E.G.S.PILLAY ENGINEERING COLLEGE

An Autonomous Institution Affiliated to Anna University, Chennai | Approved by AICTE, New Delhi
Accredited by NAAC with A Grade | Accredited by NBA T1 (B.E. – CSE, B.E. – ECE & B.Tech – IT)
Old Nag ore Road, Thethi, Nagore Village, Nagapattinam – 611002, Tamil Nadu, India

DEPARTMENT OF MECHANICAL ENGINEERING

MECTROZ

NEWS LETTER

JANUARY 2023- DECEMBER 2023

VOLUME-11

ISSUE-1

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MECTROZ

23

SECRETARY MESSAGE

Mr.S.Senthil Kumar

Secretary

EGSP GROUP OF INSTITUTION

I extend my warmest greetings to all members of Mectroz 23. It is truly inspiring to witness your dedication and passion for advancing the field of mechanical engineering . Your commitment to excellence and innovative spirit are pivotal in shaping the future of our institute.

As we embark on another year filled with opportunities, I encourage each of you to embrace learning and collaboration. Let's continue to push the boundaries of knowledge and explore new frontiers together. Your contributions and enthusiasm are the driving force behind our success.

Principal message

Dr.S.Ramabalan ME.Phd

Principal

E.G.S PILLAY ENGINEERING COLLEGE

It is with great pleasure and pride that I welcome you to the latest edition of our MECTROZ newsletter. This publication is more than just a collection of articles and updates; it is a reflection of our collective achievements, aspirations, and the relentless pursuit of excellence within our Mechanical Engineering community.

MECTROZ '23 arrives at a time when the world of engineering is undergoing transformative changes. Innovations in sustainable materials, smart particles, and circular economies are reshaping the landscape of our industry. Our students and faculty have risen to the occasion, embracing these challenges with creativity and determination, and I am thrilled to see their efforts showcased in this newsletter.

As we delve into the pages of MECTROZ '23, I encourage you to immerse yourself in the wealth of knowledge and insights presented. Let us celebrate our achievements, learn from our experiences, and continue to strive for innovation and excellence in all our endeavours.

Thank you for your continued support and engagement. Together, let us forge ahead and make a lasting impact in the world of Mechanical Engineering.

Hod's Message

Dr.N.Ramanujam ME.Phd

Professor and Head of the Department

E.G.S PILLAY ENGINEERING COLLEGE

It is with great pleasure that I welcome you to the MECTROZ '23 newsletter. This edition is a celebration of the hard work, dedication, and innovative spirit that defines our Mechanical Engineering department. Throughout the year, our students and faculty have embarked on numerous projects and initiatives, pushing the boundaries of what is possible.

I am immensely proud of our students for their enthusiasm and commitment to excellence. Your achievements are a testament to your hard work and perseverance. I also extend my heartfelt gratitude to our faculty members, whose guidance and support have been crucial in nurturing the talents within our department.

Vision

To foster academic excellence in Mechanical Engineering Education and Research and turn out students into competent professionals to serve the society.

Mission

Mechanical Engineering department is committed to

M1: To produce successful mechanical engineers through innovative teaching and learning processes and by enhancing the knowledge and skills of faculty members and supporting staff through various training programmes.

M2: To establish state-of-the-art laboratories and centers of excellence to promote good quality education, research and consultancy for industrial and societal needs.

M3: To prepare the students for higher education and successful engineering careers by inculcating leadership and entrepreneurial qualities, team work capability, interpersonal skills, lifelong learning, moral and ethical values..

About the Department

The department of Mechanical Engineering was established in 1995. The department offers a under graduate B.E. (Mechanical Engg.) and a Post Graduate M.E. (Manufacturing Engg.) programmes. The department has approved as research centre by Anna University and Annamalai University. The department has highly qualified and experienced faculty. The department has well infrastructural facilities and has fully equipped laboratories with adequate hardware and software. The teaching faculties are active in conducting research and publishing the papers in reputed Journals and Conferences. The department has conducted six International Conferences and four AICTE sponsored Faculty Development Programs.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Preparing the graduates to have successful career in mechanical and associated industries or becoming an entrepreneur or pursuing higher education and research.

PEO 2: Developing ability to apply fundamental technical knowledge and skills to find practical solutions to technological challenges and problems in core and allied areas of mechanical engineering.

