AMET
ACADEMY OF MARITIME EDUCATION AND TRAINING
DEEMED TO BE UNIVERSITY
(Under Section 3 of UGC Act 1956)

ELECTRO MARINE

NEWSLETTER

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

January 2019 – June 2019

ABOUT THE UNIVERSITY

AMET is India's first Deemed to be University in Maritime Education which is ranked as 3rd among Maritime Universities of the World in the PIMET (Performance Indicators in Maritime Education and Training) Ranking of International Association of Maritime Universities (IAMU). Established during 1993, AMET's uncompromising strides of excellence in the field of maritime education and training laced with its capacity to feed the global shipping industry with an unrivalled maritime human resource secured it to have many national and international recognitions, accreditations and rankings such as NAAC, NIRF, ARIIA, DGS-CIP, PIMET etc.

AMET serves as an ocean of knowledge for over 4000 students pursuing Programmes ranging from diploma to Doctoral programs through 9 schools and 23 intensive research and training centers for marine and marine related activities. Equipped with an excellent infrastructure for research and development, co-curricular and extracurricular activities AMET secured its compliance certificate for ISO 9001:2015 QMS standards from the prestigious and globally renowned DET NORSKE VERITAS, Norway.

For over two decades AMET is remaining as the favourite destination for campus interviews by many shipping giants such as AP MOLLER MAERSK, GOODWOOD, NYK, SONANGOL, VSHIPS, WALLEMS, SHELL, CHEVRON, STENA and so goes a list of over 100 companies. Besides positions onboard, AMET Business school graduates have secured lucrative jobs in commercial shipping sectors such as chartering and ship broking. Never the less, Naval architecture, petroleum engineering, harbor engineering, marine electrical and electronics engineering graduates have successfully walked away from AMET with jobs offering sumptuous packages along with an opportunity to grow and glow in their career swiftly. Needless to say about the entrepreneurship development activities nurtured into AMET'ians has been found rewarding by students who are chief executive officers of their own organization.

VISION AND MISION OF THE UNIVERSITY

VISION

To sustain identity as a World Class Leader in Maritime Education and empower learners with wholesome knowledge through progressive innovation in training, research and development which will render students a unique learning experience and a transformation impact on the Global Society.

MISSION

AMET will strive continuously to

- Impart value-based higher education and technical knowledge with uncompromising strides of an outstanding quality.
- Emerge as a Centre of Excellenceinculcating skill development in recent technologies in accordance with industrial trends.
- Create World class research capabilities on par with the finest in the world and broaden student’s horizons beyond classroom education.
- Nurture talent and entrepreneurship to enable all round personality development among students.
- Empower studentsacross socio economic strata
- Make a positive difference to society through technical education.

ABOUT THE DEPARTMENT

The Department of Electrical and Electronics Engineering is constituted and administered to provide a professional atmosphere for scholars, students, educators and engineers to enrich the discipline of Electrical, Electronics and Marine Engineering. The Department offers a well-balanced undergraduate Electrical and Electronics Engineering -Marine program and postgraduate M-E (Power Systems) program and PhD- Electrical and Electronics Engineering program of technological and scientific study designed to serve the professional needs of the baccalaureate.

The Department gives opportunity to learn marine related courses for the students and pursue studies related to the scientific concepts, technological advancements and design principles of Electrical and Electronics Engineering pertaining to Onshore and Offshore applications as well. This programme is designed to enable the Engineers coming out of the stream to work on board the ship as Electrical Engineers. Jobs with shipyards, dry docks, ship machinery manufacturers are some of the other fields they can look into.

ESTABLISHMENT:

Department of Electrical and Electronics Engineering is established in the year 2008 with the objective of imparting quality education of international standards and to produce highly innovative Marine Electrical and Electronics Engineers capable of solving global maritime challenges. Since its inception in the year 2008, the Department has grown steadily and acquired the present shape with excellent infrastructure, modern equipment for the laboratories and qualified and dedicated faculty to impart sound technical knowledge to the enthusiastic student community. As on date, the Department has successfully produced four batches of talented graduates who are serving in prestigious shipping industries and organizations.

The Department offers 4 years U.G program in EEE-Marine, PG program in M-E (Power Systems) and PhD in interdisciplinary Engineering domains. The Department is headed by Dr.T. Sasilatha, Professor and Dean and supported by a team of well qualified, experienced and dedicated faculties. The Specialization of staff members span around major areas in Electrical and Electronics Engineering including Marine Automation, Power Systems, Electronic

Navigation Systems, Offshore Energy Systems, Electrical machines, Energy studies, Control Systems, Power Electronics, Applied Electronics, Embedded Systems, Electrical Drives and VLSI Design.

