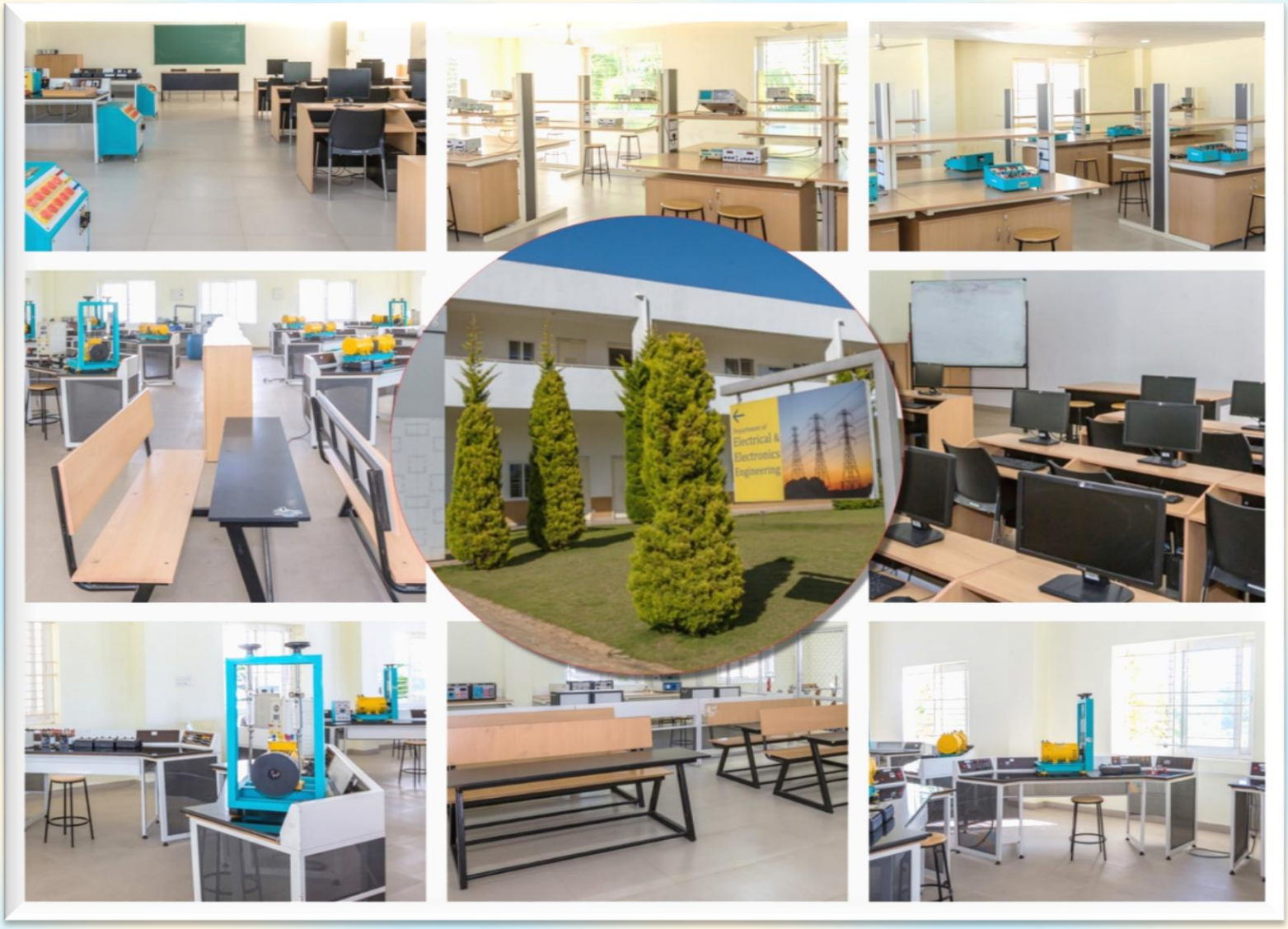
ATME College of Engineering

Department of EEE
Emitting Elite Energy

Volume-8/ Issue-1/Feb 2023

INSPIRE

Electrical and Electronics Bi-Annual News Letter



"If four things are followed – having a great aim, acquiring knowledge, hard work, and perseverance – then anything can be achieved."- Dr. A. P. J. Abdul Kalam

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Dr. Parthasarathy L,
Prof & Head, Dept. of EEE ATMECE, Mysuru

