AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING

Deemed to be University Under Section 3 of UGC Act 1956

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ELECTRO MARINE

NEWSLETTER

"2020 – 2021" (ODD Semester)

(JULY - DECEMBER)

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 centres 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, harbour 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 MISSION 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 Excellence in culcating 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 students across 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 – Marine program 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 analyse 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.

"I believe that education is all about being excited about something. Seeing passion and enthusiasm helps push an educational message".

STEVE IRWIN

DEAN'S MESSAGE

Dr. T. SASILATHA M.E, Ph.D.

It gives me great pleasure to congratulate faculty, students of electrical and electronics department for the publication of newsletter. Newsletter is believed to be a focus of the inside activities i.e. academics, students and faculty achievement as well as innovation occurring in the department during the academic year 2020 – 2021 ODD Semester (June – December). In the era of engineering and technology this newsletter will motivate the teachers and students of sharing their creativity and new ideas with the world and will help in their overall development. I appreciate the faculty, students and supporting staff for their tireless efforts and contributions to the various activities held in the Department.

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DEPARTMENT ACTIVITIES

AICTE SPONSORED SHORT TERM TRAINING PROGRAMME (STTP)

The Department organized AICTE sponsored One week online Short-Term Training Programme (STTP) on "**ROLE OF SMART TECHNOLOGY IN MARITIME INDUSTRIES**" with three phase slots.

Phase I slot – 02.11.2020 to 07.11.2020 at (10.30 – 12.30 pm & 2.00 – 4.00 pm)

Dr.K.G.Srinivasa, Professor, NITTR, Chandigarh has delivered the key note address and Guest of Honour was Mr.G.Janakiraman, CEO, Fietz Global Engineering & Technology Pvt. Ltd, Chennai with 206 participants from various colleges and Universities in India.

Phase II slot – 23.11.2020 to 28.11.2020 at (10.30 – 12.30 pm & 2.00 – 4.00 pm)

Dr.R.Vijayakumar, Professor, Department of Ocean Engineering, IIT Madras has delivered the key note address and Guest of Honour was Mr. Amarender Katkam, Founder & CEO**,** Smart Bridge Educational Services Pvt Ltd, Hyderabad with 257 participants from various colleges and Universities in India.

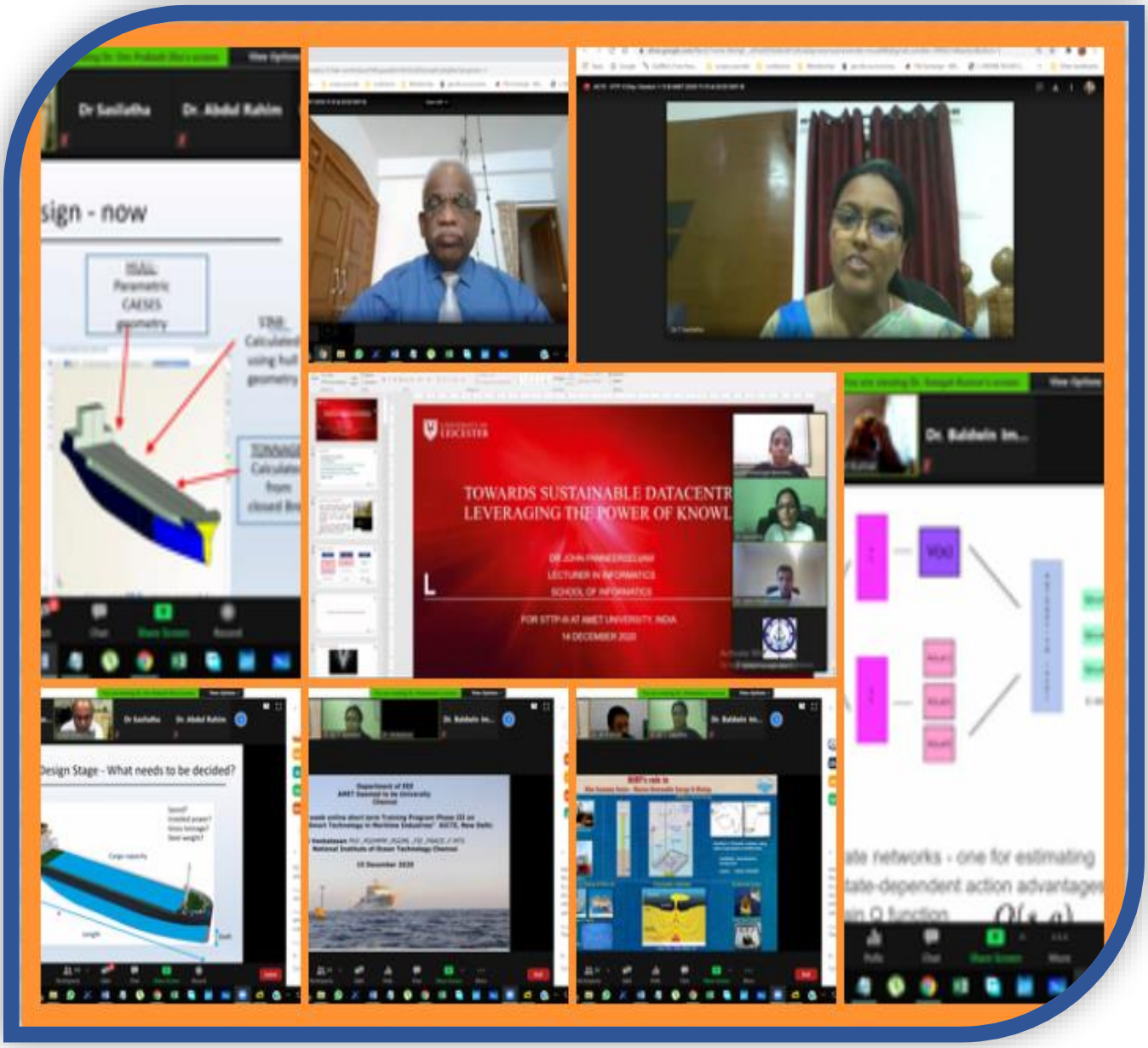
Phase III slot – 14.12.2020 to 19.12.2020 at (10.30 – 12.30 pm & 2.00 – 4.00 pm)

