PANIMALAR ENGINEERING COLLEGE
An Autonomous Institution
Bangalore Trunk Road, Nazarathpet, Poonamallee, Chennai- 600 123
Accredited by NBA, New Delhi and Affiliated to Anna University, Chennai
Approved by All India Council for Technical Education, New Delhi
DEPARTMENT OF MECHANICAL ENGINEERING
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Club Activities

ENERGY CLUB

KARVANS' 3D CLUB

ADDITIVE MANUFACTURNG AND
DESIGN CLUB

PANIMALAR ENGINEERING COLLEGE

DEPARTMENT OF MECHANICAL ENGINEERING

ENERGY CLUB

Energy Club

S.No.	Date	Name of the activity	Number of students participated
1	01.10.2024	Enfuse Inaguration	250
2	05.04.2024	Presentation on Energy Saving Ideas	32
3	05.01.2024	Debate on Energy Conservation and Energy Efficiency	36
4	22.10.2023	Essay Writing competition on Energy Saving	74
5	27.07.2023 to 28.07.2023	Workshop on “Electric vehicles and Hybrid vehicles”	120
6	09.02.2023	Inauguration of energy club and Special lecture by Dr.T.Mayava M.E.,Ph.D	120

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ENERGY CLUB

Events organized during Academic Year 2024-2025

S.No.	Date	Name of the activity	Number of students participated
1	01.10.2024	Enfuse Inaguration	250

Date: OCtober 01, 2024

Venue: PIT Auditorium

Participants : 250

Enfuse actively engages with engineering students, fostering innovation and providing opportunities for hands-on learning in the fields of energy efficiency, sustainability, and digital transformation. By creating strong connections between academic institutions and industry, Enfuse helps students bridge the gap between theoretical knowledge and practical application, preparing them for successful careers in engineering and technology.

Key Initiatives and Engagements:

1. **Workshops and Training Programs:** Enfuse organizes specialized workshops and training sessions for engineering students, focusing on real-world applications of energy management, IoT (Internet of Things), and AI (Artificial Intelligence) in sustainability and digital transformation. These programs provide students with insights into cutting-edge technologies and industry best practices.
2. **Internships and Project Collaborations:** Enfuse offers internship programs where students gain practical experience by working on real projects. These internships allow students to apply their academic knowledge to solve industry challenges in energy efficiency, sustainability consulting, and digital innovation.
3. **Hackathons and Competitions:** To promote innovation and problem-solving, Enfuse partners with educational institutions to host hackathons and competitions. These events encourage students to develop creative solutions for industry problems, especially in areas like smart infrastructure, renewable energy integration, and operational efficiency.
4. **Research and Development Support:** Enfuse collaborates with universities to support R&D projects that align with their core focus areas. This partnership allows students to work on advanced research topics such as sustainable energy systems,

IoT-enabled solutions, and AI-based process automation. These projects give students an opportunity to contribute to real-world advancements in engineering.

Benefits for Engineering Students:

- **Practical Exposure:** Students get first-hand experience working with the latest technologies and tools used in the industry, enhancing their technical skills and employability.
- **Industry Mentorship:** Enfuse provides students with mentorship from experienced professionals, offering guidance on career paths, emerging industry trends, and innovation opportunities.
- **Networking Opportunities:** Students have the chance to network with industry leaders, gain professional contacts, and explore career opportunities in energy management and sustainability.
- **Real-World Problem Solving:** By participating in Enfuse's projects and competitions, students develop critical problem-solving skills, learning how to apply their knowledge to address complex challenges.

Success Stories:

Enfuse’s collaboration with engineering students has led to several success stories, where students have developed innovative solutions for energy conservation, smart infrastructure, and digital automation. These projects not only enhance student learning but also contribute to Enfuse’s mission of promoting sustainable practices across industries.

Conclusion:

Through its interaction with engineering students, Enfuse plays a key role in shaping the next generation of engineers and innovators. By providing practical learning opportunities, mentorship, and industry insights, Enfuse empowers students to become leaders in the fields of sustainability and digital transformation. Their collaborative approach helps students build essential skills and prepares them to contribute to a more energy-efficient, sustainable future.

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Events organized during Academic Year 2023-2024

S.No.	Date	Name of the activity	Number of students participated
1	05.01.2024	Debate on Energy Conservation and Energy Efficiency	36
2	05.04.2024	Presentation on Energy Saving Ideas	32

Debate Report: Energy Conservation vs. Energy Efficiency

Date: January 5, 2024

Venue: MECH A.V Hall

Introduction:

On January 5, 2024, the Department of Mechanical Engineering at Panimalar Engineering College organized a thought-provoking debate on the topic of "Energy Conservation vs. Energy Efficiency." The event aimed to stimulate critical discourse and foster a deeper understanding of the key concepts and principles underlying energy conservation and energy efficiency.

Debate Details:

The debate attracted enthusiastic participation from students, faculty members, and experts in the field of energy conservation and mechanical engineering. Participants were divided into teams, with each team tasked with presenting arguments either in favor of energy conservation or energy efficiency.

Key Points Discussed:

Energy Conservation:

Participants advocating for energy conservation highlighted the importance of reducing overall energy consumption through behavioral changes, lifestyle adjustments, and policy interventions. They emphasized the need for awareness campaigns, education initiatives, and government regulations to promote energy-saving practices among individuals, industries, and institutions.

Energy Efficiency:

On the other hand, proponents of energy efficiency argued that optimizing energy use and maximizing output with minimal input is paramount for sustainable development. They emphasized technological advancements, innovation, and engineering solutions aimed at improving energy efficiency in various sectors, including transportation, manufacturing, and building construction.