PEO 3: Complementing the class room teaching with live projects, field works, seminars to build self-learning, and lifelong learning capability, and to develop out of box thinking. Also, developing capability to adapt to evolving technological challenges, communicate effectively, work effectively as individuals and as team members and adhering to professional ethics..

PROGRAM OUTCOMES (POs)

PO 1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3: 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.
PO 4: 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.
PO 5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO 6: 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.
PO 7: 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.
PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10: 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.
PO 11: 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.
PO 12: 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)

After successful completion of the programme, Graduates will be able to

PSO1: Design, develop, test and maintain advanced thermal engineering systems for industrial and other applications.

PSO2: Apply the concepts of modern manufacturing and industrial engineering techniques in industries.

PSO3: Modeling, design and analysis of mechanical components using Computer Aided Design and Analysis software tools.

STUDENTS ACHIEVEMENT/PARTICIPATIONS

Mr.S.Arun,Mr.B.Arunbharathi,Mr.R.Balakumaran,Mr.B.Lalithkumar,Mr.R.S.Madhesh,Mr.G.Anbarasan,Mr.J.Arihaaran,Mr.S.Bhuvaneshwaran,Mr.K.Guhan,Mr.M.Guruprakash,Mr.K.Jagadheeshwar,Mr.R.Jayasurya,Mr.P.Dhinesh, Mr.S.Deepak,Mr.A.Muralimanogar,Mr.nakulkhajuria,Mr.S.Neelakandan,Mr.V.Nitharshan,Mr.R.Rahul,Mr.A.Sakthi,Mr.S.Sathishkumar,Mr.M.Shakilan,Mr.B.Shyambarath,Mr.R.Sivaguru,Mr.M.Vasanth,Mr.S.Venkadesh,Mr.S.Mukil,Mr.R.Rithikeshmani.,Mr.S.Subamanikandan,Mr.M.Sundaraj ,Mr.M.Sunilrohin,Mr.S.Vikneshwaran the students of **Third year** mechanical engineering were participated in various event in **GYANITH-23** symposium conducted by **NIT-Karaikal** from **01.03.2023 - 02.03.2023**

Mr.V.Harish,Mr.T.Arunkumar,A.Baranidharan from **second year** mechanical engineering participated in event titled "system design"in **GYANITH-23** symposium conducted by **NIT-Karaikal** from **01.03.2023.**

Mr.S.Abimanyu,Mr.J.ArunKumar,Mr.A.Baranidharan,Mr.R.DhanushKumar,Mr.V.Harish,Mr.S.KarthikViasar,Mr.R.Selvamani ,Mr.A.Vignesh ,Mr.Mark Antony Regon **Second year** mechanical engineering were participated in various event in **GYANITH-23** a symposium conducted by **NIT-Karaikal** from **01.03.2023 - 02.03.2023.**

Mr.A.Murali Manogar,Mr.S.Neelakandan,Mr.V.Nitharsan,Mr.M.Sunil Rohin **Third year** mechanical engineering were participated in various event Titled "Mechanical Design- SIEMENS NX"conducted by **NIT-Karaikal** on **01.03.2023**

Mr.K.Shiyam Sundar **Third year** mechanical engineering were attended a one day workshop Titled "Advanced Diesel Engine Demonstration" conducted by **ROMES Engineering Services** on **22.01.2023**

Mr.S.Ramadoss,Mr.G.NithishKumar,Mr.A.Vimal,Mr.M.TawfeeqRahman,Mr.P.PraveenRaj**Third year** mechanical engineering were attended a one day workshop titled "Automotive Proto-kindling Workshop" conducted by **NIT-Trichy** on **24.02.2023**

Mr.V.Sathish **Third year** mechanical engineering were attended a one day workshop Titled "**3D Printing Workshop**" conducted by **NIT-Trichy** on **24.02.2023**

Mr.R.Elamvazhuthi **second year** mechanical engineering were attended a online webinar Titled "a**dditive Workflow in Industries and Benefits from its Adaptation**" conducted by **NIT-Trichy** on **24.02.2023**

Mr.S.Subamanikandan.,Mr.M.Nithishkumar,Mr.S.Sasidharan,Mr.R.Rithikeshmani,,Mr.S.Saminathan ,Mr.V.Sathish Mr.V.Sairam ,Mr.R.Sivaguru ,Mr.S.Venkadesh ,Mr.M.Tawfeeq Rahman**Third year** mechanical engineering were attended a one day workshop titled "Science and Technology Capacity Building for Industrial Needs" conducted by **University College of Engineering & Technology Thirukuvalai** on **28.08.2023-30.08.2023**