Dr. M. Abdul Rahim, Corporate Officer Managing Director, Middle East and South Asia Nippon Kaiji Kyokai (ClassNK), UAE has delivered the key note address and Guest of Honour was Dr. John Paneerselvam, Lecturer in Informatics, University of Leicester, UK with 150 participants from various colleges and Universities in India.

The objective of conducting this STTP is to provide Engineering Faculty and Industrialist to up-grade their knowledge and skills that are essential for Research and Development in the field of Smart Technologies in Shipping Industries. To understand the social, legal and ethical issues surrounding smart technologies such as Cyber Physical systems, robotics and AI. This would advance our understanding in order to maximize the benefits of these technologies while mitigating potential adverse effects. We had a great guest speaker's expert

from academician and as well as industry. They are well expertise in the area of smart technology in

Maritime sector. They were always shown keen interest in associating themselves for the activities of the various programme by sharing their knowledge.



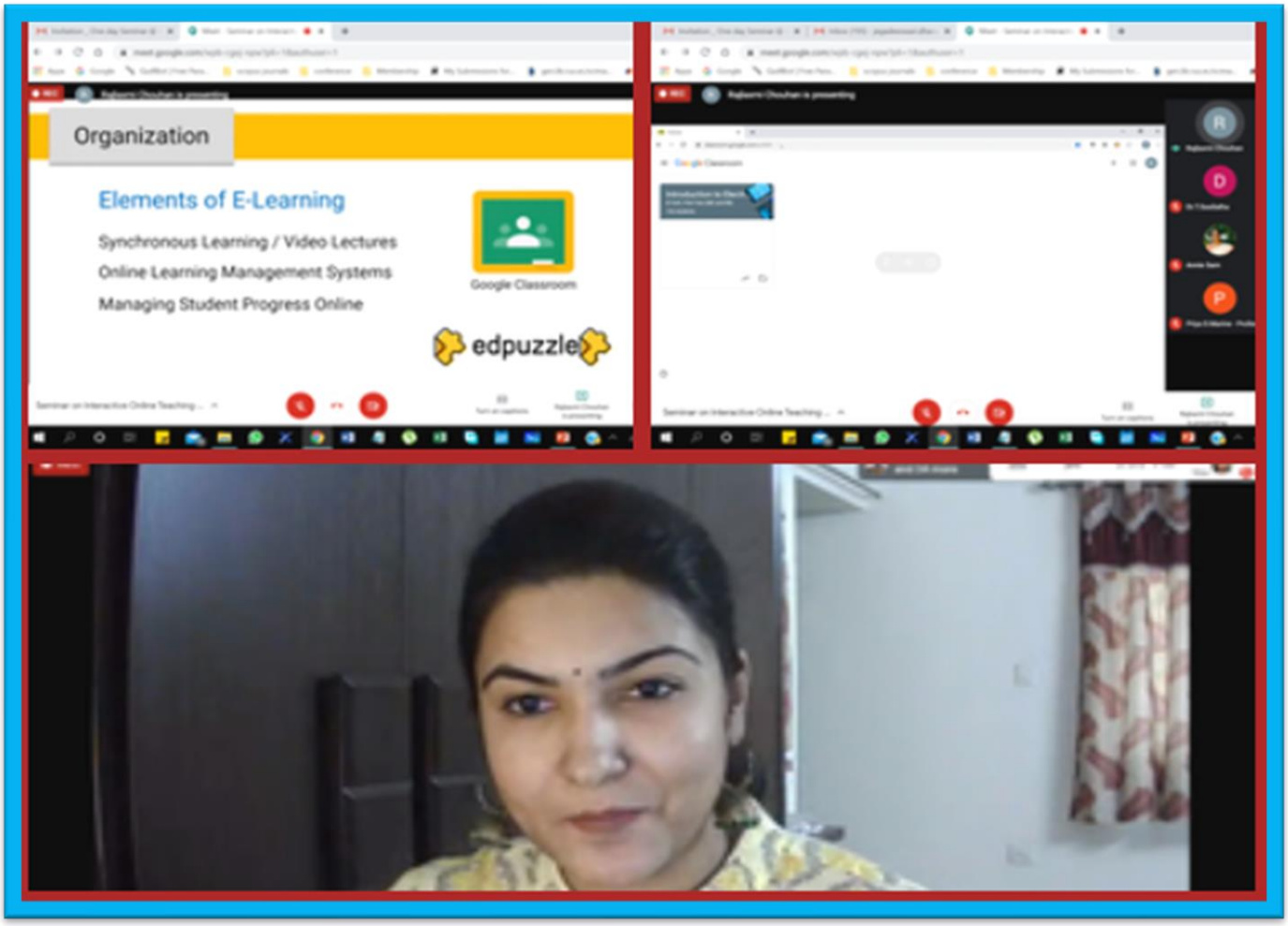
One-week AICTE sponsored Short Term Training Programme (Phases I, II, III) through Virtual Mode.