PROGRAMS OFFERED:

- B.E - Electrical and Electronics Engineering-Marine – 4 Years
- M.E - Power Systems – 2 Years
- Ph.D – Electrical and Electronics Engineering, Interdisciplinary Domains (Full time and Part time)

VISION AND MISSION OF THE DEPARTMENT

VISION

To emerge as a Centre for higher learning and research through development of highly competent, innovative and world class Marine Electrical and Electronics Engineers while remaining sensitive to ethical, societal and environmental issues.

MISSION

- To impart quality education in order to produce highly innovative, socio- economically conscious Marine Electrical and Electronics Engineers.
- To provide knowledge and skills, that is essential to meet the local and global demands in Marine Electrical and Electronics Engineering.
- To upgrade student's technical knowledge through industry interaction activities.
- To foster strong ethics, positive attitude and transform the Department into Centre of Excellence by promoting world class research and development to meet the challenging needs of society.
- To motivate and guide students for developing entrepreneurship or pursue higher education and train them for overall personality development.

B.E. ELECTRICAL AND ELECTRONICS ENGINEERING - MARINE

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Bachelor of Electrical and Electronics Engineering - Marineprogram is designed to prepare the graduates will,

PEO1:

Have a successful career in Marine or other related Electrical and Electronics Engineering fields or pursue higher education and research in multidisciplinary area.

PEO2:

Apply Engineering fundamentals, technical knowledge, skills and modern tools to solve real world Electrical Engineering problems in Maritime industries.

PEO3:

Adapt to any environment and practice the ethics of their profession, consistent with a sense of social responsibility.

PEO4:

Exhibit the skills by updating the breadth of knowledge in the life-long learning process to meet the global challenges.

PROGRAM OUTCOMES (POs):

A graduate of the Electrical and Electronics Engineering - Marine Program will,

PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs):

PSO1:

Apply the knowledge of Electrical Engineering, investigate and solve the complex Marine Electrical Engineering problems to meet the specified needs with appropriate considerations for the society.

PSO2:

Develop solutions for complex Engineering problems in the broad field of power electronics and drives, power systems, high voltage Engineering and Marine Engineering and control.

PSO3:

Analyze, design and integrate Electrical systems in on board ships and apply modern tools and techniques in marine industries and create passion for life-long learning and research in advanced fields.

M-E (POWER SYSTEMS)

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Master of Engineering in Power Systems program is designed to prepare the graduates will,

PEO1: Have a successful career and carryout innovative research in power system Engineering and its related disciplines.

PEO2: Provide optimum solutions to the challenging problems in power and energy sectors with ethical values and social responsibility.

PEO3: Demonstrate life-long independent and reflective learning skills in their career.

PEO4: Exhibit project management skills and ability to work in collaborative, multidisciplinary tasks in their profession.

PROGRAM OUTCOMES (POs)

Master of Technology in Power Systems program is designed to prepare the graduates will have,

PO1: An ability to independently carry out research/investigation and development work to solve practical problems.

PO2: An ability to write and present a substantial technical report /document.

PO3: An ability to apply advanced concepts of Electrical Power Engineering to analyse, design and develop Electrical systems to put forward power systems Engineering solutions globally.

PO4: Ability to use advanced techniques, skills and modern scientific and Engineering tools for professional practice in power systems.

PO5: Ability to communicate effectively at all levels of projects and its management and demonstrate leadership qualities in a multidisciplinary scientific research team.

PO6: An ability to engage in independent, reflective, and lifelong learning for the benefits of society.

Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model

- Dr.A.P.J. Abdul Kalam

DEAN'S MESSAGE

The Department newsletter is one the wonderful presentation of the Department regarding the achievements and participations of the faculty and the students. The Newsletter gives all the details of the activities undergone in the Department during the period from January 2019 – June 2019. I appreciate the faculty, students and supporting staff for their tireless efforts and contributions to the various activities held in the Department.

CONTENTS

DEPARTMENT ACTIVITIES

NATIONAL SEMINAR

Then department organized one day National Seminar on Hybrid and Electric Hybrid Vehicle, on 30.03.2019

WORKSHOPS ORGANIZED IN THE DEPARTMENT

The department regularly organizes national workshop for the students and faculty members to expose them to emerging areas.