STUDENTS ACHIEVEMENT/PARTICIPATIONS

Mr.S.Praveen ,Mr.S.Ramakrishnan ,Mr.K.Nithishkumar ,Mr.S.Vikneshwaran ,Mr.M.Sundaraj ,Mr.M.Vasanth ,Mr.S.Sasidharan ,Mr.R.Rithikeshmani ,Mr.A.Sivarama Krishnan ,Mr.K.Sujith ,Mr.M.Sivakumar ,Mr.M.Sunil Rohin,Mr.R.Pavithran Rahman **Third year** mechanical engineering were attended a one day workshop titled "Electrical vehical Design And Fabrication Techniques" conducted by **Karpagam College of Engineering** on **26.08.2023**

Mr.G.S.HariharaRaajan,Mr.S.Bhuvaneshwaran,Mr.H.MohamedRasoolFahith,Mr.P.Vijayanandh ,Mr.S.Vignesh,Mr.B.S.Lalithkumar,Mr.P.Praveenraj,Mr.P.Sivaranjani,Mr.M.Guruprakash ,Mr.S.Mathiyazhagan,Mr.K.ShyamSundar,Mr.Nakul Khajuria,Mr.M.Prakash ,Mr.S.Vasantha Kumar ,Mr.S.Mohanraj Manikandan mechanical engineering were students attended a one day QUIZ titled "**Electric Vehicles**" conducted by **Karpagam College of Engineering** on 17.09.2023

Mr.ElankumaranArumaidoss,Mr.M.Madhankumar,Mr.Akash Lingan,Mr.V.Manikandan second year mechanical engineering were attended a one day workshop titled "**Casting Simulation: Bridging the gap between Design and Manufacturing**" conducted by **Karpagam College of Engineering** on 23.09.2023

NPTEL

In January 2023, **Mr. Mohamed Rasool Fahith, Mr. M.A. Mohamed Mucksith, and Mr. S. Saminathan**, all third-year students, commenced an 8-week course titled "Product Design and Manufacturing" offered by NPTEL. They successfully completed the course in March 2023.

In January 2023, **Mr.A.Baranidharan second**-year student, commenced an 8-week course titled "Product Design and Manufacturing" offered by NPTEL. He successfully completed the course in March 2023

In January 2023, **Mr.K.Balaji ,Mr.V.Harish ,Mr.S.Karthick Viasar ,Mr.B.Aswindhan,Mr.R.Ragul, Mr.N.MohammedHamza,Mr.R.UdhayaPriyan,Mr.R.Premnath,Mr.S.Ramakrishnan,Mr.R.Vigneshwaran,Mr.K.Nithishkumar,Mr.M.Saravanan,Mr.P.Vijayanandh** , all second-year students, commenced an 8-week course titled "Product Design and Manufacturing" offered by NPTEL. They successfully completed the course in March 2023.

INTERNSHIP & IN-PLANT TRAINING

Mr.V.ArunKumar,Mr.K.Balan ,Mrs.S.Bavadharini,Mr.R.Manikandan,Mr.M.Navin,Mr.A.Vignesh, from final year mechanical students completed their in-plant training in **MECHMANINDUSTRIES,Coimbatore** from 07.01.2023 TO 14.01.2023.

Mr.B.Ajay,Mr.S.Ganesh,Mr.H.Ragul,Mr.M.Rajajifrom final year mechanical students completed their in-plant training in **SD pro solutions,Trichy** from 07.01.2023 TO 12.01.2023.

Mr.K.Abinash,Mr.A.Deena,Mr.B.Vijayabalaji, from final year mechanical students completed their in-plant training in **JKR Industries,Nagapattinam** from 07.01.2023 TO 14.01.2023.

Mr.V.Dhanush,Mr.S.Dharun,Mr.A.Jegadheeswaran,Mr.R.Kalidas,Mr.I.Priyan,Mr.R.Ragavan,Mr.N.Ramkumar Mr.N.RatheesKumar,Mr.X.Remigious Jayanathan,Mr.M.Sandheep, , from final year mechanical students completed their in-plant training in **Southern Railway,Ponmalai** from 09.01.2023 TO 14.01.2023.

Mr.D.Lokesh,Mr.M.MohamedRasheed Mr.M.Mohamed Thahir Hussain M Mr.S.Vasantha Kumar,Mr.T.Vishal, Mr.R.VishnuKumar,Mr.R.S.Yogeshwar,Mr.V.Yogesh Muthuvel from final year mechanical students completed their in-plant training in **SD pro solutions,Trichy** from 10.01.2023 TO 14.01.2023.