EDITORIAL DESK

This newsletter provides a proper platform to students and faculty to exhibit their creative talents. It is becoming a need to motivate the students community in technical Institutions to be exposed to additional knowledge over and above those in prescribed curriculum in order to provide them an opportunity to professionally mature at faster rate. I congratulate all the students and faculty and who have contributed their valuable creations for publication in this issue. I also take this opportunity to appreciate the strenuous effort made by the editorial to bring out the newsletter. I convey my good wishes to all the readers and wish them a happy and enjoyable reading

CO-EDITOR

Mr. Praveen Kumar M,
Asst. Professor Dept. of EEE,
ATMECE Mysuru

Affiliation

Accreditation

About the Department of EEE

The Department of Electrical & Electronics Engineering believes in imparting holistic education, where the student community is the focal point of the learning process. We offer a motivating environment for knowledge assimilation with a sense of social responsibility and human values. The department Undergraduate Program is Accredited by National Board of Accreditation (for second time up-to 2024-2025) and has well qualified and experienced faculty members with specialization in Power systems, Power Electronics, Energy Systems & Management, Computer Applications in Industrial Drives, Bio-Medical Signal Processing & Instrumentation and VLSI Design & Embedded systems. All the laboratories relevant to the program are established as per Visevesvaraya Technological requirement and the department is highly committed to bring-in the state of art laboratories to provide quality education for present challenging societal and industrial needs. We update and associate with training institutes to ensure that our students gain technical, interpersonal and communication skills.

To prepare our students for Industry-ready, the Department has MoU with Vidyut Automation, Innovaskill Technologies, Xponential orbit shifters, which provide Domain Specific Training in the area of Industrial Automation, Embedded system design, Cyber security in Power systems. This enables the students to exhibit their Technical skills in the the field of Automation, Embedded system design and Cyber security.

Vision of the College

Development of academically excellent, culturally vibrant, socially responsible and globally competent human resources.

Mission of the College

- **To keep pace with advancements in knowledge and make the students competitive and capable at the global level.**
- **To create an environment for the students to acquire the right physical, intellectual, emotional and moral foundations and shine as torch-bearers of tomorrow's society.**
- **To strive to attain ever-higher benchmarks of educational excellence**

Vision of the Department

To create Electrical and Electronics Engineers who excel to be technically competent and fulfill the cultural and social aspirations of the society.

Mission of the Department

- **To provide knowledge to students that builds a strong foundation in the basic principles of electrical engineering, problem solving abilities, analytical skills, soft skills and communication skills for their overall development.**
- **To offer outcome based technical education.**
- **To encourage faculty in training & development and to offer consultancy through research & industry interaction.**

Program Educational Objectives (PEO's)

PEO1: To produce competent and ethical Electrical and Electronics Engineers who will exhibit the necessary technical and managerial skills to perform their duties in society.

PEO2: To make graduates continuously acquire and enhance their technical and socio-economic skills.

PEO3: To aspire graduates on R&D activities leading to offering solutions and excel in various career paths.

PEO4: To produce quality engineers who have the capability to work in teams and contribute to real time projects.

Program Specific Outcomes (PSO's)

PSO1: Apply the concepts of Electrical & Electronics Engineering to evaluate the performance of power systems and also to control industrial drives using power electronics.

PSO2: Demonstrate the concepts of process control for Industrial Automation, design models for environmental and social concerns and also exhibit continuous self- learning.

Short Term Goals:

- Leveraging technology for Teaching & Learning Process: Video based Learning, NPTEL & MOOCS.
- Professional Body Activities- ISTE, IEI, IEEE
- Endeavour to obtain sponsors for Workshops and FDPs.
- Encourage the Faculty members to publish papers in reputed International Journals and Conferences.

Long Term Goals:

- To achieve recognition of excellence in undergraduate education in the fields of Electrical & Electronics Engineering.
- To achieve distinguished academic results.
- To participate in the project sponsored by NGO's, State & Central government bodies.
- Work in close cooperation with industry and professional bodies.