NATIONAL SEMINAR ORGANIZED

The Department organized One day Seminar on **"INTERACTIVE ONLINE TEACHING USING PEDAGOGICAL INITIATIVES AND ONLINE TOOLS"** on 19th September 2020 @ 3.00 – 4.00 pm through Virtual Mode (Google Meet).

Dr. Rajlaxmi Chouhan, Assistant Professor, Dept of EEE, IIT Jodhpur delivered the keynote address with 52 participants from various colleges and Universities. She had explained very clearly on how to deliver online teaching effectively by various tools and its usages. Many Participants are expressed their views and feedback on this program. They are expecting more program like this in future.

The objective of seminar is, gathering of people for the purpose of discussing a stated topic. Such gatherings are usually interactive sessions where the participants engage in discussions about the delineated topic. The sessions are usually headed or led by one or two presenters who serve to steer the discussion along the desired path. A seminar may have several purposes or just one purpose. For instance, a seminar may be for the purpose of education, such as a lecture, where the participants engage in the discussion of an academic subject for the aim of gaining a better insight into the subject. Other forms of educational seminars might be held to impart some skills or knowledge to the participants. Examples of such seminars include personal finance, web marketing, real estate, investing or other types of seminars where the participants gain knowledge or tips about the topic of discussion. A seminar can be motivational, in which case the purpose is usually to inspire the attendees to become better people, or to work towards implementing the skills they might have learned from the seminar.



One Day Seminar on "Interactive Online Teaching Using Pedagogical Initiatives and Online Tools" on 19th September 2020

WORKSHOPS ORGANIZED

The Department of EEE and Skill and Personality Development Programme (SPDP) have jointly organized more workshops for students.

1. **Two day's Workshop on "Future Readiness for Engineers" on 30.09.2020 & 01.10.2020 through Virtual Mode @ 3.00 – 4.00 pm.**

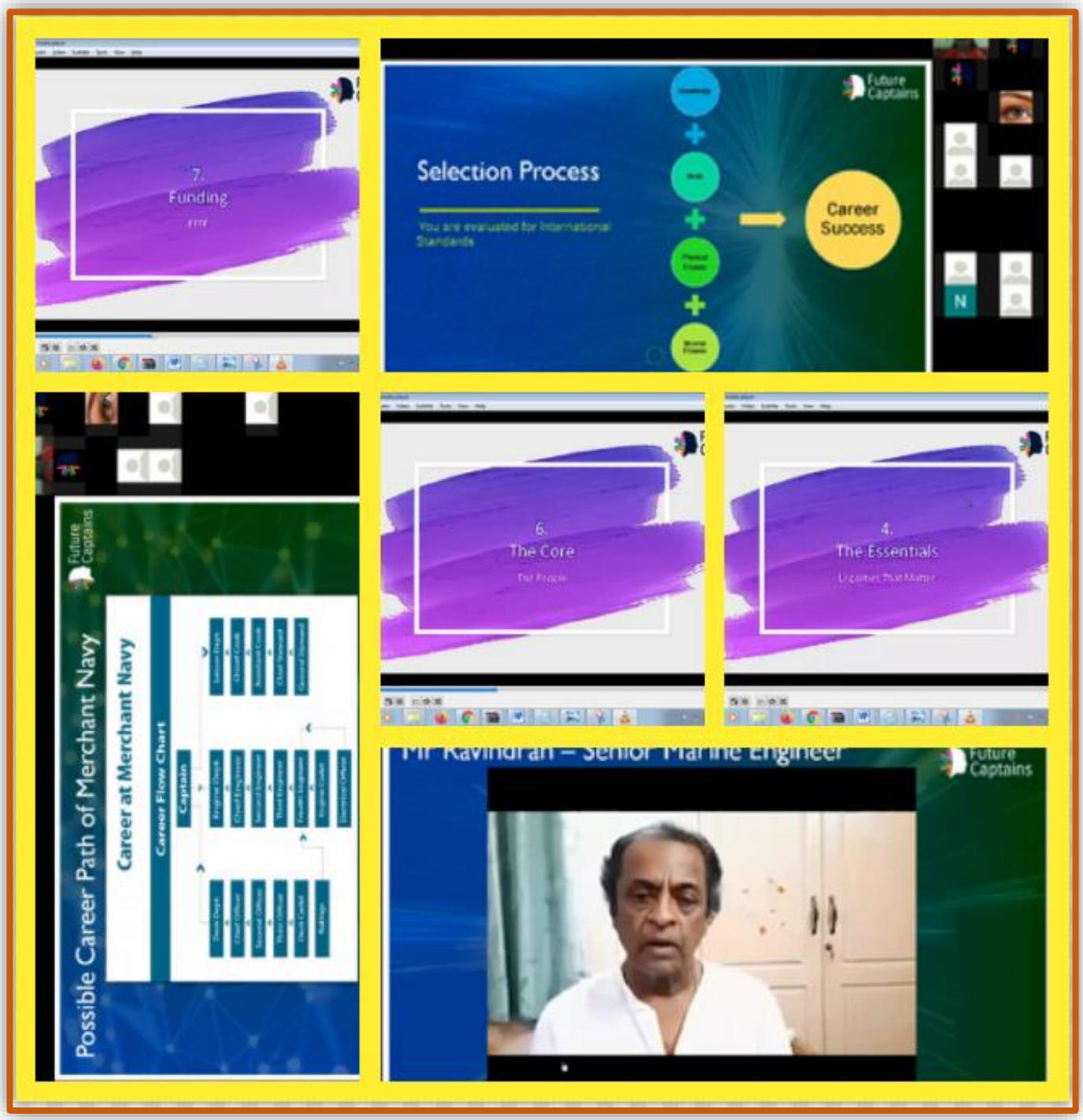
   Ms. Geetha Anand, Career Counsellor, Future Captains, Chennai delivered the guidance for their career and discussed the importance of advent courses and also guided them to groom their personality on 30.09.2020 (Day 1).