Mr.B.Arunbharathi,Mr.B.S.Lalithkumar,Mr.R.S.Madhesh,Mr.V.Sairam from Third year mechanical students completed their in-plant training in **CIPET,Chennai** from 13.01.2023 TO 26.01.2023.

Mr.S.Deebaswaran,Mr.P.Dhanavendhan,Mr.S.MohamedRiyas,Mr.A.Mothilal Mr.G.Naveen Kumar ,Mr.J.R.K.Nimal Mr.G.Shanmugavel,Mr.S.Sivaseelan,Mr.S.Veerasubash,Mr.B.Vikram, from final year mechanical students completed their in-plant training in **SHIVAMOTORS,Thanjavur** from 20.01.2023 TO 26.01.2023.

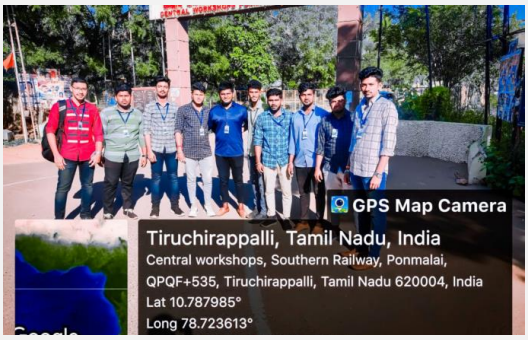
Mr.S.Sasidharan,Mr.K.Shiyam Sundar,Mr.M.Sivakumar,Mr.A.Sivaramakrishnan, from Third year mechanical students completed their in-plant training in **NLC,Neyveli** from 20.02.2023 TO 04.03.2023.

Mr.R.Abimanyu,Mr.V.Saran,Mr.B.Abinash,Mr.N.Arun,Mr.M.FarisMohamed, Mr.V.Gopi from final year mechanical students completed their in-plant training in **MACRO AUTOMATION,Chennai** from 21.01.2023 TO 03.02.2023.

Mr.G.Kesavan,Mr.S.Nithishkumar Mr.J.Sriram from final year mechanical students completed their in-plant training in **NIT,Trichy** from 23.01.2023 TO 27.01.2023.

Mr.M.Abinesh,Mr.P.Aswin,Mr.P.Balaji,Mr.K.HariDoss,Mr.M.Kabilesh,Mr.S.Kameshwaran,Mr.S.Manimaran,Mr.R.NaveenKumar from final year mechanical students completed their in-plant training in **TNSTC,Kumbakonam**from30.02.2023 TO 03.02.2023.

INTERNSHIP/IN-PLANT TRAINING PICS



STUDENTS CHAPTER

A National level one-day workshop on **"Virtual Lab"** was conducted by The Institution of Engineers (India), Student Chapter - MECH, on January 29th, 2023. The workshop was specifically organized for IES Members and was led by Dr. S. Krishnamohan, a Professor in the Department of Mechanical Engineering at EGSPEC, Nagapattinam. This workshop aimed to provide participants with an in-depth understanding and practical knowledge of virtual labs, enhancing their skills and expertise in this area.

On July 19th, 2023, The Institution of Engineers (India), Student Chapter - MECH, organized an international webinar on "3D Printing Applications." The event was specifically designed for IES Members and featured Dr. Shanawaz Patil as the lead speaker. Dr. Patil, an Associate Professor at REVA University, specializes in Manufacturing Science and Engineering with a notable expertise in advanced composites for

On July 8th, 2023, the Indian Welding Society (IWS Student Forum) organized a seminar on Non-Destructive Testing, aimed specifically at third-year Mechanical Engineering students. The seminar was led by Mr. S. Ganapathy, the Managing Director of Diamond NDT Inspection Service. Throughout the event, participants gained in-depth knowledge and insights into the latest techniques and technologies in

The department of mechanical engineering organised a national-level seminar on "Circular Economies in Waste Valorization: Revolutionizing Sustainable Materials and Smart Particles" for the ISTE Students chapter on 10-09-2023, with Dr. S. Jayabal, Principal of Government Engineering College, Sengipatti, as a speaker.

The department of mechanical engineering organised a webinar titled "Industry's Expectations from Students" for the ISTE Students chapter on 20-03-2023. The webinar will feature Mr. B. Gopalakrishnan, Business Head of MS Fire & Safety Equipments, as a speaker.