S.No	Date	Resource person	Name of the Events	Organization
1	28.01.2019	Dr. S. Baskar, Professor& Dean, Thiagarajar Engineering College, Madurai	Workshop on 'Outcome based Education' for NBA Accreditation Process	AMET
2	29.01.2019	IE Solution,Chennai	Workshop on Hands-on Training on Printed Circuit Board Design	AMET
3	30.1.2019 & 31.1.2019	Mr. V. P. Boopathi, Senior support engineer, Powersys Solution	Workshop on Simulation of Power System Transients in modern grids	AMET
4	22.02.2019 & 23.2.2019	Mr.SankalpMate Cyber Security Analyst, Pristine Info Solutions Pvt Ltd	Workshop on Ethical Hacking and Cyber Security	AMET
5	09.03.2019	Dr.S.Baskar Professor, Thiagarajar Engineering College, Madurai	Workshop on 'Implementation of Outcome-Based Education'	AMET
6	22.3.2019	Mr. E. Murugan Engineer & Project Development Signals & Systems (India) Pvt. Ltd	Workshop on Machine Learning using Python	AMET
7	30.03.2019	Mr. Venugopal Parvataneni Senior General Manager (R & D), Brakes India Pvt. Ltd, Chennai.	National Seminar on Electric and Hybrid Electric Vehicles	AMET
8	08.04.2019	Dr. R. Velraj Director & Professor, Institute for Energy Studies Anna University	Renewable Energy Sources and Solar Energy Storage System	AMET

Workshop on Outcome based Education for NBA Accreditation Process conducted on 28.01.2019

Two Days National Workshop on Simulation of Power System Transients in Modern Grids in Association with Powersys Solution on 30.01.2019 & 31.01.2019

Workshop on Implementation of Outcome Based Education on 9.02.2019.

Two Days National Workshop on Ethical Hacking and Cyber Security in Association with Pristine InfoSolutions Pvt, Ltd., Mumbai on 22.02.2019 & 23.02.2019

One Day Workshop on Machine Learning Using Python in Association with Signals & Systems India Pvt. Ltd on 22.3.2019

One Day Workshop on Renewable Energy Sources and Solar Energy Storage Systems in Association with Ensun Energy Systems Pvt. Ltd on 08.4.2019

PROFESSIONAL SOCIETY ACTIVITIES

The Department of EEE has two professional chapters namely Institution of Engineers of India (IEI) and Institute of Electrical and Electronics Engineers (IEEE). Many activities are conducted under these professional chapters.

EVENTS ORGANIZED UNDER PROFESSIONAL SOCIETIES

Date	Event and Title	Resource Person
28.1.2019	One day workshop on Outcome Based Education for NBA Accreditation Process'	Dr. S. Baskar, Professor, Thiagarajan Engineering College, Madurai
29.1.2019	One day workshop On Hands-on Training on Printed Circuit Board Design	Mr. Sundar Support Engineer IE Solutions PvtLtd
30.1.2019 & 31.1.2019	Two-day workshop On Simulation of Power System Transients in modern grids	Mr. V.P. Boopathi Senior Support Engineer, Powersys, Chennai
22.2.2019 & 23.2.2019	Two-day workshop on Ethical Hacking and Cyber Security	Mr. Sankalp Mate Cyber Security Analyst Pristine Info Solutions, Mumbai
09.03.2019	One day workshop on Implementation of Outcome Based Education	Dr. S. Baskar, Professor, Thiagarajan Engineering College, Madurai
22.03.2019	One day workshop on Machine Learning using Python'	Mr. E. Murugan Engineer & Project Development Signals & Systems (India) Pvt Ltd
30.03.2019	One Day National Seminar on Electric and Hybrid Electric Vehicle	Mr. Venugopal Parvataneni Senior General Manager, R & D, Brakes India Pvt Ltd,Chennai Mr. B.Balaji General Manager (Rtd), Ashok Leyland, Chennai Mr. S.A. Sundaresan Vice- President EV and E- Mobility Solutions, Ashok Leyland, Chennai Mr. Krishna Srinivas Senior Vice President, Corporate Technology Centre Tube Investments of India Ltd, Chennai

RESEARCH AND DEVELOPMENT ACTIVITIES

SEED MONEY PROJECTS SANCTIONED BY AMET

S. No	Name of the Faculty	Title of the Project	Duration (Months)	Amount Sanctioned by AMET
1	Dr. T. Sasilatha	High Resolution Image in Marine Exploration using Neural Networks	6	1,80,000/-
2	Dr. V. Karthikeyan	Cogeneration of Electrical Energy from the Waste Heat produced by The process industry	6	1,10,000/-
3	Dr. T. Baldwin Immanuel	Design and development of security system for fishermen crossing frontier enhanced suing Android applications	6	1,60,000/-
4	Mr. C. Gnanavel	Design and Development of Neuropathy Analyzer for Biomedical applications	6	1,10,000/-
5	Dr. M. Deva Brinda	Efficient Solar powered IOT based buoy for monitoring sea	6	40,000/-
6	Mrs. R. Elavarasi	Integrated power systems in shipboard incorporating frequency converter	6	40,000/-
7	Dr. D. Lakshmi	Development of Hybrid Inverters of Capacity up to 200 VA	6	40,000/-
8	Dr. G. Themozhi	A Smart marine environment monitoring using IOT	6	15,000/-
9	Mr. S. Janarthanan	Torque Enhancement in induction motor using intelligent control in Modular Multilevel inverter	6	40,000/-