   Ms. Brinda T N, Career Counsellor, Future Captains, Chennai provided the guidance for the students to apply and how to approach the interview in the Maritime Sector on 01.10.2020 (Day 2).

   Mr. Ravindran, Senior Engineer from Future Captains shared his experience in sailing and how to get through and also explained about the recent requirements on 01.10.2020. Around 46 participants attended the workshop and got benefited.

2. **Two day's Workshop on "Expert Talk on Entrepreneurship Development" on 10.11.2020 & 11.11.2020 through Virtual Mode @ 4.00 – 5.00 pm.**

   Dr. C. Mr. Tamilselvan Mahalingam CEO, Future captains, Chennai delivered the guidance to create a startup by discussing the essentials required and also the core requirement i.e, the marketing strategies and the most important financial aspect, involvement and wished the students to achieve success in their career. Around 60 students attended the workshop and got benefited.



Photos of Two day's Workshop on "Future Readiness for Engineers" and "Expert Talk on Entrepreneurship Development"

3. **One day Workshop on "Employability Skills" through Google Meet on 11th October 2020 @ 11.00 – 1.00 pm.**

Mr.Mohammed Fayaz English Communication Trainer Shan Z Global Online Institute of Management, Chennai on 11.10.2020 delivered the guidance for their career and discussed the importance of advent courses and also guided them to groom their skills required to grab employment. Around 80 participants attended the workshop and got benefited.

4. **Two weeks Workshop on "Live Interview Skills Training for Deck and Engine Cadets" through Virtual Mode on 19.10.2020 & 30.10.2020 @ 3.30 – 4.30 pm.**

And

5. **Two weeks Workshop on "Interview Tips and Techniques" on 05.10.2020 – 15.10.2020 through Virtual Mode.**

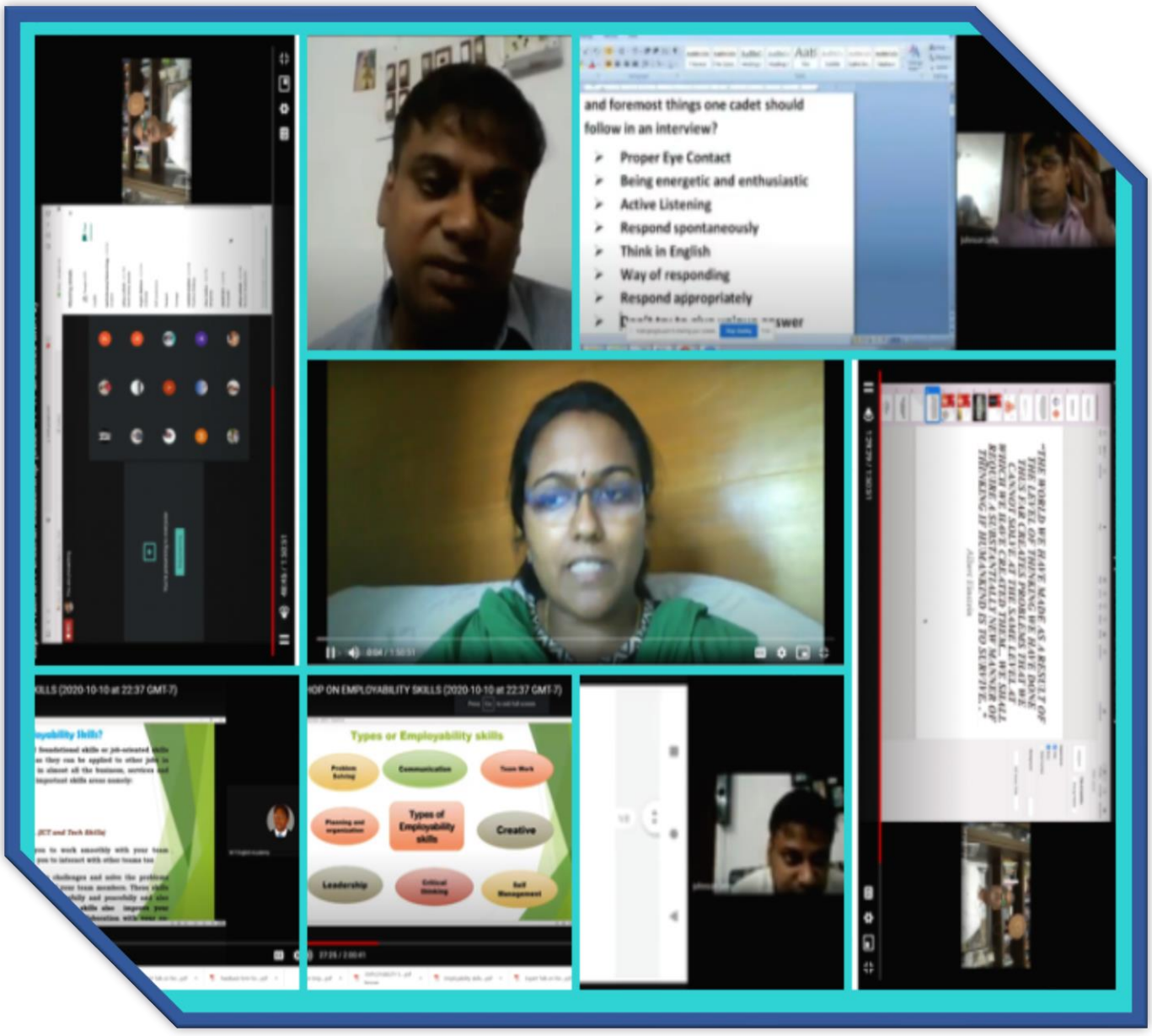
Mr.Johnson, Director – IELTS, AMET Deemed to be University delivered the guidance for attending the interview and discussed the frequently asked questions and also guided them to groom their ability towards attending the interview. From the second week onwards one to one mock interview was conducted and individual student's strength and weakness were identified and provided the guidance to resolve and groom towards their weakness and strengths respectively. Around 157 students attended the program and got benefited.