The department of mechanical engineering organised one-day workshop on the future of Automatic Sensor Technology for the Society of Automotive Engineers on 19.10.2023, with Dr. G. Nagarajan, Former Professor in the Department of Mechanical Engineering at Anna University, Chennai, as the speaker.

The department of mechanical engineering organised a seminar on "Guidelines for Journal Publication" for the ISTE Students chapter on 24-08-2023, featuring Dr. V. Naveetha Krishnan, Associate Professor at EGSPEC, as the speaker.

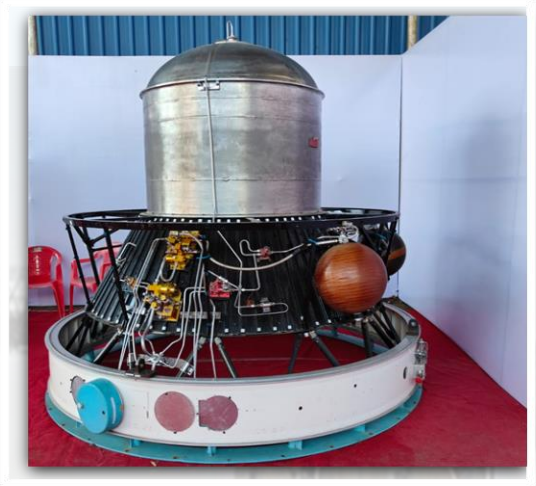
ISRO-IPRC EXPO-2023

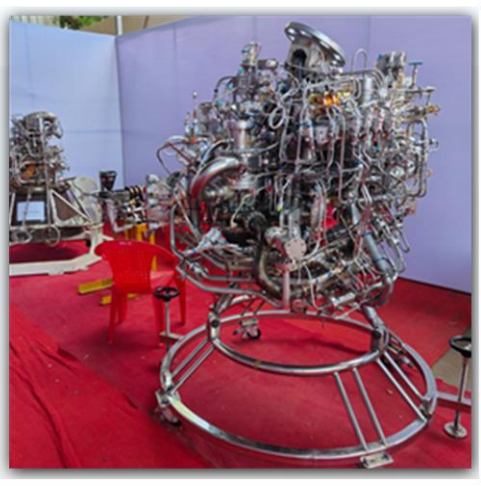
ISRO-IPRC and E.G.S PILLAY group of institution jointly organized a three days space expo from 04.10.2023 to 06.10.2023 held at E.G.S PILLAY ENGINEERING COLLEGE for school, college students and common public to enlighten the knowledge of space science . The ISRO-IPRC brought some prototype models of the engine and components and also some concepts were explained by animated videos. Before a week of the program our group of students from various institutes selected and trained by the IPRC Team to explain for school, college students and public. In this program the concepts of space science were explained and the vision and mission of the ISRO and stories of chandrayan, mangalayan, adthiya L1 were explained. The program team also organized a science drawing competition. Totally more than 10000 students from various schools, colleges and public were seen the expo and it helps to enhance their knowledge in space science.