Economic Considerations:

Both sides of the debate deliberated on the economic implications of energy conservation and energy efficiency measures. While advocates of energy conservation highlighted the potential cost savings and long-term benefits of reducing energy consumption, supporters of energy efficiency emphasized the economic opportunities and competitive advantages associated with investing in energy-efficient technologies and practices.

Environmental Impact:

Participants discussed the environmental benefits of energy conservation and energy efficiency in terms of reducing greenhouse gas emissions, mitigating climate change, and preserving natural resources. They underscored the interconnectedness between energy use, environmental sustainability, and global challenges such as air pollution and resource depletion.

Judges:

1. Dr.T.Mayavan, Asso. Prof. / Mech
2. Dr. N.Poyyamozhi, Asst. Prof. / Mech

Winners:

1. KAVIN L (2021PECME181, III Year)
2. SAKTHIVEL B (2021PECME247, III Year)

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Conclusion:

The debate on "Energy Conservation vs. Energy Efficiency" provided a platform for lively discussions, exchange of ideas, and critical analysis of strategies to address energy-related challenges. Participants gained valuable insights into the nuances of energy conservation and energy efficiency and explored potential synergies between the two approaches.

As we navigate towards a more sustainable future, it is imperative to recognize the complementary nature of energy conservation and energy efficiency efforts. By promoting awareness, fostering innovation, and implementing holistic solutions, we can collectively contribute to building a cleaner, greener, and more resilient energy ecosystem for generations to come.

We extend our sincere appreciation to all the participants, organizers, and attendees who contributed to the success of the debate. Let us continue to engage in constructive dialogues and collaborative endeavors aimed at advancing the cause of energy conservation and energy efficiency.

Photo:

Report: Presentation on Energy Saving Ideas

Date: April 5, 2024

Venue: MECH A.V Hall

Introduction:

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On April 5, 2024, a group of students presented a series of innovative and insightful ideas on energy saving at Panimalar Engineering college, Department of Mechanical Engineering. The presentation aimed to showcase practical solutions and strategies to promote energy conservation and efficiency in various contexts, ranging from households to industries.

Presentation Details:

The presentation featured a diverse range of energy-saving ideas, each meticulously researched and thoughtfully presented by the participating students. The topics covered various aspects of energy conservation, renewable energy sources, and sustainable practices, highlighting the importance of individual and collective efforts in addressing energy-related challenges.

Key Energy Saving Ideas:

Renewable Energy Technologies:

Students discussed the potential of renewable energy sources such as solar, wind, and hydroelectric power to reduce reliance on fossil fuels and mitigate carbon emissions. They presented case studies and examples of successful renewable energy projects, emphasizing the scalability and affordability of these technologies.

Energy-Efficient Building Design:

Participants explored the principles of energy-efficient building design, including proper insulation, passive solar design, and efficient HVAC systems. They proposed incorporating green building standards and energy performance metrics to optimize energy use and minimize environmental impact in construction projects.

Smart Energy Management Systems:

The presentation highlighted the role of smart energy management systems in optimizing energy consumption, monitoring energy usage patterns, and identifying opportunities for efficiency improvements. Students showcased innovative technologies such as smart meters, energy monitoring devices, and home automation systems.

Behavioral Change and Awareness Campaigns:

Students underscored the importance of fostering behavioral change and promoting energy-saving habits among individuals and communities. They proposed organizing awareness campaigns, educational workshops, and incentivized programs to encourage energy conservation practices and raise public awareness about the benefits of energy efficiency.

Conclusion:

The presentation on energy-saving ideas by students was both enlightening and inspiring, demonstrating their commitment to sustainability and environmental stewardship. The innovative solutions and strategies presented underscored the potential for transformative change in how we produce, consume, and manage energy.

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As we confront the challenges of climate change and resource depletion, initiatives like these play a crucial role in shaping a more sustainable future for generations to come. The ideas presented serve as a testament to the creativity, ingenuity, and dedication of our students in contributing to the global effort towards energy conservation and environmental preservation.

We extend our sincere appreciation to all the students who participated in the presentation, as well as to the faculty members and organizers who supported and facilitated the event. Let us continue to harness the power of ideas and innovation to drive meaningful progress towards a greener, cleaner, and more sustainable world.

Events organized during Academic Year 2022-2023

S.No.	Date	Name of the activity	Number of students participated
1	09.02.2023	Inauguration of energy club and Special lecture by Dr.T.Mayava M.E.,Ph.D	120
2	27.07.2023 to 28.07.2023	Workshop on “Electric vehicles and Hybrid vehicles”	120

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3	22.10.2023	Essay Writing competition on Energy Saving	74

Inauguration Report: Energy Club Launch and Special Lecture

Date : 09.02.2023
Venue : MECH A.V Hall
Guest : **Dr. N. Nithyanandan M.E., Ph.D**
Professor and Head
Department of Mechanical Engineering
Panimalar Institute of Technology, Chennai -123.

Attendees :
1. Dr. L. Karthikeyan, Professor and Head,
2. Dr. T. Mayavan M.E., Ph.D, Professor
3. Dr. N. Poyyamozhi, Assistant Professor
4. Student Members

Introduction:

- Panimalar Engineering college, Department of Mechanical Engineering successfully inaugurated its Energy Club on 09.02.2023 under the guidance of **Dr. L. Karthikeyan** M.E., Ph.D., the Head of the Department.
- The inauguration ceremony was marked by the presence of 120 enthusiastic students and staff members who gathered to witness the commencement of this significant initiative.
- Moreover, the event featured a special lecture delivered by **Dr. N. Nithyanandan**., an esteemed expert in the field.

Inauguration Ceremony:

- The inauguration ceremony commenced with an opening address by Dr. L. Karthikeyan, who highlighted the importance of promoting energy awareness and sustainability initiatives within the institution.
- He emphasized the pivotal role that the Energy Club would play in fostering a culture of energy conservation, innovation, and research among students and staff.
- Following Dr. Karthikeyan's address, the Energy Club was officially launched amidst great anticipation and applause from the attendees.
- The club's objectives, mission, and upcoming activities were outlined, generating significant interest and participation among the audience.