DETAILS OF CONSULTANCY PROJECTS

S. No	Faculty Incharge	Title of Consultancy Work	Client/ Organization / Company	Duration	Amount (in Rs.)	Year
1	Dr. T. Sasilatha	Role of AI based plant stress identification in agricultural industry	Electronics Platform Research Labs, Chennai.	6 Months	60,000	2019
2	Dr. T. Sasilatha	Soil texture analysis for prediction of suitable Crop Yield using Machine Learning	Labtech Electronics Pvt. Ltd., Chennai.	6 Months	70,000	2019
3	Dr. V. Karthikeyan	Battery Operated Vehicle for Cleaning Solar Module	Electronics Platform Research Labs, Chennai.	6 Months	60,000	2019
4	Dr. M. Deva Brinda	Hardware and software implementation of three phase power quality analyzer	Vi Micro Systems Pvt. Limited, Chennai.	6 Months	50,000	2019
5	Dr. G. Themozhi	Prototyping a Smart Intelligent Robot for Surveillance Using IoT	Electronics Platform Research Labs, Chennai.	6 Months	40,000	2019
6	Dr. G. Themozhi	Energy Management for the Industrial Equipment	Sarada Technologies, Chennai.	3 Months	35,000	2019
7	Dr.T. BaldwinImmanuel	Design of smart lock system for doors with special features using wi fi technology	New Bee Technologies, Chennai.	9 months	48,500	2019
8	Dr. D. Lakshmi	Development of battery charging station for EHV vehicles using commercial applications	Tech power solutions, Chennai.	6 months	40,000	2019

DETAILS OF BOOKS PUBLISHED

Name of the Book/chapter	Author Details	Details of Publications	Year
Load Frequency Control in Deregulated Power System (Book Chapter). Title of the Book: Holistic Research Perspectives	Dr. D. Lakshmi	Bonfring.org ISSN: 2394-9759	2019
Control Techniques for Improving Quality of Power-A Review (Book Chapter). Title of the Book: Holistic Research Perspectives	Dr. D. Lakshmi	Bonfring.org ISSN: 2394-9759	2019

DETAILS OF ARTICLES PUBLISHED IN JOURNALS

1. **Dr. T. Baldwin Immanuel** ”Energy Efficient Light Monitoring and Control Architecture Using Embedded System” International Journal of Recent Technology and Engineering (IJRTE),Volume-7, Issue-5S2, ISSN: 2277-3878 Jan. 2019
2. **Dr. S. V. Saravanan**”Miniaturization Using Shorting Posts in C-Shaped and H-Shaped Micro Strip Patch Antennas for GPS Applications”,International Journal of Recent Technology and Engineering (IJRTE),Volume-7, Issue-5S2, ISSN: 2277-3878.Jan. 2019
3. **G.Jegadeeswari**,”Performance Analysis of Power Quality Improvement Using Shunt Active Power Filter”,International Journal of Recent Technology and Engineering (IJRTE),Volume-7, Issue-5S2, ISSN: 2277-3878,Jan. 2019
4. **G. Jegadeeswari**”Implementation of Buck-Boost Chopper Type AC Voltage Regulator Universal Reviews (UR)”,Volume-8, Issue-1, ISSN: 2277-2723,Jan. 2019
5. **Dr. V. Karthikeyan**”A Simplified Optimal THD Modulation Algorithm for Multi-Level Inverter with Reduced Components”, International Journal of Recent Technology and Engineering (IJRTE),Volume-7, Issue-5S2, ISSN: 2277-3878,Jan. 2019