6. **One day Workshop on "Expert Talk on Personal Leadership" through Virtual Mode on 17.11.2020 @ 3.30 – 4.30 pm.**

Dr. C. Suriyaprakash, Professor, Janson's School of Business, Coimbatore delivered the guidance for their career and discussed the importance of advent courses and also guided them to groom their skills required to grab employment and to develop their leadership skills. Around 75 students attended the workshop and got benefited

The objective of conducting this Workshop is to Explore Effective techniques used for the career development and its exploration. Experience and expertise in career counselling to enhance the leadership skill

and also, about his contribution in achieving career success. At the end of the training, student's confidence level was drastically increased to great extent. Students showed the spark on their face of the learning curve. Consequently, Many Participants were expressed their views and feedback on this program. They are expecting more programs like this in future.



Photos of workshop's organized by Department of EEE and Skill and Personality Development Programme (SPDP) Cell

PROFESSIONAL SOCIETY ACTIVITIES

(Under IEEE & IEI – Chapter)

Date	Event and Title	Resource Person
19.09.2020	One day Seminar on "Interactive Online Teaching Using Pedagogical Initiatives and Online Tools"	**Dr. Rajlaxmi Chouhan,** Assistant Professor, Dept of Electrical Engineering, IIT Jodhpur.
30.09.2020 - 01.10.2020	Two day's Workshop organized by Skill and Personality Development Programme (SPDP) on "Future Readiness for Engineers"	**Ms. Geetha Anand,** Career Counselor, Future Captains, Chennai. **Ms. Brinda T N,** Career Counselor, Future Captains, Chennai.
05.10.2020 - 15.10.2020	Two weeks Workshop organized by Skill and Personality Development Programme (SPDP) on "Interview Tips and Techniques"	**Mr. Johnson,** Director – IELTS, AMET Deemed to be University.
11.10.2020	One day Workshop organized by Skill and Personality Development Programme (SPDP) on "Employability Skills"	**Mr. Mohammed Fayaz,** English Communication Trainer, Shan Z Global Online Institute of Management, Chennai.
19.10.2020 - 30.10.2020	Two weeks Workshop organized by Skill and Personality Development Programme (SPDP) on "Live Interview Skills Training for Deck and Engine Cadets"	**Mr. Johnson,** Director – IELTS, AMET Deemed to be University.
10.11.2020 - 11.11.2020	Two day's Workshop organized by Skill and Personality Development Programme (SPDP) on "Expert Talk on Entrepreneurship Development"	**Mr. Tamilselvan Mahalingam,** CEO, Future Captains, Chennai.
17.11.2020	One day Workshop organized by Skill and Personality Development Programme (SPDP) on "Expert Talk on Personal Leadership"	**Dr. C. Suriyaprakash,** Professor, Janson's School of Business, Coimbatore.
02.11.2020 - 07.11.2020	AICTE sponsored One week Online Short-Term Training Programme (STTP-I) on "Role of Smart Technology in Maritime Industries"	**Dr. K G Srinivasa,** Professor, NITTTR, Chandigarh. **Dr. Revathy,** Professor, Department of IT, Sathyabama Institute of Science and Technology, Chennai. **Mr. Jerome Johnson,**

		Head, Ship Design, Alpha Ori Technologies, Chennai. **Dr. Amarpreet Singh,** Professor, Department of Computer Science Amritsar College of Engineering and Technology, Punjab. **Dr. Bharathi,** Professor, Department of IT, Sathyabama Institute of Science and Technology, Chennai. **Prof T. Asokan,** Professor & Head, Dept of Engineering Design, IIT (Madras), Chennai. **Dr. Rajeev Sharma,** Professor, Dept. of Ocean Engineering, IIT (Madras), Chennai. **Mr. Sanjay Kumar A.P,** Product Manager, Pantech Solutions Pvt Ltd, Chennai. **Mr. G. Janakiraman,** Chief Executive Officer, Fietz Global Engineering & Tech Pvt Ltd, Chennai. **Mr. Sanjay Kumar A.P,** Product Manager, Pantech Solutions Pvt Ltd, Chennai. **Capt. K. Karthick,** Dean, Department of Nautical Science, AMET Deemed to be University, Chennai. **Prof. MSP. Raju,** HOD, Naval Architecture and Offshore Engineering, AMET Deemed to be University, Chennai. **Ms. G. Jegadeeswari,** Assistant Professor, Department of EEE, AMET Deemed to be University, Chennai.
23.11.2020 - 28.11.2020	AICTE sponsored One week Online Short-Term Training Programme (STTP-II) on "Role of Smart Technology in Maritime Industries"	**Chief Engineer Mr. Mani G.R,** Director- Strategy & Business Development, AMET Deemed to be University, Chennai. **Dr. K. Komathy,** Director- ICT & HoD, Department of Information Technology, AMET Deemed to be University, Chennai. **Dr. R. Vijayakumar,** Associate Professor, Department of Ocean Engineering,