Contents

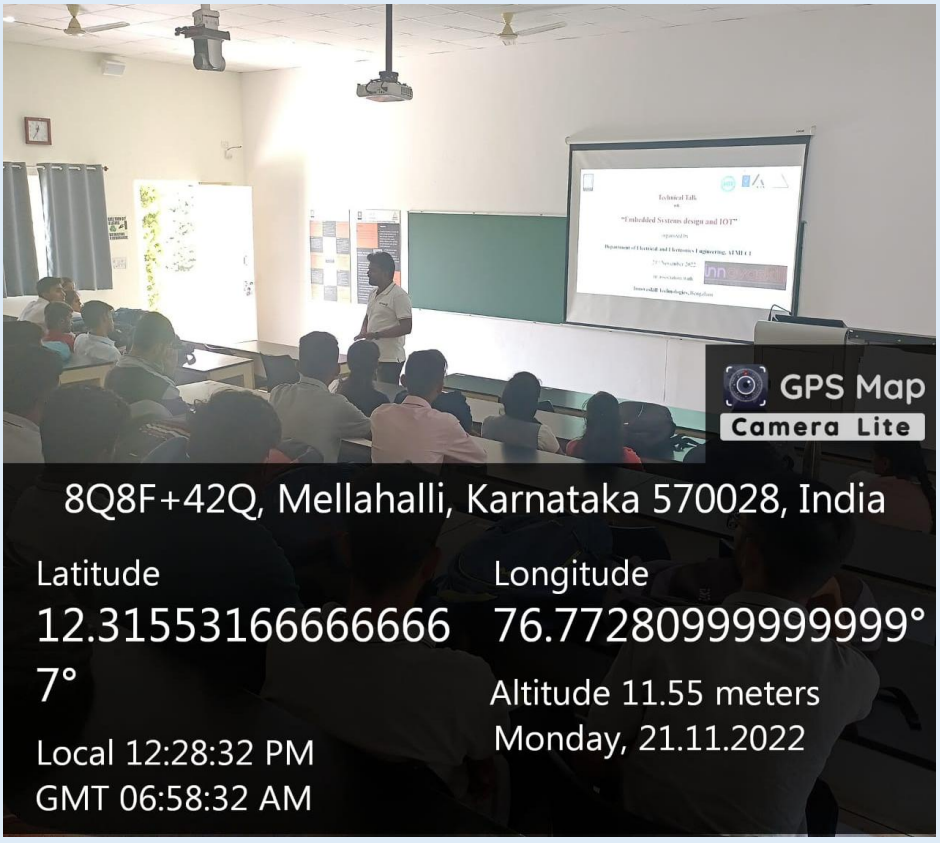
KEY MILESTONES

- Ms. Safeena Shazia Secured **8th Rank** in University with an average score of 84.55%
- **NAAC A+** grade Accreditation in the first cycle.
- **National Board of Accreditation** (Term-1: 2019-2022; Term-2: 2022-2025)
- **AICTE-MODROB Funding** for Cybersecurity in Power Systems
- **Best Student Project** under Karnataka State Council for Science and Technology(KSCST) for 3 Consecutive Years
- Financial Assistance for student Projects by VTU and KSCST.
- Results are 98% and above in all the Six Batches
- **Inter Institute Project Winners**, Toycathon semifinalists, IIC-MHRD proposal, IICDC-DST participation etc.
- University level sports representation with **gold medal**.
- **Average Placement**: 70 % and above (Last 3 Years)
- **Our Alumni are entrepreneurs** owning companies like FLARE LED, Madhu Electricals, Eagle Electricals, Manswi Infotech, nclues etc
- Alumni are working in premier MNCs like **Oracle, IBM, Infosys, L&T, SIEMENS, JP Morgan** etc and in government sector as Junior Engineers.

Department Activities

Technical talk on 'Embedded System design & IoT'

Department of Electrical and Electronics conducted a technical talk on "Embedded System design & IoT" on 21/11/2022. Resource person Mr. Subash A. Sr. Automation Engineer, Innovaskill Technologies Private Technologies, Bangalore, addressed final year students regarding importance of IoT Embedded System in any industries for today's world. Mr. Subash A. having rich experience in industrial automation delivered lecture on History of IoT, embedded system in IoT, Types of IoT embedded systems, difference between IoT and embedded systems, The significance of embedded systems in IoT, Examples of non-IoT embedded system devices, The role of embedded system in IoT, IoT computing devices, popular types of IoT embedded system devices such as POS terminals, Vending machines, Ticket scanners, Hardware for an IoT embedded system, Software for an IoT embedded system, Advantages of using Android for an embedded system for IoT, Installation , configure, The Students were able to know Basic & advance knowledge of Embedded system design using IOT, He talked about the rising needs of the IoT Embedded System industries and the skills required for IoT Embedded System career, Around 50 students of VII Semester from our department attended this technical talk along with faculty members.