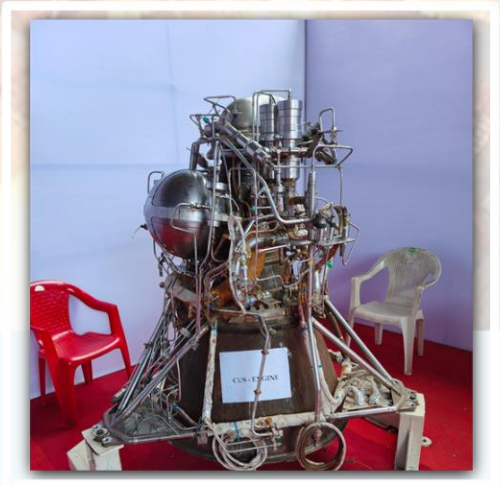
VOLUNTEERS FROM DEPARTMENT OF MECHANICAL ENGINEERING FOR ISRO IPRC EXPO-2023

ISRO-IPRC EXPO-2023

ROCKET MODELS & COMPONENTS

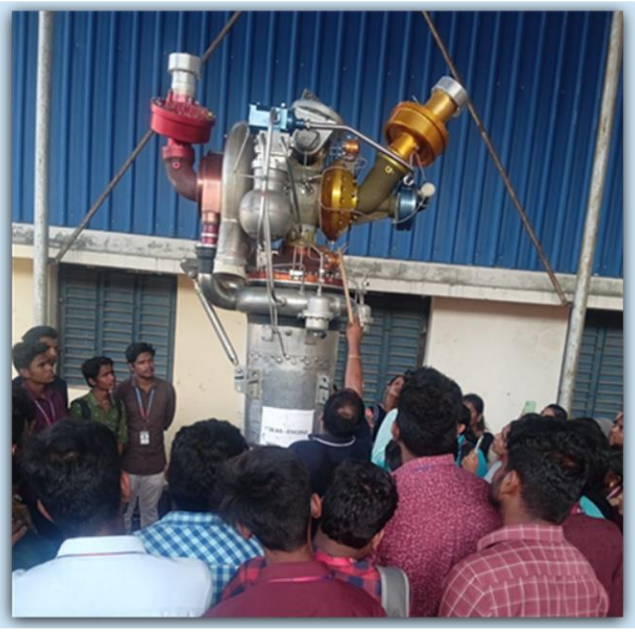






ISRO-IPRC EXPO-2023

STUDENT TRAINING



Department Activities

Dr.V.NavaneethaKrishnan presented a seminar about ”technical paper writing-A research perspective” for final year B mechanical students on 17.08.2023

Mr.M.Thirunavukkarasu presented a seminar about ”introduction to 3D printer” for third year A mechanical students on 17.08.2023.

Dr.M.K.Mishra presented a seminar about ”An overview of intellectual property rights” for final year A mechanical students on 17.08.2023.

Dr.M.K.Mishra presented a seminar about ”An overview of intellectual property rights” for final year B mechanical students on 24.08.2023.

Mr.Manimaran & Udhayakumar were alumini batch(2017-21) conducted a seminar about ”introduction to 2D designing and 3D modelling using solid works ” for third year B mechanical students on 24.08.2023.

A hands on training for second year A&B mechanical students titled “fundamentals of autocad” conducted by CADD Centre on 30.09.2023

Dr.P.J.Suresh babu, Department of EEE given a guest lecture on the topic of “Emotional quotient – A challenge to human being in the society” on 30.09.2023 for third year A mechanical students

Mr.Nandhakumar,Departement of EEE given a seminar on the topic of “safety measures against fire hazards” for third year B on 10.10.2023

Hands on practice training session on MAT LAB fundamentals final year B mechanical students by Dr.M.Nuthalsrinivasan department of ECE on 10.10.23

Dr.S.Ramabalan published a research article in SCIE titled **"Experimental feasibility study of coconut oil for sustainable electrical discharge machining on Hastelloy B2 "**on July 2023.

Dr.S.Ramabalan published a research article in SCIE titled **" Influence of hallo site nanotubes on mechanical and swelling properties of silicone rubber compound "**on August 2023.

Dr.V. Navaneethakrishnan published a research article in SCIE titled **"Effect of modified nanographene oxide loading on the swelling and compression set behavior of EPDM/SBR nano-composites"** on August 2023.

Dr.V. Navaneethakrishnan &Dr.G.Gurumoorthi published a research article in SCIE titled **"Effect of modified nanographene oxide (mGO)/carbon nanotubes (CNTs) hybrid filler on the cure, mechanical and swelling properties of silicone rubber composites"** on August 2023.

Dr.G.Sundaravadivel &Dr.V.Navaneethakrishnan published a research article in SCIE titled **"Effect of complex of resorcinol and hexamethylenetetramine modified halloysite nanotubes (RH-HNTs) on the mechanical and swelling characteristics of NR/EPDM nanocomposites"** on October 2023.

Dr.G.Sundaravadivel &Dr.V.Navaneethakrishnan published a research article in SCIE **titled "Influence of APTES modified HNTs on properties of NR/EPDM nanocomposites"** on October 2023.

Dr.G.Sundaravadivel published a research article in SCOPOUS titled **"Progress in the Development of Additive Manufacturing Techniques for Infrastructure Engineering"** on November 2023.

Dr.A.Arunkumar& Dr.V.Navaneethakrishnan published a research article in SCIE titled **"Effect of HNTs and modified HNTs nanotubes on the mechanical properties and swelling resistance of EPDM/SBR rubber blend nanocomposites"** on November 2023.

Mr.V.Manathunainathan &Dr.S.Krishnamohan published a research article in Springer -SCIE titled **"Fabrication of low cost USPER nanocomposites membrane for oil /seawater separation"** on December-2023.