		IIT, Madras. **Dr. Preeta Sharan,** Professor, Department of ECE, The Oxford College of Engg, Bangalore. **Dr. A. Prasanth,** Assistant Professor, Department of ECE, PSNA College of Engineering & Tech., Dindigul. **Mr. Amarender Katkam,** Founder & CEO, Smart Bridge Educational Services Pvt Ltd, Hyderabad. **Mr. R. Saravanan,** Team Lead, Alpha Ori Technologies, Chennai. **Dr. Reeba Korah,** Professor, Alliance University, Bangalore. **Mr. K. Sriram,** Founder & CEO, Techgreech Cyber Solutions, Chennai. **Capt. K. Karthik,** Dean- Department of Nautical science, AMET Deemed to be University, Chennai. **Dr. S. Priya,** Professor, Department of EEE, AMET Deemed to be University, Chennai. **Ms. G. Jegadeeswari,** Assistant Professor, Department of EEE, AMET Deemed to be University, Chennai.
14.12.2020 - 19.12.2020	AICTE sponsored One week Online Short-Term Training Programme (STTP-III) on "Role of Smart Technology in Maritime Industries"	**Dr. M. Abdul Rahim,** Corporate Officer,Managing Director, Middle East and South Asia Nippon Kaiji Kyokai (ClassNK), UAE. **Prof. Om Prakash Sha,** Professor, Ocean Engineering & Naval Architecture IIT Kharagpur. **Dr. John Paneerselvam,** Lecturer in Informatics, University of Leicester, UK. **Dr.R. Venkatesan,** Scientist G & Programme Director, Ocean Observation Systems, National Institute of Ocean Technology – Chennai, Ministry of Earth Sciences. **Dr. Swagat Kumar,** Department of Computer Science, Edge Hill University, UK.

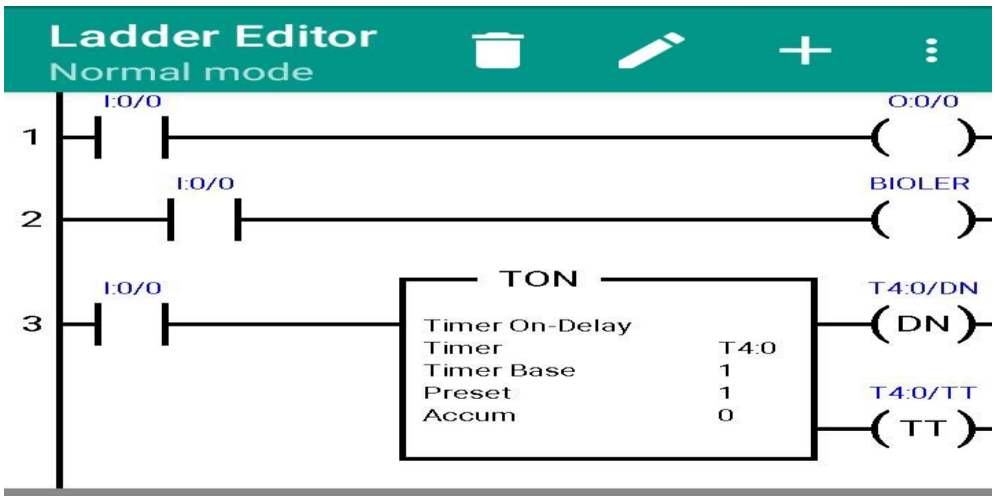
		Dr. Gurdeep S Hura, Department of Mathematics and Computer Science, University of Maryland Eastern Shore, USA. **Dr. Vijay Kumar Banga,** Principal, Amritsar College of Engineering and Technology, Amritsar, Punjab. **Dr. Gaurav Shekhar,** Program Director and Asst Professor of Instruction Graduate Program – Business Analytics Naveen Jindal School of Management The University of Texas at Dallas, USA. **Prof. K. Sivaprasad,** Cochin University of Science and Technology, Kerala. **Dr.V.N. Mani,** Scientist-E, Head, Centre for Materials for Electronics Technology, Department of Electronics & Information Technology, Govt. of India, Hyderabad. **Dr. Mayank Agarwal,** Associate Professor & H.O.D, Computer Science & Engineering, Gurukul Kangri University, Haridwar. **Dr. Rajesh Katyal,** Deputy Director General & Division Head National Institute of Wind Energy. Ministry of New and Renewable Energy, Govt. of India. **Dr. T. Sasilatha,** Professor & Dean, Department of EEE AMET Deemed to be University, Chennai. **Ms. G. Jegadeeswari,** Assistant Professor, Department of EEE, AMET Deemed to be University, Chennai.

STUDENTS ARTICLES

STEAMPIEZO POWER GENERATOR

AMUDHAN / III Year / EEEM

The characteristics of a new steam power generating system have been proposed by installing a piezoelectric sensor instead of using steam turbine. By installing the sensor to power generation, Steam will hit the piezoelectric sensor to generate energy. In the steam power plant the pulverised coal is fed into the boiler and it is burnt in the furnace. The water present in the boiler drum changes to high pressure steam. From the boiler the high-pressure steam passed to the steam regulator and consists of safety valves and relief valve heated steam strikes the piezoelectric plates with high speed. The generator converts the mechanical energy of the Steam into electrical energy after striking on piezoelectric plates it's leaves and enters into cooler The steam gets condensed with the help of cold water from the water tank. The condensed water feed into the water tank. The heat from steam is cooled by feed water before entering boiler. This heating of water increases the efficiency of the boiler. The exhaust gases from the furnace pass through the filter And released to atmosphere After burning of the coal into the furnace, it is transported to ash handling plant and finally to the ash storage.