Special Lecture by Dr. N. Nithyanandan M.E., Ph.D.:

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- **Dr. N. Nithyanandan M.E., Ph.D**., an eminent authority in the field of energy and sustainability, delivered a captivating and informative lecture as part of the inauguration event.
- His presentation delved into various aspects of energy conservation, renewable energy technologies, and the global imperative for sustainable energy practices.
- **Dr. N. Nithyanandan,** shared valuable insights, case studies, and research findings to underscore the critical need for proactive measures in mitigating energy-related challenges.
- His expertise and passion for the subject resonated with the audience, inspiring them to explore innovative solutions and contribute meaningfully to the energy sector.

Interactive Sessions and Q&A:

- Following the lecture, interactive sessions and a lively question-and-answer segment provided attendees with an opportunity to engage directly with **Dr. N. Nithyanandan**.
- Participants actively discussed pertinent issues, sought clarifications, and exchanged ideas on potential projects and initiatives to be undertaken by the Energy Club.

Conclusion:

- The inauguration of the Energy Club and the special lecture by **Dr. N. Nithyanandan** M.E., Ph.D., marked a significant milestone in our institution's commitment to energy awareness and sustainability.
- The event served as a catalyst for fostering greater collaboration, knowledge sharing, and action towards creating a more energy-conscious campus community.
- Moving forward, the Energy Club endeavors to spearhead a range of activities, including workshops, seminars, research projects, and outreach initiatives aimed at promoting energy efficiency and environmental stewardship.
- With the support of enthusiastic students, dedicated staff, and expert guidance from luminaries such as **Dr. N. Nithyanandan**, we are poised to make meaningful contributions towards a more sustainable future.
- We extend our heartfelt gratitude to all the participants, speakers, and organizers who contributed to the success of this inaugural event. Together, let us embark on this journey towards a greener and more sustainable tomorrow.

Photos:

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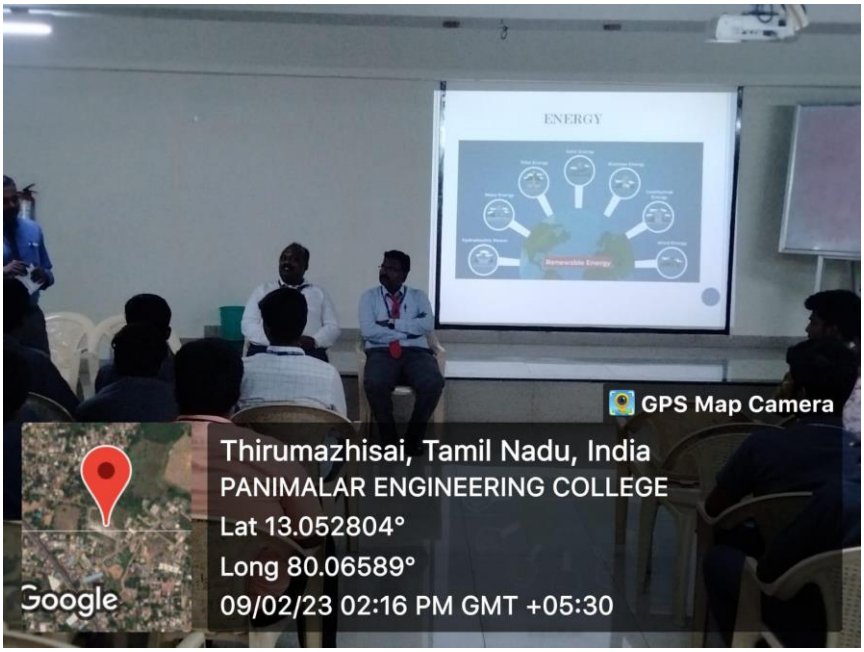
ENERGY CLUB



FACULTY INCHARGE: **N. POYYAMOZHI, AP/MECH Department**

MEMBER OF THE STUDENTS:

S.NO.	NAME	YEAR	ROLE
1	SAGAR M S	IV/ MECH	President
2	SHAIJU C	IV/ MECH	Vice President
3	KEERTHI RAMANAA K M	III/ MECH	Treasurer
4	SUMAN M	IV/ MECH	Committee Member

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5	SANTHOSH R	IV/ MECH	
6	NANTHAKUMAR S	IV/ MECH	
7	DINESH KUMAR S	IV/ MECH	
8	GOKULRAJ V	III/ MECH	
9	MANOJ KUMAR S	III/ MECH	
10	PRASANTH R	III/ MECH	
11	RAJASEKAR D	III/ MECH	
12	SURENDAR S	III/ MECH	
13	KISHORE V	III/ MECH	
14	SUDHARSHAN A	III/ MECH	
15	UMAPATHY V	III/ MECH	

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Essay Writing Competition Report: Promoting Energy Saving

Date: July 14, 2023
Venue: MECH III Class room

Participants: 74 Students

Introduction:

On July 14, 2023, the Panimalar Engineering College, Department of Mechanical Engineering organized an Essay Writing Competition with the theme of "Energy Saving." The event aimed to raise awareness among students about the importance of energy conservation and encourage them to reflect on innovative ways to reduce energy consumption in their daily lives.

Competition Details:

The Essay Writing Competition attracted participation from 74 enthusiastic students, who showcased their creativity and insights on the topic of energy saving. Participants were given a set duration to craft their essays, during which they delved into various aspects of energy conservation, sustainable practices, and the role of individuals in mitigating energy-related challenges.

Themes Explored:

The essays submitted for the competition explored a wide range of themes related to energy saving, including:

Importance of Energy Conservation: Many participants emphasized the critical need for energy conservation to address climate change, reduce environmental impact, and ensure a sustainable future for generations to come.