Dr.S.Krishnamohan published a research article in SCIE titled **"Evolutionary U-Net for Lung cancer segmentaion on medical images"** on December-2023.

FACULTY PARTICIPATION

Mr.K.Senthilnathan,Dr.G. Gurumoorthi ,Mr. R. Sundar,Mr. K. Balasubramanian, Mr. G. Hari Narayanan,Mr. S. Murugesh were attended the five days Faculty development program Titled "Research opportunities and futures of additive Manufacturing Engineering" conducted by Sri Manakula Vinayagar Engineering college.from 30.01.2023 to 03.02.2023

Dr.V.Sivaramakrishnan,Dr.N.Ramanujam,Dr.G.Sundaravadivel,Mr.M.Subramaniyan were attended 8 weeks Faculty development program Titled "Fundamentals of welding science and technology" conducted by NPTEL from January 2023 to March 2023

Mr. M. Thirunavukarasu,Mr. S. Udayamuthu,Mr. S.Ramesh,Mr. G. Ashok Kumar,Mr. K. Kathirvelan,Mr. S.Hariskirthi were attended the five days Faculty development program Titled "Recent Advances in Composite Materials" conducted by NIT,Puducherry.from 27.03.2023 to 31.03.2023

Dr. V.Navaneethakrishnan,Dr. K.Senthilnathan,Dr. V.Manathunainathan Mr. S.Sargunathamizhan,Mr.N.Prabhu were attended the Three days days Faculty development program Titled "Entrepreneurship Development program" conducted by Jayalakshmi Institute of Technology from 06.04.2023 to 08.04.2023

Dr.G. Gurumoorthi attended 8 weeks Faculty development program Titled "Foundation of computational Fluid Dynamics" conducted by NPTEL from July 2023 to September 2023.

Dr.V.Sivaramakrishnan,Dr.G.Sundaravadivel were attended 8 weeks Faculty development program Titled "Priniciples of metal forming Technology" conducted by NPTEL from July 2023 to September 2023.

Dr.A.Arunkumar,Dr.G.Gurumoorthi,Dr.M.Kathiresan,Dr.S.Krishnamohan Dr.V.Sivaraman were attended the Three days Faculty development program Titled "Future of Sustainable : Electric vehicles and smart grid" conducted by S.R.M.Institute of science and technology.from 27.07.2023 to 29.07.2023

Dr.A.Arunkumar,Dr.N.Ramanujam,Mr.P.Kalaignar,Mr.K.Kathirvelan,Mr.G. Ashokkumar,Mr.S.Udhayamuthu,Mr.S.Rameshwere attended the six days days Faculty development program Titled "Recent advancements in materials, Manufacturing and Technology" conducted by Swarnandhra college of engineering & Technology from 30.10.2023 to 04.11.2023

Mr.S.Harish Kirthi attended the six days ATAL Faculty development program Titled "Opportunities in Hybrid Manufacturing Technologies" conducted by Government college of Engineering, Sengipatti from 04.12.2023 - 09.12.2023

Dr.A.Arunkumar,Dr.N.Ramanujam,Mr.P.Kalaignar,Mr.K.Kathirvelan,Mr.G .Ashokkumar,Mr.S.Udhayamuthu,Mr.S.Rameshwere attended the six days days Faculty development program Titled "Recent advancements in materials, Manufacturing and Technology" conducted by Swarnandhra college of engineering & Technology from 04.12.2023 - 08.12.2023

SEMINAR

Dr.S.Krishnamohan & Mr.R.Hemachandran organized a one day seminar on "Role of additive manufacturing applications towards environmental sustainability" on 20.09.2023.**Dr.J.Jeevamalar**, Assistant Professor,Engineering Design division,CEG campus,Anna university,Chennai.presented the various advanced topics in additive manufacturing.

Dr.S.Krishnamohan & Mr.R.Hemachandran organized a one day hands on workshop "virtual lab-an learners perspective " by Mr.P.F saneesh,project manager,Amrita vidyapeetam for II A&B on 09.10.2023.

Mr.N.Manikandan&Mr.M.Subramaniyan organized "orientation program of society of automotive engineers"on 19.10.2023 presented by Dr.S.BeerMohamed,M.Sc,ME,Ph.d,Associate professor,Department of Material Science,Central university,Thiruvarur

WORKSHOP ORGANIZED

Summary Report

Workshop Title: Role of Additive Manufacturing Applications towards Environmental Sustainability

Date: 20.09.2023

Delivered by: Dr. J. Jeevamalar, Assistant Professor, Mechanical Engineering, Anna University Chennai, CEG Campus.