IMPACT OF ARTIFICIAL INTELLIGENCE ON THE CURRENT EDUCATION SYSTEM

UDAY KUMAR / II Year / EEEM

Education can be defined as a process where teachers and students give and receive systematic instructions, respectively. Learning can take place in either a formal or informal setting. More commonly, students receive education in a formal setting such as a high-school, college, university, etc. Education is often considered as a significant determinant of an individual's future success rate. Justifiably, there are various efforts to improve the current education systems in multiple countries worldwide.

Among the many methods employed by various countries to improve the education sector includes the use of AI (Artificial intelligence). AI systems are defined by the use of computers to accomplish tasks that had previously required human intellect. AI utilizes algorithms that collect, classify, organize, and analyse information to conclude it, which is also called machine learning. As such, the use of machine learning has the potential to bring about several benefits for the various industries, including the education system.

The implementation of AI can improve the efficiency and personalization of learning tasks, as well as streamline administrative tasks. These are benefits enjoyed by students and teachers alike. The implementation of artificial intelligence also helps students to get more time with their respective teachers. This is where unique human qualities are required to supplement where AI would struggle. Traditional education systems are fast changing to adapt to the technological advancements of today's world. This is especially true with the widespread access to various educational sources of information online. The implementation of educational AI systems has the potential to help students develop their skills and acquire more knowledge in multiple subjects. Therefore, as artificial intelligence continues to evolve, it is our hope that it can help fill the gaps in the education system.

AI has altered the students' way of learning as they do not need to physically attend classes since they have access to learning material via the internet. As previously mentioned, AI allows educators to spend more time with students by taking over some administrative tasks. However, AI has done so much for education. Below are a few more effects of artificial intelligence on the education industry. They include:

- Ability to provide quality content for students worldwide
- Provision of personalized content
- Personalized information to meet your academic needs
- Tailored learning environment
- Take on the responsibility of various repetitive tasks

- Improved efficiency within the learning environment

SOLAR POWERED REFRIGERATOR

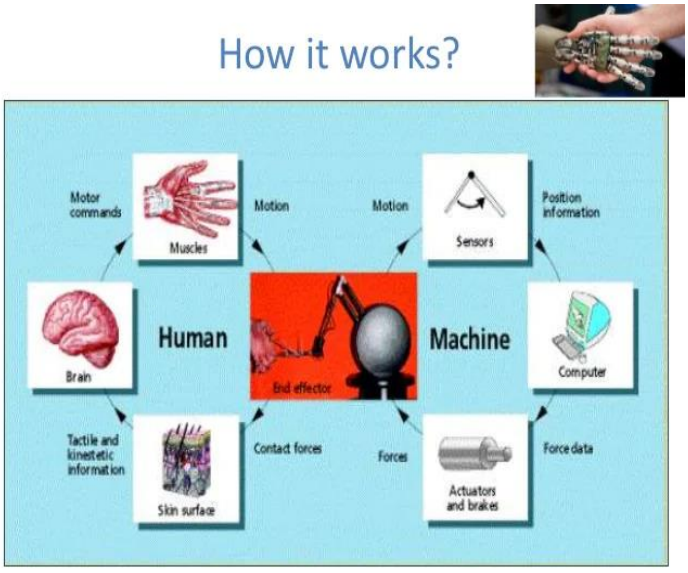
AUSTIN JEBARAJ / III Year / EEEM

A solar powered refrigerator is a refrigerator which runs on energy directly provided by sun, and may include photo voltaic or solar thermal energy. Solar powered refrigerators are able to keep perishable goods such as meat and dairy cool in hot climates, and are used to keep much needed vaccines at their appropriate temperature to avoid spoilage. Solar-powered refrigerators may be most commonly used in the developing world to help mitigate poverty and climate change.

Solar powered refrigerator Fridge and vaccine coolers use a combination of solar panels and tubular batteries to store energy at night and in absence of solar light. Meditech has launched economical, robust and affordable range of solar power refrigerators especially for hot climate conditions at 45 Degree C. In 1990s NASA began work on phase change material to store energy rather than using batteries. In 2000s Meditech Technologies India Private Limited studied on Anti - Freeze technology *t*o develop freezers. Solar powered refrigerator freezer are used by individuals living in remote Homes, remote stores, medical clinics, ice making, missionaries, micro enterprises, beverage vending and caravans.

HAPTIC TECHNOLOGY

MADHUBAN / II Year / EEEM



Haptic sensors have been around for a while now and come in various forms. Regardless of the type of haptic technology utilized, they all work around similar principles of using a combination of force, vibration, and motion to recreate the sense of touch. In this article, we look at haptic sensors as a whole and how they work.

Haptic sensors recreate the sense of touch by creating a combination of force, vibration and motion sensations to the user. Haptic technologies are significantly growing and are used in everything from automobiles, to games console controllers and smartphones. It is thought that the production and

implementation of haptic sensors will be a $12.8 billion industry by 2022. There are three main types of haptic sensor – eccentric rotating mass vibration (ERMV) motors, linear resonant actuators (LRAs) and piezo haptics sensors.

