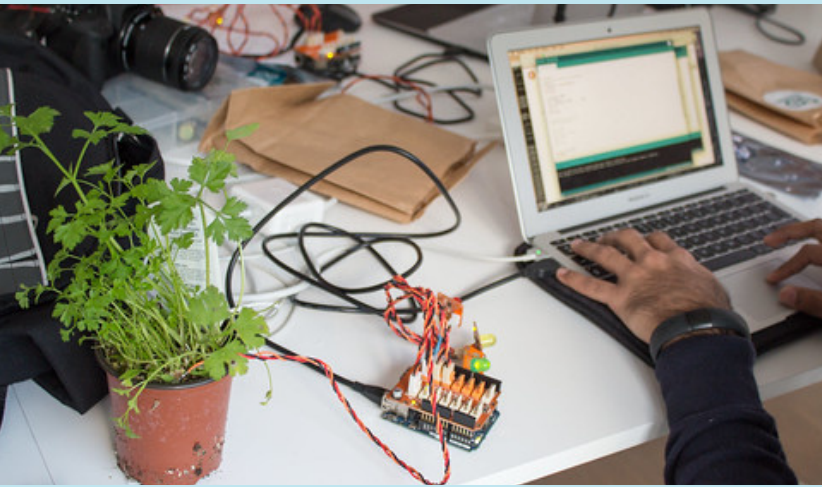
S.NO	NAME OF THE FACULTY	PROGRAME	TOPIC	PLACE	DATE(S)
08	Dr.P.LakshmiSupriya	FDP	“Digital Image Processing using MATLAB”	Skilltohire	24-04-2020 to 27-04-2020
09	M.Nalini Devi	Refresher Courses	Electric vehicles	NPTEL	Feb-march 2020
10	A. Ramchandra Reddy	FDP	“SCILAB”	JNTUHCE S, Sultanpur, Sangareddy	25-05-2020 to 30-05-2020
11	G. Gopal	Coursera	Linear Circuits 1 : DC Analysis	Coursera	22-06-2020
12	S. Abhishek Reddy	Course	Integrated Power Delivery and Management for High-Performance Digital Systems	IEEE	22-04-2020

S.N O:	NAME OF THE FACULTY	PROGRAM ME	TOPIC	PLACE	DATE(S)
13	Ch.Vinay Kumar	FDP	“Develop the Ability to write Research Proposal”	Adarsh group of Institutions , Bengaluru	24-04-2020
14	G.Arun Kumar	Course	“Fundamentals of Electric Drives”	NPTEL, AICTE Swayam	29-09-2019
15	S.Sudha Rani	Refresher Courses	“ Enhancing Soft Skills & Personality “	NPTEL	Feb- April,2020
16	P. Ranjith Krishna	SWAYAM-MOOC	Enhancing Soft Skills and Personality	IIT Kanpur	Feb-Apr 2020
17	Tejaswi Algam	FDP	Introduction to Smart Grid	IIT Madras	Jul-Sep 2019 8 Weeks
18	Swati Paliwal	FDP	Electrical Distribution system analysis	NPTEL	July-Sept 2019.

S.N O:	NAME OF THE FACULTY	PROGRAM ME	TOPIC	PLACE	DATE(S)
19	H.Gurunath	Coursera	“Custom reports in Google Analytics”	Coursera Project Network	16-06-2020
20	Dongari Vamshy	Course	Basic Electrical Circuit	Online	01-07-2019 to 30-08-2019
21	N.SanthoshSingh.B	Seminar	Policies Of Governments, Paradigms Challenges And Opportunities For Sustainable Electrical Power In India	The Institution of Engineers, Hyderabad	19-02-2020 to 20-02-2020
22	Kasaju Bharath Kumar	FDP	Machine Learning and Data Analytics Using Python	IIT ROORKEE	IIT ROORKEE
23	H.Gurunath	Webinar	Online teaching - learning and Online assessment demo	Inpods	28-05-2020

STUDENT ACHIEVEMENTS

TECHVRIDDI (IOT WORKSHOP)



- The workshop content is divided along the lines of following projects and learning outcomes. 1. Concept of Internet of Things (IoT) 1.3 Application of IoT technology , IoT Standards , different requirements for implementation. 2. IoT architecture and challenges in IoT system implementation 3. Hardware, sensors, Embedded Systems

ENERGY SWARAJ



In the past few years, climate change has become a matter of concern. While there are several causes, depletion of natural and non-renewable resources is a primary one. The government, environmentalists and nature lovers are trying to raise awareness among people about protecting the environment and ensuring energy sustainability. Energy Swaraj Yatra is one such effort to alleviate climatic change and educate people about alternative natural resources to ensure energy sustainability.



POTENZIA '20



The event which lights up the entire fest. The master work of students committees accomplished the event prosperously. It flare up the whole college with its hypnotizing events

Tech Quiz

Quiz event conducted on technical concepts . Members from various collages and various branches are participated. Winners are awarded with interesting prizes and certificates



EVENTS

- Tech Quiz
- Pictionary
- Treasure Hunt
- Electrical Contact
- B-Plan
- Poster Presentation

Pictionary

Pictionary event conducted based on finding technical components without speaking out ,it's a team event. Here board and marker are the major components used the team members .This event improves the knowledge of participants regarding technical basics



Electric Cars

Wataru Yamada

Electric cars have been running by the energy stored in the battery. The electric cars have been used since the 19th century. Although electric cars have many advantages, they are expected to be used in the future. It is expected that there will be a lot of possibilities.



Figure 2. Carbon dioxide emissions in each sector of Japan



Figure 3. In-wheel motor

3 Problems
The purchase price of electric cars is significantly higher than gasoline-powered cars. The price of gasoline-powered cars is about 1.5 million yen, while the price of electric cars is about 3.8 million yen. The primary reason of the high cost is battery. The price of battery is about 2.7 million yen, and the cost of replacing depleted battery is one of the biggest considerations that weigh heavily on consumers' minds. The high purchase price is hindering the mass transition from gasoline cars to electric cars, high cost

has prevented the transition to electric vehicles. Electric cars often have less maximum range on charge than cars powered by fossil fuels, and they take considerable time to recharge. Driving most electric vehicles is up to 100km, and this is a quarter of a conventional car's. Making range of electric car was almost the same range as a conventional car weight of the vehicle is increased dramatically but of needing a large battery. Driving range of electric is 100km, which is a quarter of a gasoline-powered car's range.

Figure 4. Li-Ion-ion battery

4 Conclusion
Electric cars have expensive batteries that must be replaced but otherwise need very low maintenance costs, particularly in the case of current lithium-ion design. Although the spread of electric cars needs realisation of low-cost batteries and equipped environment, some researchers have been done to realize these things around the world. Some people trying to buy electric cars because there is a risk of rising gasoline's price. We should make use of electric cars in order to protect the earth.

5 References
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Treasure Hunt

DEFINE YOUR TREASURE HUNT BOUNDARIES. THIS COULD BE YOUR BASEMENT, YOUR COLLEGE, FROM THE GATE TO THE E BLOCK AS WE DID, OR PERHAPS SET THE TREASURE HUNT STAGE WITHIN SHORT DISTANCE FROM THE STARTING POINT. JUST BE SURE TO LET ALL YOUR TREASURE HUNTERS KNOW SO THAT THEY DON'T GET TO FAR OFF COURSE.



Poster Presentation