Innovative Solutions: Several essays showcased innovative solutions and technologies for energy efficiency, such as renewable energy sources, smart grid systems, and energy-efficient appliances.

Behavioral Change: A recurring theme in the essays was the significance of fostering behavioral change and adopting energy-saving habits in everyday life, such as turning off lights when not in use, using public transportation, and reducing wastage.

Education and Awareness: Participants highlighted the role of education and awareness campaigns in promoting energy-saving practices, advocating for the inclusion of energy conservation topics in school curricula and community outreach programs.

Evaluation and Judging:

A panel of judges, comprising faculty members and experts in the field of energy conservation, evaluated the essays based on criteria such as creativity, relevance to the theme, clarity of expression, and originality of ideas. The judging process was thorough and impartial, ensuring a fair assessment of the participants' submissions.

Judges:

1. Mr.C. Karthikeyan, Asso. Prof. / Mech
2. Dr. N.Poyyamozhi, Asst. Prof. / Mech

Winners and Recognition:

After careful deliberation, the judges selected the top essays based on their merit and adherence to the competition guidelines. The winners were announced and felicitated during a special ceremony, where they received certificates of recognition for their outstanding contributions.

Winners:

1. SAGAR M S (2021PECME310, III Year)
2. SHAIJU C (2021PECME262, III Year)
3. POZHILAN P (2022PECME234, II Year)

Conclusion:

The Essay Writing Competition on Energy Saving served as a platform for students to express their ideas, insights, and concerns regarding energy conservation. Through their thought-provoking essays, participants demonstrated a deep understanding of the importance of energy saving and proposed practical solutions to address this pressing global issue.

The success of the competition underscores the commitment of our institution to promoting environmental sustainability and empowering the next generation of leaders to champion energy-saving initiatives. As we move forward, let us continue to inspire and engage students in endeavors that contribute to a greener, cleaner, and more sustainable future for all.

We extend our heartfelt appreciation to all the participants, organizers, judges, and sponsors who contributed to the success of the Essay Writing Competition. Together, let us harness the power of knowledge, creativity, and collective action to make a positive impact on our planet's energy future.

Photos:

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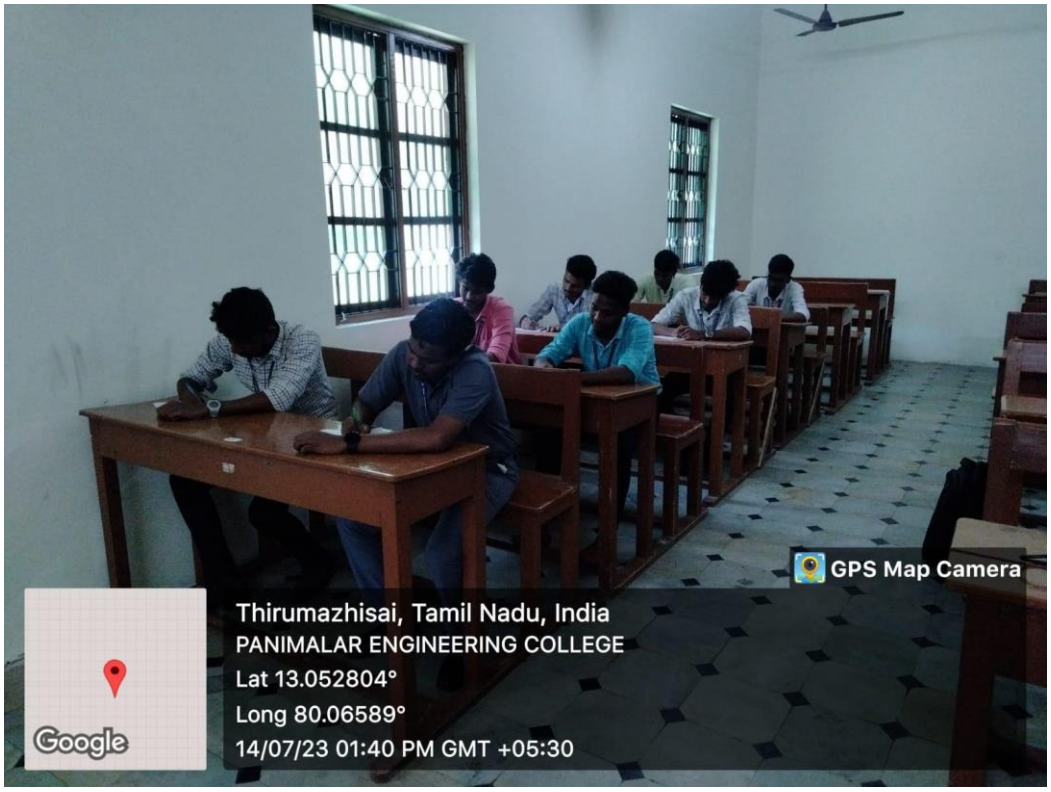

REPORT:

TWO DAYS INTERNATIONAL WORKSHOP ON
"ELECTRIC VEHICLES AND HYBRID VEHICLES"

Date: July 27, 2023
Venue: AV Hall room

Participants: 120 Students

The Department of Mechanical Engineering organized a "Two Days International Workshop on Electric Vehicles, and Hybrid Vehicles" from July 27th to July 28th, 2023. The workshop took place at Workshop-I and A.V Hall-I within the department. Dr. Prabhakar Sekar, Associate Professor of Mechanical Engineering (Automobile Stream) at Wollo University, Kombolcha Institute of Technology, Ethiopia, was the guest speaker.