INTERNATIONAL/ NATIONAL CONFERENCE PUBLICATIONS

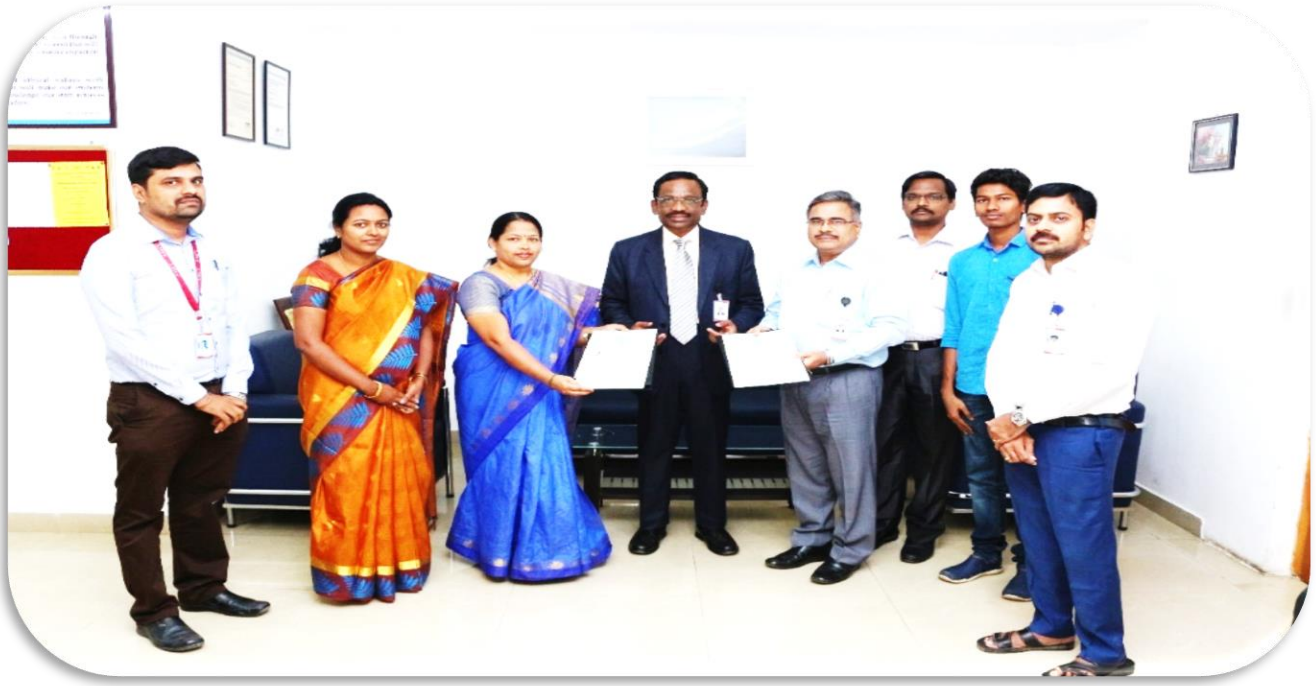
1. **G.Jegadeeswari**"Design of Space Vector PWM Inverter for Induction Motor Drive Application Using PID Controller" International Conference on Intelligence in Computation, Communication and Robotics (ICICCR 2019) Proceedings of ICICCR 2019,Feb. 2019
2. **G. Jegadeeswari**" Analysis of Dissolved Gases in Transformer Oil Using Wireless Data Acquisition 2nd National Conference on Cutting Edge Innovations in Engineering and Technology"CEIET Proceedings of CEIET 2019, Mar. 2019
3. **G. Jegadeeswari** "A Review of Power Quality Performance Analysis Using Shunt Active Power Filter", International Conference on Sustainability Management of Advanced Renewable energy Technologies ISBN: 978-93-5361-004-3,Apr. 2019

VALUE ADDED COURSES OFFERED

S.No	Value Added Training Program	Company
1	Latest Technology on Raspberry Pi with IoT using Python	Signals & Systems (India) Pvt. Ltd, Chennai
2	Electrical Machines and Control	TVS Training & Services Limited, Chennai
3	Solar Based Renewable Energy Technology	Labtech Electronics Pvt Ltd, Chennai

INSTITUTE-INDUSTRY INTERACTION

To strengthen interaction with industries and to keep the students updated with the latest trends in core industries, the Department had entered into an agreement with companies and organizations. Industry interactions helps the students to acquire the required practical knowledge.



MoU signed between the Department of EEE and LabTech Pvt Ltd on 9.01.2019

MoU signed between the Department of EEE and Signals and Systems (India) Pvt. Ltd on 10.01.2019