How Haptic Sensors Work?

Even though there is a general principle for haptic sensors, this article will highlight some of the operational differences between the different types of sensors. Aside from using a combination of force, vibration, and motions, haptic technologies use a force feedback loop to manipulate the movement of the user and go beyond a simple vibration alert. The basic principle of a haptic sensor is the generation of an electric current that drives a response to create a vibration. How this happens, is where the different technologies differ.

FOOTSTEP POWER GENERATION SYSTEM using MICROCONTROLLER

JANA S / I Year / EEEM

Day by day, the population of the country increased and the requirement of the power is also increased. At the same time the wastage of energy also increased in many ways. So reforming this energy back to usable form is the major solution. As technology is developed and the use of gadgets, electronic devices also increased. Power generation using conservative methods becoming deficient. There is a necessity arises for a different power generation method. At the same time the energy is wasted due to human locomotion and many ways. To overcome this problem, the energy wastage can be converted to usable form using the piezoelectric sensor. This sensor converts the pressure on it to a voltage. So by using this energy saving method, that is the footstep power generation system we are generating power.

This project is used to generate voltage using footstep force. The proposed system works as a medium to generate power using force. This project is very useful in public places like bus stands, theaters, railway stations, shopping malls, etc. So, these systems are placed in public places where people walk and they have to travel on this system to get through the entrance or exists. Then, these systems may generate voltage on each and every step of a foot. For this purpose, piezoelectric sensor is used in order to measure force, pressure and acceleration by its change into electric signals. This system uses voltmeter for measuring output, led lights, weight measurement system and a battery for better demonstration of the system.

- Whenever force is applied on piezoelectric sensor, then the force is converted into electrical energy.
- In that movement, the output voltage is stored in the battery

- The output voltage which is generated from the sensor is used to drive DC loads
- Here we are using AT89S52 to display the amount of battery get charged.

PUZZLES

VIGNESH S / IV Year / EEEM

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PERFUME
HAIRSTYLE
CURLING IRON
MOUSTACHE
BEARD
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SAUNA
STYLIST
BRUSH
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SHAMPOO
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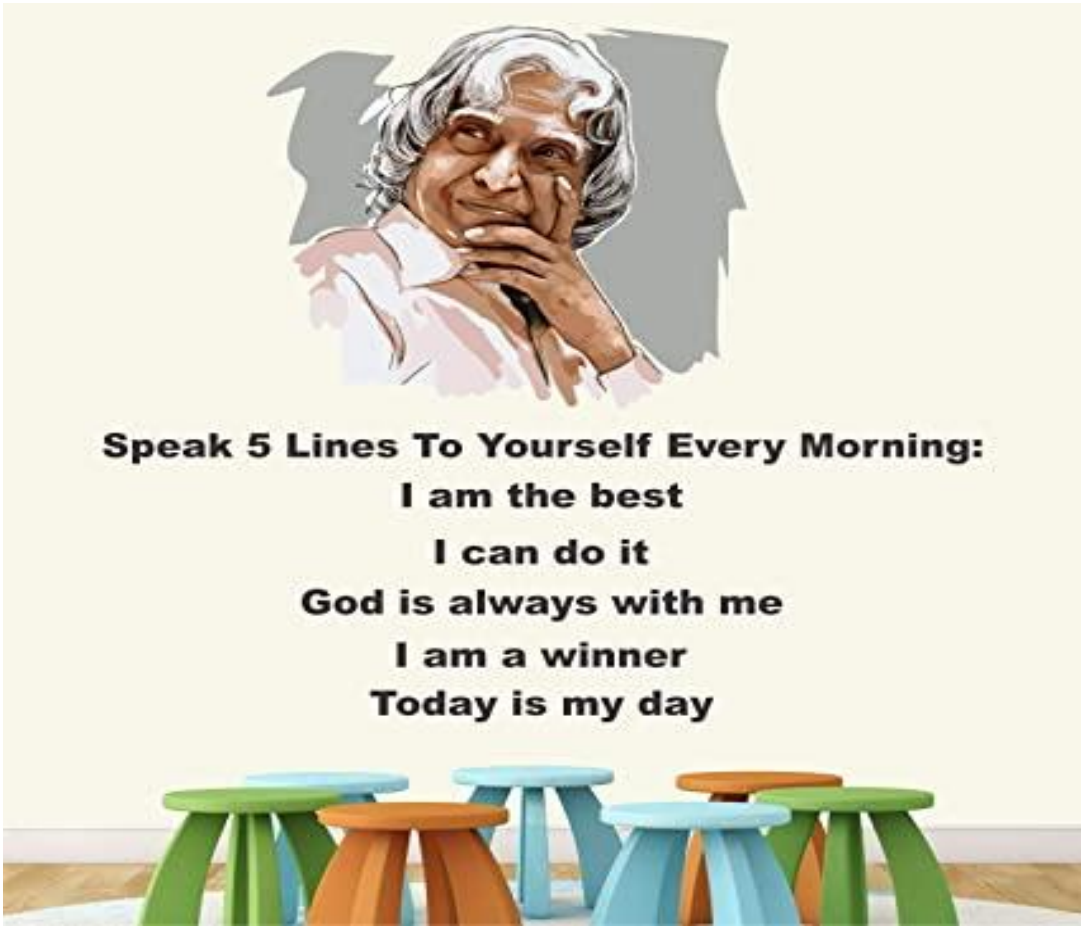
Speak 5 Lines To Yourself Every Morning:
I am the best
I can do it
God is always with me
I am a winner
Today is my day

THANK YOU!!!