On the first day (July 27, 2023), Dr. Prabhakar Sekar commenced the session by introducing himself and emphasizing the significance of the workshop. He welcomed the students and initiated the session by providing real-life examples to explain the basics of electric vehicles, internal combustion engines, and hybrid vehicles. He covered topics such as

types of hybrid vehicles, powertrain batteries, electric motors, pollution in EVs, challenges in EVs, EV charging systems, and EV safety systems. Dr. Sekar engaged the students through interactive questioning, simplifying complex concepts, and addressing their queries.

The second day (July 28, 2023) featured a session on the dismantling and assembling of a four-stroke Bajaj engine. Additionally, a live demonstration of an electric bike and motor was conducted, giving participants a hands-on experience with practical applications.

The workshop provided a comprehensive understanding of electric and hybrid vehicle technologies, as well as insights into internal combustion engines. Dr. Prabhakar Sekar's expertise and interactive teaching approach enhanced the learning experience, making the event informative and engaging for all attendees.

The successful coordination of the entire event was led by Dr. N. Poyyamozhi, Assistant Professor in the Department of Mechanical Engineering. We extend our heartfelt gratitude to the management for their unwavering support in organizing and facilitating such valuable and informative events. Their continuous encouragement and backing are instrumental in making events like these a resounding success.

The "Two Days International Workshop on I.C. Engines, Electric Vehicles, and Hybrid Vehicles" yielded fruitful outcomes, enriching participants' knowledge and fostering valuable interactions. Attendees gained an in-depth understanding of various aspects of internal combustion engines, electric vehicles, and hybrid vehicles, thanks to the expert insights provided by Dr. Prabhakar Sekar. The event facilitated interactive sessions, enabling participants to ask questions and receive clear explanations, thus enhancing their comprehension. The workshop's hands-on sessions, including the dismantling and assembling of a four-stroke Bajaj engine and the live demonstration of an electric bike and motor, provided practical exposure to the technologies discussed. This practical experience proved invaluable in reinforcing theoretical concepts and bridging the gap between theory and application.

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DRONE CLUB

Year & Month of Establishment:09th Feb 2023

Objective:

To create an awareness among students in the field of Drone technology and Drone piloting :

1. Enhance practical exposure to drone technology.
2. To train students in the field of Drone Piloting
3. Provide networking opportunities with professionals.

Targeted Audience: Students Interested in Drone Technology

Outcomes:

1. Basic knowledge in the concept of Drone Technology.

2. Prepare students for careers in Drone Technology.

Consolidate Events Details

S.no	Activities	Topics	Date	Resource person
1	Workshop	Two Days workshop on Drone Technology	5.9.2024 & 6.9.2024	Mr. Damodharan , AVIATORQ
2	Workshop	Two-Day Workshop on "Non-Destructive Testing"	23.07.2024 & 24.07.2024	Mr. Selwin and Mr. Johnson, Sri Sai Sis Institute of NDT
3	Workshop	One Day Workshop on Drone Design	03.04.2024	Mr. Valladurai, Skyfi Labs
4	Guest Lecture	Guest Lecture on Career Opportunities in Drone Piloting	08.02.2024	Mr. Gokul, Vimanam Drones
5	Guest Lecture	Guest Lecture on Drone Design	01.09.2023	Mr. Gurunathan, MEP Engineers
6	Workshop	Workshop on Drone Assembling	27.08.2023	Mr. Arwin Raj, Vimanam
7	Inauguration	Inauguration	09.02.2023	Dr. L. Karthikeyan, H.O.D -Mech

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8	Guest Lecture	Guest Lecture on Drone Applications	10.03.2023	Mr. Govardhan Giri

Faculty Coordinators

- **Convener – Dr. I. John Solomon, Asst Prof/ Mech**
- **Coordinator – Dr. J. Gunasekeran, Asst Prof/ Mech**

Student Coordinators

- **Chair– Mr. S Sagar IV Year Mech**
- **Vice-Chair–Mr Hariharan S IV Year Mech**
- **Secretary–Mr Ramsanjay V S IV Year Mech**
- **Joint Secretaries–Keerthi Ramanan K M III Year Mech**

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DRONE CLUB

Academic Year 2024-2025

S.no	Activities	Topics	Date	Resource person
1	Workshop	Two Days workshop on Drone Technology	5.9.2024 & 6.9.2024	Mr. Damodharan , AVIATORQ
2	Workshop	Two-Day Workshop on "Non-Destructive Testing"	23.07.2024 & 24.07.2024	Mr. Selwin and Mr. Johnson, Sri Sai Sis Institute of NDT

Photo for the Event

A two days' workshop and hands on training on Drone Technology was organized by the Drone club of the Department of Mechanical Engineering In Association with AVIATORQ. Around 45 students participated in this two days event Mr Damodharan and his team from team members carried out the workshop as well the hands on training session for two days in a very effective manner. The participants were interactive and the event catered to the need of the student in the

specific domain of drone technology. Dr L Karthikeyan , Head of the Department of Mechanical Engineering felicitated the students by awarding the certificates to the participants.

Event Report: Two-Day Workshop on "Non-Destructive Testing"

Organized by :Department of Mechanical Engineering, Panimalar Engineering College
Dates :23rd July 2024 - 24th July 2024
Venue :Mechanical Department AV Hall
Participants :46 Students
Coordinators :Dr. I. John Solomon, Dr. J. Gunasekeran
Resource Persons : Mr. Selwin and Mr. Johnson, Sri Sai Sis Institute of NDT

Introduction:

The Department of Mechanical Engineering at Panimalar Engineering College organized a two-day workshop on "Non-Destructive Testing" (NDT) on 23rd and 24th July 2024. The event was aimed at providing students with a comprehensive understanding of various non-destructive testing methods, which are crucial in ensuring the integrity and reliability of materials and structures without causing damage.

Objectives:

- To introduce the principles and applications of Non-Destructive Testing (NDT).
- To provide hands-on experience with various NDT techniques.
- To enhance the practical knowledge of students in quality control and material inspection.