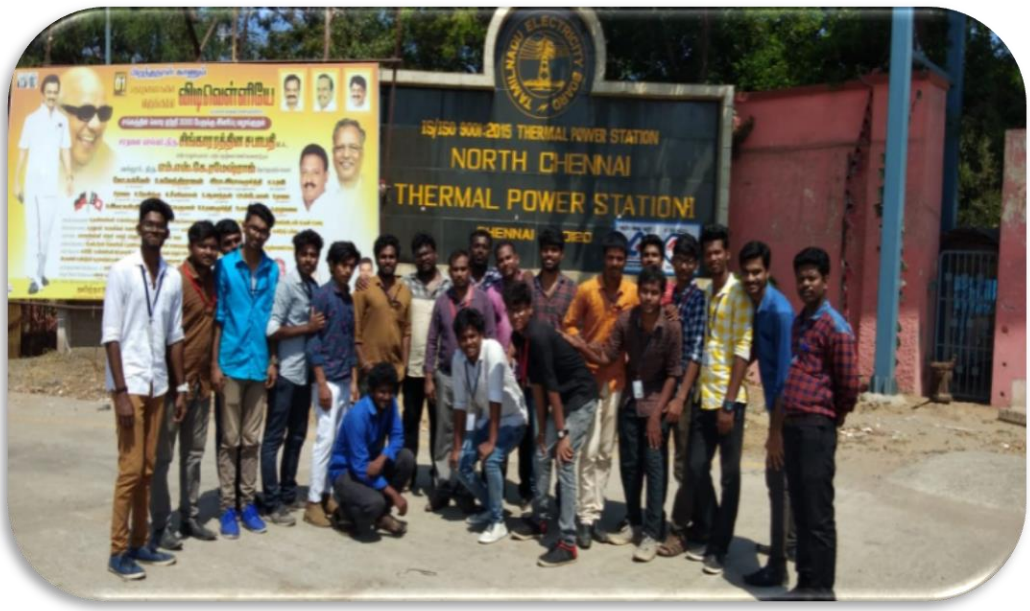
STUDENTS ACHIEVEMENTS

INTERNSHIP TRAINING PROGRAM

S. No	Company Name	Date of Visit	No. of Students
1	Chennai Port Trust, Chennai	26.12.2018 to 10.01.2019	27

INDUSTRIAL VISIT

S. No	Company Name	Date of Visit	No. of Students
1	North Chennai Thermal Power Station, Chennai	04.03.2019	24
2	SMEC Automation lab Chennai	18.03.2019	28
3	Signal and System (India) Pvt. Ltd, Chennai	26.03.2019	28



Final Year students industrial Visit in North Chennai Thermal Power Station on11.03.2019

Third Year Industrial Visit in SMEC Automation lab on 18.03.19

Second Year Industrial Visit in SMEC Automation lab on 19.03.19

EXTENSION AND COMMUNITY ACTIVITIES

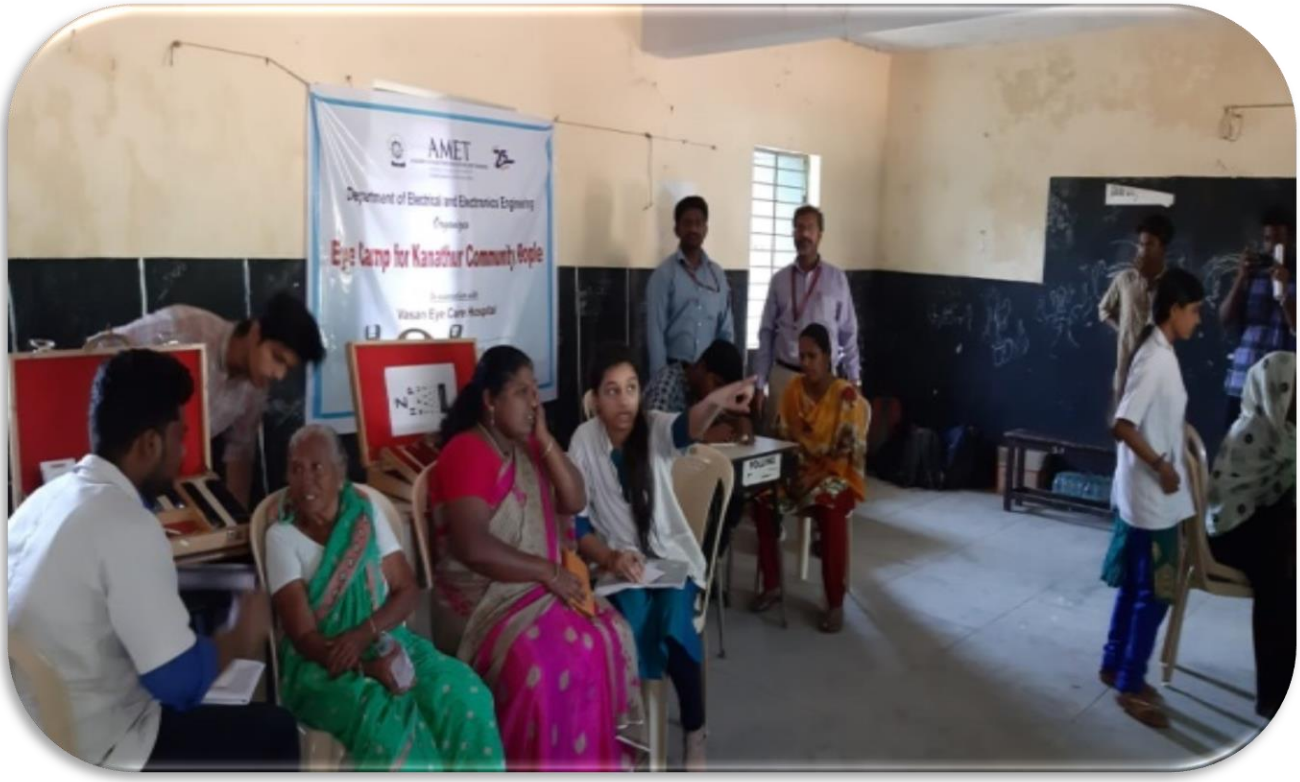
Extension and community Activities are aimed at :