Snapshot of Technical talk on 'Embedded System design & IoT', Resource Person Mr. Subash A. during the session with students

Technical talk on ‘Electrical Switchgear & Applications’

Department of Electrical and Electronics conducted a technical talk on “Electrical Switchgear & Applications” on 04/01/2023. Resource person Mr. Shivanand. Managing Director, dbson Universal Power Controls, Tumkur, addressed final year students regarding importance of Contactors & control gears, Protective Relays, Breakers, Protective Instruments, components of Switchgears & their Applications, Cables Accessories, Applications Automation & Installations, Ingress Protection, Selection of Wires, cables, Variable Frequency Drive, DOL Starter, Forward Reverse Starter, Slipring Starter, Fully automatic star-delta starter, DG Interlocking, corrections of power factor, Reactive Maintenance, Preventive Maintenance, Predictive Maintenance, Thermo Graphic Analysis. Around 50 students of VII Semester from department attended this technical talk along with faculty members.

Snapshot of Technical talk on ‘Electrical Switchgear & Applications’, Resource Person Mr. Shivanand. during the session with students

Technical Talk on "Awareness Session on Cybersecurity"

The Department of Electrical and Electronics Engineering, ATME College of Engineering, Mysuru organized a Technical Talk on **Awareness Session on Cybersecurity** for Third Semester students of the institution on 19.01.2023 on campus premises.

Mr. Derick Jose, Co-Founder & Chief Product Officer, Flutura Decision Sciences & Analytics, Houston Texas Area was the resource person. **Mr.Saravanan Sundaramurthy**, CEO and Founder, Xorbit Shifters, Bengaluru was the guest of honour.

Program Coordinator, Dr. Parthasarathy L, Professor and HoD, Department of Electrical and Electronics Engineering spoke on the need for cybersecurity. He said the institution has been funded by AICTE-MODROB To Set Up Cybersecurity In The Power Systems Lab. He further gave insight on the internship opportunity for students which is jointly set up in consultation with Xorbit Shifters, Bengaluru, and IISC, Bengaluru.

Resource Person, Mr. Derick Jose, started the session by giving insight on Stuxnet, which targets supervisory control and data acquisition systems and is believed to be responsible for causing substantial damage to Iran's nuclear program. He spoke about the Saudi Aramcyber-attack where the malware was used to target the Saudi government by causing destruction to the state-owned national oil company Saudi Aramco. He gave examples of how Chinese hackers target the Indian power grid. Further, the union government had announced spending 515 crores on cybersecurity. He explained about Spot which is an agile mobile robot that navigates the terrain with unprecedented mobility, allowing it to automate routine inspection tasks and data capture safely, accurately, and frequently. Further, he explained about BlackEnergy which is a malware toolkit that has been used by both criminal and APT actors.

He gave insights about InfraGard, to prevent hostile acts against the U.S. Computer Emergency Response Team(CERT), which is the national nodal agency for responding to computer security incidents as and when they occur. He spoke in detail about the Cybersecurity strategies i.e Grid Attack detection, Grid attack Prevention, Grid Incident response, Grid Threat modeling,
He concluded the session by speaking about the 7 S of Physical forensic investigation, AI for Grid cybersecurity, Thermal AI pipelines, Drone AI, Grid vectors, snort attack detection, and potential opportunities for students. Post session questionnaire was held where faculty and students interacted with the resource person

Pic: A section of the audience during the session

Domain Specific Technical Training on “Industrial Automation”

The hands-on training on Industrial Automation Level-1 for 28 students of V semester was provided for a period of a 7 weeks in premises of Department of Electrical & Electronics Engineering, ATMECE, Academic Year: 2022-23. Domain Specific Training was conducted by Mr. Shashikiran M, Managing Director, Vidyut Automation, Mysuru using their own training modules/accessories.

Pic: DST Technical Training Conduction, Resource Person Mr. Shashikiran M during the session with students

National Assessment and Accreditation Council (NAAC)

National Assessment and Accreditation Council (NAAC) Expert Committee member visited ATME College of Engineering on 8th and 9th November 2022. The NAAC Expert Committee member conducts assessment and accreditation of Higher Educational Institutions (HEI) such as colleges, universities or other recognised institutions to derive an understanding of the 'Quality Status' of the institution. ATME College of Engineering accredited by NAAC with A+ Grade and is the First Engineering college in Mysore region to get NAAC A+ grade Accreditation in the first cycle

Pic: NAAC Expert Committee member Prof. R P Maheshwari visit to Project Lab of EEE Dept.