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Day 1: 23rd July 2024

The workshop commenced with a welcome address by Dr. L. Karthikeyan, Head of the Department of Mechanical Engineering. He emphasized the importance of NDT in the engineering field and how it contributes to safety and quality assurance in industries.

Mr. Selwin from Sri Sai Sis Institute of NDT led the first session, where he introduced the fundamentals of NDT. The session covered:

- An overview of NDT and its significance in various industries.
- Basic principles of commonly used NDT methods such as Ultrasonic Testing (UT), Radiographic Testing (RT), Magnetic Particle Testing (MPT), and Liquid Penetrant Testing (LPT).
- Real-world applications of NDT in fields like aerospace, automotive, and construction.

In the afternoon session, Mr. Selwin conducted a practical demonstration of Liquid Penetrant Testing (LPT) and Magnetic Particle Testing (MPT). Students were given the opportunity to participate in the hands-on exercises, allowing them to gain a better understanding of the techniques.

Day 2: 24th July 2024

The second day of the workshop was led by Mr. Johnson, who focused on advanced NDT techniques. His session included:

- A detailed explanation of Ultrasonic Testing (UT) and Radiographic Testing (RT).
- The role of NDT in defect detection, material characterization, and structural health monitoring.
- Safety precautions and standards related to NDT.

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In the practical session, students were introduced to Ultrasonic Testing equipment and were guided through the process of inspecting sample materials. Mr. Johnson also demonstrated Radiographic Testing, explaining how it is used to detect internal flaws in welded joints and castings.

The workshop concluded with an interactive Q&A session, where students had the opportunity to clarify their doubts and discuss the challenges faced in real-world NDT applications.

Conclusion:

The two-day workshop was a resounding success, with active participation from all 46 students. The hands-on experience and expert guidance from Mr. Selwin and Mr. Johnson provided valuable insights into Non-Destructive Testing. The knowledge gained from this workshop will undoubtedly benefit the students in their future careers, especially in fields that require stringent quality control and safety measures.

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DRONE CLUB

Academic Year 2023-24

DRONE CLUB ACTIVITIES

S.no	Activities	Topics	Date	Resource person
1	Workshop	One Day Workshop on Drone Design	03.04.2024	Mr. Valladurai, Skyfi Labs
2	Guest Lecture	Guest Lecture on Career Opportunities in Drone Piloting	08.02.2024	Mr. Gokul, Vimanam Drones
3	Guest Lecture	Guest Lecture on Drone Design	01.09.2023	Mr. Gurunathan, MEP Engineers
4	Workshop	Workshop on Drone Assembling	27.08.2023	Mr. Arwin Raj, Vimanam

1. Workshop on Drone Design

Photo for the event

The one-day workshop on drone design conducted by SkyFi Lab at Panimalar Engineering College saw active participation from 24 enthusiastic students. The workshop provided a

comprehensive overview of drone technology, its applications, and hands-on experience in designing and building drones. The session commenced with an introduction to the fundamentals of drones, covering topics such as aerodynamics, propulsion systems, and control mechanisms. Participants gained insights into the various types of drones, their components, and how they function. Mr. Valladurai from Skyfi labs a seasoned expert in the field of drone technology help the students by sharing his knowledge in the field of drone design.

2. Guest Lecture on Career Opportunities in Drone Piloting

Photo for the event

The primary objective of the guest lecture is to provide students with insights into the art and science of drone piloting, exploring the principles, techniques, and challenges associated with controlling unmanned aerial vehicles. Mr. Gokul, a seasoned professional from Vimanam Drones, will serve as the guest speaker for the lecture. With extensive experience in drone piloting and training, Mr. Gokul brings a wealth of practical knowledge and expertise to share with the audience.

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3. Guest Lecture on Drone Design

Panimalar Engineering College had the privilege of hosting a guest lecture on "Drone Design" on May 20, 2024. The lecture, held in the Mechanical Seminar Hall, was delivered by Mr. Gurunathan from MEP Engineers. The event attracted a diverse audience of students and faculty members from various engineering disciplines, all eager to gain insights into the rapidly evolving field of drone technology. Mr. Gurunathan is a seasoned professional in the field of drone engineering with extensive experience in mechanical, electrical, and plumbing (MEP) engineering. His expertise spans across various aspects of drone design, including aerodynamics, propulsion systems, and control mechanisms.

4. Workshop on Drone Assembling

PANIMALAR ENGINEERING COLLEGE

DEPARTMENT OF MECHANICAL ENGINEERING

DRONE CLUB

Vimanam Drones recently organized an engaging workshop on drone assembling, attracting enthusiastic participation from around 18 students. The event aimed to provide hands-on experience in building and understanding the mechanics of drones, fostering a deeper appreciation for this burgeoning technology.

Led by experienced Mr. Arwin Raj, from Vimanam Drones, the workshop commenced with an introduction to the various components of a drone, including the frame, motors, propellers, flight controller, and power distribution board. Participants were guided through the intricate process of assembling these components, learning about their functionalities and interconnections along the way.