- Spreading of engineering education among the local community,
- Electrical safety awareness programs,
- Maintenance and repair of Electrical Equipment,
- Rallies to promulgate the message of pollution-free society and electrification of less privileged schools,
- Community development programs are also conducted regularly to equip the local community with basic practical knowledge in Electrical Engineering.
- Community development programs are conducted on topics like mobile service, motor winding repair, house wiring by EEE-M Faculty.

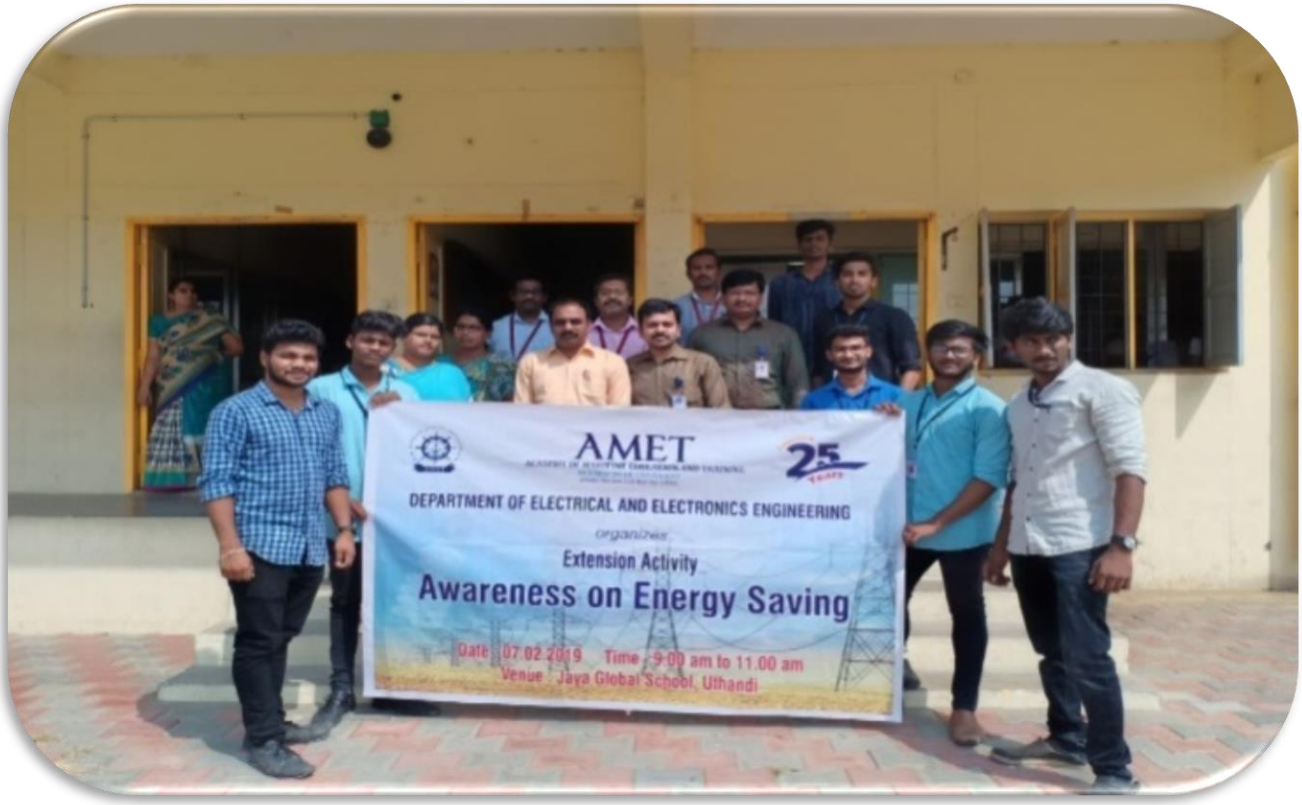
Date	Activity Type	Title of the Activity	Venue
6.02.2019	Community Activity	Creating Awareness on water, sanitation, and hygiene	Panchayat Union Middle School, Kanathur
7.02.2019	Extension Activity	Awareness on Energy Saving	Jaya Global School, Uthandi
15.02.2019	Community Activity	Eye Camp for Kanathur Community People	Government Elementary School, Kanathur
30.03.2019	Community Activity	Children and Youth Development Program for Perumbakkam Community	Perumbakkam