Objective:

The primary objective of the workshop titled " Advances in Additive Manufacturing " was to :

1. Provide faculty members with new teaching strategies and methodologies to enhance student engagement and learning outcomes.
2. Foster collaboration and knowledge sharing among faculty members from different departments.
3. Introduce innovative technologies and tools that can be integrated into teaching practices.
4. Discuss current trends and best practices in additive manufacturing.

Key Topics Covered:

- Resource Efficiency in AM Processes
- Energy Consumption and Carbon Footprint
- Lifecycle Assessment of AM Products
- Sustainable Materials in AM
- Customization and Localized Production
- Waste Reduction and Recycling
- Case Studies and Best Practices
- Regulatory and Policy Implications
- Social and Economic Impacts
- Future Trends and Innovations

Participant Engagement:

- Faculty members from EGSPEC and Other Colleges

WORKSHOP ORGANIZED

Summary Report

Workshop Title: Hands on training in Wire Cut EDM and Wear Testing Machine

Organized by: Dr. S. Krishna Mohan, Professor, Mechanical Engineering

Date: 04.03.2023 – 05.03.2023

Objective:

The primary objective of the workshop titled "Fabrication of metal matrix composites through powder metallurgy techniques" was to :

1. Assign new teaching tactics and methodologies to faculty members in order to improve learning results and student engagement.
2. Encourage faculty members from other disciplines to work together and share expertise.
3. Offer cutting-edge resources and technology that can be incorporated into instructional strategies.
4. Talk about excellent practices and current developments in additive manufacturing.

Key Topics Covered:

- ✓ Work piece Preparation:
- ✓ Electrode Selection and Preparation:
- ✓ Dielectric Fluid Management:
- ✓ Machine Parameters Setting:
- ✓ Monitoring and Maintenance:
- ✓ Post-Machining Inspection:
- ✓ Operator Training and Skill:

Participant Engagement:

- Faculty members from EGSPEC and Other Colleges

Memorandum of Understanding (MoU)

VB Ceramic Consultants, located in Chennai (600041), signed a Memorandum of Understanding (MoU) on February 10, 2023. The purpose of this MoU is to support advanced equipment sponsorship and to conduct training programs for students, researchers, and faculty members. These training programs are designed to enhance the skills and knowledge of participants in handling and utilizing advanced technological equipment, thereby promoting educational and research excellence in the field.

A value-added course titled **"Heat Ventilation and Air Conditioning (HVAC)"** was conducted by Pumo Technovation India Private Limited in Coimbatore from January 2nd, 2023, to January 11th, 2023. The course was convened by Dr. A. Arunkumar, M.E., Ph.D., Assistant Professor of Mechanical Engineering, and coordinated by Dr. G. Sundaravadivel, M.E., Ph.D., Assistant Professor of Mechanical Engineering.

The course began on January 2nd with a morning session covering unit conversion and the functions of HVAC, followed by an afternoon session on sensible heat and latent heat. On January 3rd, the forenoon session focused on types of condensers, expansion valves, and evaporators, while the afternoon session covered types of filters and the functions of refrigerants.

On January 4th, participants learned about different types of air-conditioning in the forenoon and about Air Handling Units (AHU), VRF, and VRU systems in the afternoon. The next day,

January 5th, included sessions on chillers and air distribution systems in the morning, and dust materials, thermal insulation, and insulating materials in the afternoon.

The forenoon of January 6th was dedicated to the design of ducts, with the afternoon session focusing on calculations using duct size applications.

January 7th included a full duct design session in the morning, covering components such as shoe pieces, branches, and mouthpieces, and an afternoon session on types of ventilation and air flow symbols.

On January 9th, participants learned about ventilation systems (hood) in the morning, followed by hood calculations and general working areas in the afternoon. The next day, January 10th, covered island-type applications and wall types in the forenoon, and the design of hoods, grills, and filters in the afternoon.

The course concluded on January 11th with a morning session on pumps and pipe fittings, followed by assessments and feedback in the afternoon.

This comprehensive training program provided participants with a detailed understanding of HVAC systems, including unit conversion, heat types, components of HVAC systems, air distribution, duct design, ventilation, and practical design applications, equipping them with the skills needed to effectively design and manage HVAC systems.

VALUE ADDED COURSE

MECTROZ-23

Student chapter

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