Academic Year 2022-23

DRONE CLUB ACTIVITIES

S.no	Activities	Topics	Date	Resource person
1	Inauguration	Inauguration	09.02.2023	Dr. L. Karthikeyan, H.O.D -Mech
2	Guest Lecture	Guest Lecture on Drone Applications	10.03.2023	Mr. Govardhan Giri

1. Inauguration

PANIMALAR ENGINEERING COLLEGE

DEPARTMENT OF MECHANICAL ENGINEERING

DRONE CLUB

Photo for the event

The Panimalar Engineering college, Department of Mechanical Engineering successfully inaugurated its Drone Club on 09.02.2023 under the guidance of **Dr. L. Karthikeyan** M.E., Ph.D., the Head of the Department. The inauguration ceremony was marked by the presence of 62 enthusiastic students and staff members who gathered to witness the commencement of this significant initiative. Moreover, the event featured a special lecture delivered by Dr R. Sathiyamoorthy M.E., Ph.D.,

2. Guest Lecture on Drone Applications

Photo for the event

PANIMALAR ENGINEERING COLLEGE

DEPARTMENT OF MECHANICAL ENGINEERING

DRONE CLUB

Commencing with a comprehensive overview of the evolution of drone technology, Mr. Govardhan Giri, elucidated the remarkable advancements that have propelled drones from niche gadgets to indispensable tools across various industries. He highlighted their pivotal role in revolutionizing fields such as agriculture, infrastructure inspection, environmental monitoring, and disaster management, emphasizing their efficiency, precision, and versatility.

Event Consolidate Sheet

Url : https://karvans.netlify.app
Linkedin : https://www.linkedin.com/company/karvans3dclub

The Karvans 3D Printing and Design Club at Panimalar Engineering College is a hub of innovation, fostering the next generation of designers and engineers. Our club explores the vast potential of 3D printing technology, pushing the boundaries of creativity, from prototyping to functional models. We offer hands-on workshops, collaborative projects, and industry expert sessions, empowering members to master 3D design, printing techniques, and real-world applications. Join us to shape the future, one layer at a time.

Consolidate Event Details

Sl.no	Date	Event Details	Organized By	No. of Participants
1	21.08.2024	Inaguration	PEC	60
2	11.09.2024 to 12.09.2024	Kickstarter Workshop	PEC	30

Member Details

Faculty Coordinator

Mr. S. THAMIZH SELVAN, Assistant Professor - Mecahnical

Student Coordinator

Mr. G. SACHIN KUMAR- CHAIRMAN
Mr. K. NISHANTH- VICE-CHAIRMAN
Mr. K. M. KEERTHI RAMANAA- SECRETARY
Mr. V. PRASANNA- EVENT ORGANISER
Mr. N. KATHIRAVAN- EVENT ORGANISER

Academic Year 2024-2025

1. Karvan's 3D Club Inaguration

Event Datails

Date: 21.08.2024
Venue: Mechanical AV Hall
Participants: 60

Banner

Purpose of a 3D Printing Club

1. **Skill Development**: The club provides students with hands-on experience in 3D printing technology, enabling them to learn about 3D modeling, design, and the operation of 3D printers. This enhances their technical skills, which are highly relevant in industries like manufacturing, product design, and engineering.
2. **Innovation and Creativity**: The club encourages innovation by allowing students to create prototypes, models, and custom parts. It offers a platform for students to

experiment with design ideas, solve problems, and push the boundaries of what can be done with 3D printing.

3. **Interdisciplinary Collaboration**: Students from various disciplines (mechanical engineering, electronics, computer science, etc.) can collaborate on projects. This helps in fostering teamwork and promotes a multidisciplinary approach to problem-solving, which is crucial in the real-world engineering industry.
4. **Research and Development**: The club can act as a hub for research initiatives, such as exploring new materials, optimizing 3D printing processes, or developing innovative applications. This can support ongoing academic research or help in developing final-year projects.
5. **Entrepreneurship and Prototyping**: Students interested in entrepreneurship can use the 3D printing club to design and prototype products or concepts. It provides an affordable way to test ideas and bring them to life before full-scale production.
6. **Competitions and Events**: The club can participate in or organize competitions and hackathons that encourage students to use 3D printing for various engineering challenges, promoting both learning and networking opportunities.
7. **Support for Projects and Coursework**: It provides a resource for students working on academic projects that require rapid prototyping or custom components, helping them bring their ideas to life more efficiently.

Member Details

Faculty Coordinator

Mr. S. THAMIZH SELVAN, Assistant Professor

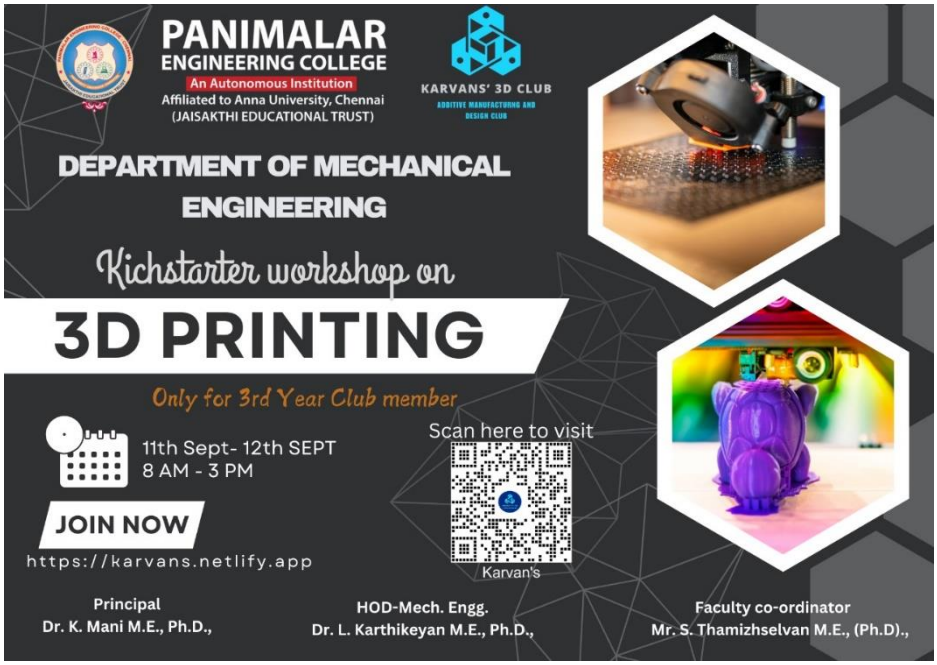
Student Coordinator

Mr. G. SACHIN KUMAR- CHAIRMAN
Mr. K. NISHANTH- VICE-CHAIRMAN
Mr. K. M. KEERTHI RAMANAA- SECRETARY
Mr. V. PRASANNA- EVENT ORGANISER
Mr. N. KATHIRAVAN- EVENT ORGANISER