Pic: Prof. R P Maheshwari interacting with students during Project demonstration

Social Outreach Activities

III Semester Students of Department of Electrical & Electronics Engineering visited to Chennakeshava Temple, Somanathapura, Karnataka on 28-12-2022, The visit was intended to Provide a formal platform for students to communicate and connect with their surroundings, enable to create of a responsible connection with society

Pic: A Group photo of III Semester Students Heritage Chennakeshava Temple.

Also in connection with Social Connect and Responsibility, field visits were arranged for 3rd Sem Students on wet waste management and Water Conservation which enable the student to do a deep drive into societal challenges, sustainability and enable to build solutions to alleviate these complex social problems through immersion, design & technology.

Students were explained on Water Conservation, design, technology and its implementation in the campus.

Social Outreach Activities

Students were explained on wet waste management, design, technology and implementation in the campus.

Big Tech Show 5K Walkathon 'Beyond Bengaluru'

V Semester Students of Department of Electrical & Electronics Engineering participated in Walkathon organised by the Karnataka Digital Economy Mission (KDEM) on 20-10-2022 at Mysuru Palace, The Big Tech Show Walkathon 'Beyond Bengaluru' was aimed at enhancing growth in the IT/ITeS, Business Processing Outsourcing (BPO), Electronic System Design Manufacturing (ESDM) and telecom sector industries located in emerging technology clusters in Tier II & III cities across the State.

The team comprised of Faeza Taskeen, Shashikala K S, Lavanya G K, Pavan Kumar S, Ponnanna C P, Nikhil H N from 5th Sem of Department of Electrical & Electronics Engineering

Pic: Group Photo of 5th Semester students at Big Tech Show 5K Walkathon 2022.

Social Outreach Activities

Bangalore Tech Summit 2022 Exhibition visit

V Semester Students of Department of Electrical & Electronics Engineering visited to Bangalore Technology Summit 2022 Exhibition held on 17-November-2022 at Bangalore Palace.

The 25th edition of Bengaluru Technology Summit, the three-day annual tech exposition hosted by the Karnataka government, the event organized by the department of IT/BT in association with Software Technology Parks of India (STPI).

The team comprised of Omkar BN, Ashith S Gowda, Arun V, Raehan Ahmed, MD Rayyan Shariff from 5th Sem of Department of Electrical & Electronics Engineering

Pic: Group Photo of 5th Semester students at BTS 2022.

About The Bengaluru Tech Summit is a major tech event in India and Asia, promoting international discussions in areas like FinTech, EdTech, Semiconductors, and Biotechnology. Experts share insights on technological advancements and businesses make cross-linkages for growth in IT and BT. Better industry-academia connect, at the event world's leading companies in Information Technology, Electronics & Semiconductors, AVGC, Biotechnology and Deep-Tech impacting many industry verticals may it be Education, Healthcare, Agriculture, Mobility, Logistics, Finance, Telecom and Manufacturing or for that matter governance. presented and unveiling some of the world's most advanced devices and solutions.

Student Achievements

Academic Toppers

<table>
<tr><th colspan="2">III Semester</th></tr>
<tr>
<td> 
VAISHNAV TA - 4AD21EE020
SGPA-9.67</td>
<td> 
ANJANA CV- 4AD21EE001
SGPA-9.06</td>
</tr>
<tr><th colspan="2">V Semester</th></tr>
<tr>
<td> 
AATHIQA FATHIMA KHANUM 4AD20EE001
SGPA- 9.16</td>
<td> 
KARTHIK R - 4AD20EE009
SGPA- 9.12</td>
</tr>
<tr><th colspan="2">VII Semester</th></tr>
<tr>
<td> 
KAVYA G - 4AD19EE007,
SGPA- 9.4</td>
<td> 
MEGHANA N- 4AD19EE008,
SGPA-9.4</td>
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Faculty Publications and Achievements

- Dr. Shakunthala C, et al "Vehicle Health Monitoring System With IOT Applications" Article published in International Journal of Creative Research Thoughts, Volume 10 | Issue 9 | September 2022, Pp: a857-a867

- M Praveen Kumar, et al "Evaluation of strong microwave absorption property of PVB-PEDOT:PSS-Ti3C2Tx MXene nanocomposite with materials data-driven discovery", Article published in Journal: Transactions on Electrical and Electronic Materials, Publisher: Springer Nature, 08 May 2023, Volume 24, Issue 3, Pages: 235–241, DOI:10.1007/s42341-023-00439-7

- M Praveen Kumar, et al "X-band dielectric characterization and Microwave absorption characteristics of polyaniline loaded poly vinyl butyral (PVB)", Article Published in Journal: Transactions on Electrical and Electronic Materials, Publisher: Springer Nature, DOI:10.1007/s42341-022-00415-7, SEP-2022.