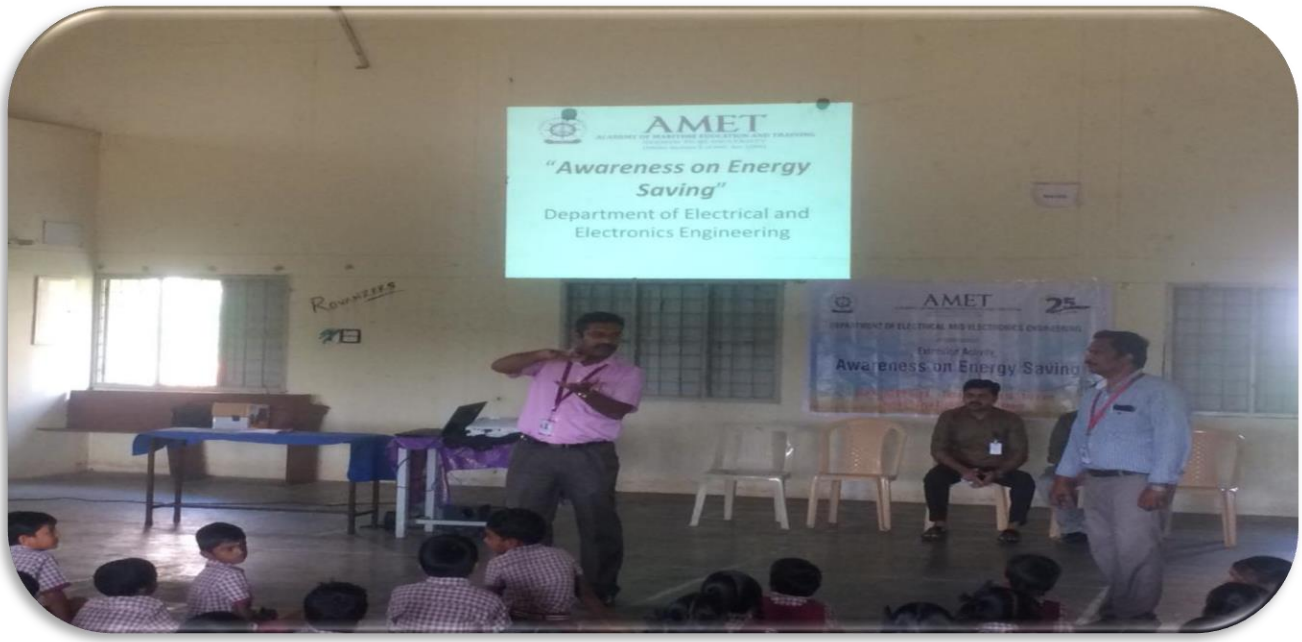
Community Development activity titled "Awareness Program on Wash, Sanitation and Hygienic" conducted on 06.02.2019 at Panchayat Union Middle School.

Community Development activity titled "Children and Youth Development Program for Perumbakkam Community" conducted on 30.03.2019 at Perumbakkam.



Eye Camp conducted at Government Elementary School, on 15.02.2019





The Extension activity titled "Awareness on Energy saving" conducted on 07.02.2019 at Jaya Global School, Uthandi.

DEPARTMENT CULTURAL ACTIVITIES

The Department of Electrical and Electronics Engineering of AMET Deemed to be University organized a Cultural Meet (CALIDA FESTA-2K19) at Shri Janaki Raman Auditorium on 25.01.2019.

The Department offers a cultural platform to bring all the students together irrespective of years to show their talents on a platform in which students may get a chance to exhibit their talents to show their abilities creatively and innovatively through various forms of art

PONGAL CELEBRATION

Pongal was celebrated in AMET Campus on 11.01.2019 and our students participated in.various games and won prizes

EDITORIAL COMMITTEE MEMBERS

Faculty Members

Dr.T.Sasilatha, DEAN/EEE

Dr. T. Baldwin Immanuel, Assoc.Prof/EEE

Student Members

Mr.KrishnaRaj

Mr.Aakash

THANK YOU!! MORE TO EXPECT IN THE NEXT EDITION