2. Kickstart Workshop

Event Details:

Date: 11-Sept-2024 to 12-Sept-2024
Time: 8.15AM to 3.00 PM
Venue: MECHANICAL CAD LAB
Participants: 32



The Karvans' 3D Club is excited to announce its first official event, a hands-on workshop focused on **3D Printing and Design Fundamentals**. This event marks the beginning of a series of interactive sessions aimed at fostering creativity and technical skills among students and faculty, following the successful inauguration of the club. Whether you are a beginner eager to learn the basics or an enthusiast seeking to refine your skills, this workshop offers something valuable for everyone.

Event Overview: The workshop will provide an introduction to the key concepts of 3D printing and design, enabling participants to understand how digital models are transformed into physical objects. The event will be divided into two main segments: an introduction to 3D design principles and a practical session on using 3D printers.

In the design segment, participants will learn the fundamentals of computer-aided design (CAD) software. Expert instructors will guide attendees through the basics of creating and modifying digital models, with a focus on how design decisions impact the printing process. From understanding file formats to working with various shapes, students will gain hands-on

experience in designing objects suitable for 3D printing. This session will introduce tools like TinkerCAD or Fusion 360, giving participants a solid foundation in design techniques.

The second part of the workshop will focus on the **3D printing process** itself. Participants will learn about different types of 3D printers, the materials used (such as PLA, ABS, and other composites), and how to prepare files for printing. Practical demonstrations will be conducted, showing the step-by-step process of setting up a 3D printer, selecting the right print settings, and troubleshooting common issues. Attendees will have the chance to print their designs and see their creations come to life.

The workshop will cover the following topics:

1. Introduction to 3D Printing Technology
2. CAD Design for 3D Printing using Fusion 360 software
3. Slicing model for 3D Printer using Ultimaker Cura
4. Hands-on Practice in 3D Printing Machine.

Si.No.	Register Number	Club Membership ID	Name
1	211422114012	PEC-3DP-2024-09-001	ARAVIND. N
2	211422114013	PEC-3DP-2024-09-002	ARAVINDHAN.R
3	211422114069	PEC-3DP-2024-09-003	MANOJ KUMAR .S
4	211422114019	PEC-3DP-2024-09-004	V.J BHARANEEDHARAN

5	211422114045	PEC-3DP-2024-09-005	JEKIN JEBAKUMAR
6	211422114050	PEC-3DP-2024-09-006	KATHIRAVAN N
7	211422114063	PEC-3DP-2024-09-007	LOKESH K
8	211422114096	PEC-3DP-2024-09-008	PRAVEEN M
9	211422114099	PEC-3DP-2024-09-009	G.PURUSHOTHAMAN
10	211422114100	PEC-3DP-2024-09-010	RAHUL A
11	211422114104	PEC-3DP-2024-09-011	RAJASEKAR D
12	211422114107	PEC-3DP-2024-09-012	RISHI MADHAN
13	211422114108	PEC-3DP-2024-09-013	RISHIT BUVANAN B M
14	211422114116	PEC-3DP-2024-09-014	SANJAY E K
15	211422114118	PEC-3DP-2024-09-015	SANTHOSH KUMAR M
16	211422114130	PEC-3DP-2024-09-016	SIDHARTHAN T
17	211422114152	PEC-3DP-2024-09-017	VIKRAM R
18	211422114157	PEC-3DP-2024-09-018	Vishva.M
19	211422114158	PEC-3DP-2024-09-019	VISHWA K
20	211422114160	PEC-3DP-2024-09-020	YOGESH KUMAR S
21	211422114163	PEC-3DP-2024-09-021	YUVARAJ E
22	211422114114	PEC-3DP-2024-09-022	SAMUEL KEVIN A
23	211422114059	PEC-3DP-2024-09-023	KRISHNASAMY N
24	211422114078	PEC-3DP-2024-09-024	MUSNATH AHAMED
25	211422114132	PEC-3DP-2024-09-025	SRI SATHGURU PARAMATHAMA V
26	211422114036	PEC-3DP-2024-09-026	HARIHARAN E
27	211422114912	PEC-3DP-2024-09-027	KISHORE S
28	211422114925	PEC-3DP-2024-09-029	SURENDAR S
29	211422114910	PEC-3DP-2024-09-031	HARISH. V
30	211422114914	PEC-3DP-2024-09-032	PRATHEEP KUMAR M
31	211422114902	PEC-3DP-2024-09-033	AKASH R
32	211422114903	PEC-3DP-2024-09-034	K.ANAND


PANIMALAR ENGINEERING COLLEGE
An Autonomous Institution
Affiliated to Anna University, Chennai
Department of Mechanical Engineering
KARVANS' 3D CLUB
E-Certificate No.: PEC-3DP-2024-09-007
CERTIFICATE
OF PARTICIPATION
This is to certify that LOKESH K (211422114063) from Department of Mechanical engineering has been participated in Two Days Kickstarter workshop on 3D printing conducted by Karvans' 3D Club of Panimalar Engineering College during 11-Sept-2024 to 12-Sept-2024.
Dr. L. KARTHIKEYAN M.E., M.B.A., Ph.D., Head Of Department, Mechanical Engineering
Mr. S. THAMIZHSELVAN M.E., (Ph.D)., Faculty co-ordinator Karvans' 3D club.
For more details Gmail to dome3dprinting@gmail.com or visit https://karvans.netlify.app