- M Praveen Kumar, et al. "Supercritical fluid synthesized Cu2ZnSnS4-Polyaniline nanocomposites for supercapacitor application", Article Published in Journal: Ceramics International, Publisher: Elsevier, ISSN 0272-8842, DOI:10.1016/j.ceramint.2022.08.104, August 2022

- Shreeshayana R, et al, Ergonomic Automated Dry and Wet Waste Segregation and Compost Production for Innovative Waste Management", IEEE 3rd Global Conference for Advancement in Technology(GCAT)-Oct 2022. DOI: 10.1109/GCAT55367.2022.9972230

- Shreeshayana R, et al, IOT based innovative smart monitoring of aquaponics system using Atmega 328P and ESP 8266, Sep 2022 IEEE 3rd Global Conference for Advancement in Technology (GCAT), 1-6, DOI: 10.1109/GCAT55367.2022.9972203

Research and Consultancy

Memorandum of Understanding (MOU) With Xponential orbit Shifters(XORBISS), Bengaluru

ATME College of Engineering, Mysuru and Xponential orbit Shifters(XORBISS), Bengaluru, signed a Memorandum of Understanding (MOU) on 19th January 2023

The objective of MoU is to make students competent enough to take on real time application work in the field of cybersecurity in power systems, this is intended to support students for good and greater job opportunities and also to reduce the gap between Industries and Engineering Institution

The institution has been funded by AICTE-MODROB to Set Up Cybersecurity in The Power Systems Lab.

From Left: **Mrs. Shakunthala C**, Associate Professor, Dr. Yathisha L, Dean-Student Affairs, **Dr. Parthasarathy L**, Head, Department of EEE, **Dr. L Basavaraj**, Principal, ATME College of Engineering, **Mr. Saravanan Sundaramurthy,** CEO and Founder, Xponential orbit Shifters(XORBISS), **Mr. Shreeshayana R**, Assistant Professor Department of EEE.

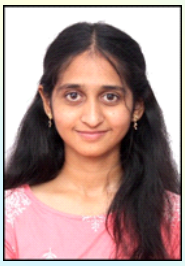
Training and Placement

Placement training plays a major role in shaping up the career goals of students. The Training Division of the ATMECE Placement Cell offers training with a vision to cater to the requirement of industries. Training etiquette like Business English, Personality Development, logical & verbal analysing ability, Group Discussion, Resume writing etc are expected from graduates. Keeping this key aspect into consideration, it is realized that training is important to create an exposure, enhance skillset, build confidence amongst engineering students to enhance their employability and achieve good placement in various Industries. Business English is currently covered in the Ist Year of the Program as part of the curriculum. Remaining etiquette are offered through Training vendors and In-House Trainers.

Training Type	Description	Semester	Vendor/ Training Institute	Training Period
Aptitude Verbal & Reasoning-II Training (AVR-II)	In-House AVR Training is offered to address aptitude test failures and train students on analytical, logical, verbal, and critical reasoning	V Semester	In House Faculty Members	Full semester
Pre-Placement Training	Pre–Placement Training is offered to students covering all etiquette before the students formally enter the placement recruitment process.	VII Semester	Genesis	6/10/2023 to 19/10/2023
Soft skills Training	(Group Discussion, Resume writing, Personality skills, Mock Interview)	III Semester	Genesis	20/02/2023 to 3/03/2023
Domain Specific Training	Industrial Automation Level-1	V semester	Vidyut Automation, Mysuru	10-12-2022 to 27-01-2023 Full semester (45 hours hands-on training program)

News Letter Student Editorial Committee

Ms. Kavya G
VII Sem, EEE
Student editor



Ms. Fathima Sadaf
III Sem, EEE
Student Co-editor

Link to Virtual Campus Tour : *http://surl.li/aoowi*

"Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning"- Albert Einstein