

Happy New Year!

MExpress

**Mechanical Engineering Department's Official Newsletter
VOLUME 05 - Issue 05**



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SENTIENT LAB

Mr. Nithesh S V
20BME080
2nd Mech.- B

It is a research and development innovation laboratory, which has developed the India's first hydrogen fuel cell bus in Pune. They have developed this in collaboration with the Council of scientific and Industrial research. They have their motive to develop the technological solutions for the sustainable mobility with the hydrogen powered technologies. They found out Bottlenecks in battery technology, fuel cell technology for hydrogen generation. They are the first in India to generate the hydrogen directly from agricultural residue for the use in hydrogen fuel cell powered vehicles. They have developed this hydrogen fuel cell bus in collaboration with the council of scientific and Industrial research (CSIR), National Chemical Laboratory and Central Electrochemical Research Institute.

Hydrogen bus:

In addition to this hydrogen fuel cell technology, they have designed and developed the balance of plant, powertrain, and battery pack. These were done on a 9 metre, 32-seater, Air-conditioned bus. It has been claimed that the bus gives a range of about 450 km range with the utilization of 30 kg of hydrogen. It also gives the allowance of changing the design in modular periods for improving the range and operating conditions. The fuel cell utilizes the hydrogen and air for generating the electricity to power the bus.

**Alternative source :**

Hydrogen generation technology provides an alternative source of revenue for the farmers, by the replace of diesel buses by the hydrogen fuel cell buses, such that it can improve the air quality and reduce the transport costs. Thus, it results in minimizing the expenses and increases the revenue and also becomes environmental friendly also. This technology surely has the best outcome in the current developing stage.



PROGRAMMES ORGANIZED



A Regional Level Technical Talk on “New Product Design and Development” was organized by the department on 29-12-2021 in the Conference Hall. **Mr. M. A. Vinayagamoorthis**, Assistant Professor – II, **Mr. R. S. Mohan Kumar**, Assistant Professor and **Dr. S. Thirumurugaveerakumar** Associate Professor provided the technical talks. Around 35 students from various engineering colleges listened to the talk.



In association with Mechanical Engineering Association a TECHNICAL QUIZ Event, “Mech Whiz” was conducted on 08-12-2021. **Dr. V. R. Muruganantham**, Associate Professor coordinated the event. Another event “SPELL and BELL” was conducted on 22-12-2021. **Mr. M. A. Vinayagamoorthis**, Assistant Professor – II coordinated the event.



Another Technical talk on “Recent Advancements on Plastic and Sheet Metal Concept Design” was organized by the department on 20-12-2021. Mr. Roopban Sanjeeva Rajeev, Technical Head, Macbro Technologies Private Limited, Japan was the resource person. **Dr. V. Muthukumaran**, Professor, **Dr. K. M. Senthil Kumar**, Associate Professor, **Dr. S. Balaji**, and **Mr. P. Pradeep**, Assistant Professors coordinated the event.



FACULTY AS RESOURCE PERSONS



Dr. S. Bhaskar, Associate Professor as a resource person, handled a three-hour session on 15.02.2021 on "Outcome Based Education" during the 8th Online Faculty Induction Programme (01-12-2021 to 30-12-2021) UGC - Human Resource Development Centre (UGC-HRDC) Sardar Patel University Mota Bazar, Opp. SICART, Vallabh Vidyanagar-388 120, Gujarat.

Dr. M. Balaji, Associate Professor was the Chief guest for MEA inauguration and delivered a Guest Lecture on "Continuous improvement through KAIZEN for the Department of Mechanical Engineering, SRIET on 10.12.2021. He was also a Project review expert for the "Project Review" conducted by the Department of Mechanical Engineering, KPRIET on 27.12.2021.



Dr. V. R. Muruganantham, Associate Professor acted as an auditor for the PADS 2021 -22 2nd quarter Review Auditing during 10.12.2021 and 27.12.2021. He was also one of the coordinators for Annual Report 2020 from 13-12-2021 and 28-12-2021.

Mr. P. D. Devan, Assistant Professor acted as an auditor for the PADS 2021 - 22 2nd quarter Review Auditing during 10.12.2021 and 18.12.2021.



Mr. B. Jeeva, Assistant Professor gave Weekly forum presentation on "Invited for talk on CII Industrial Innovation Award 2021 Highlights in the weekly forum conducted on 24-12-2021 at KCT.

Dr. N. Sangeetha, Sr. Associate Professor, acted as External Examiner for the End Semester QP scrutiny for Government College of Technology, Coimbatore on 20-12-2021.



PAPER PRESENTED

Dr. K. Krishnamoorthi, Assistant Professor – II, **Dr. A. P. Arun**, Assistant Professor – II and **Dr. V. Manivelmuralidaran**, Assistant Professor – II presented their paper entitled "EFFECT OF B4C PARTICLE REINFORCEMENT ON TENSILE PROPERTIES OF Al7075/B4C COMPOSITES" in the Second International Conference on Engineering Materials Metallurgy and Manufacturing 2021 conducted by SSN College of Engineering during 16-12-2021 and 17-12-2021.



PAPER SUBMISSION

Following faculty members submitted their papers in various Scopus indexed journals for publication.

- **Dr. A. P. Arun**, Assistant Professor - II
- **Dr. R. Manivel**, Professor
- **Dr. B. N. Sreeharan**, Assistant Professor - II



PAPER PUBLICATION



Dr. M. Balaji, Associate Professor published a couple of papers entitled "Augmenting agility in production flow through ANP" and "Balanced Scorecard approach in deducing supply chain performance" in the International Journal Materials Today: Proceedings, Volume 47, Part 15, 2021, Pages 5308-5312.

PAPERS REVIEWED

Dr. PR. Ayyappan, Sr. Assistant Professor reviewed a journal paper titled "Comparative Life Cycle Assessment of battery electric vehicles and internal combustion engine vehicles fed with innovative fuels in Europe" in International Journal of Applied Energy- (Elsevier) with an IF of 9.74 in December 2021.



Dr. C. Velmurugan, Professor and HoD, reviewed a Paper titled "Sustainable Construction in the Nigerian Construction Industry: Practices, Barriers and Strategies" on 14-12-2021 for the Journal of Engineering, Design and Technology.

Dr. V Muthukumaran, Professor reviewed a paper titled Designing thickness of subgrade for flexible pavements incorporating Waste Foundry Sand, Molasses and Lime for the Journal of Engineering, Design and Technology.



Dr. K. K. Arun, Assistant Professor - III reviewed a paper titled Numerical Investigation of Modified Fin Shapes for the Improved Heat Transfer for Materials Today proceeding. He also reviewed another paper titled Role of Fluid Motion in Regulation of Bone Mechan transduction: A Review for international conference.

CONSULTANCY



Dr. S. Balasubramanian, Associate Professor, provided a consultancy for Rs. 3000/- at CAD Lab with respect to Design analysis of WindMill component for M/s. Windcare India Ltd., Gudimangalam, India.

PROGRAMMES ATTENDED / COURSES COMPLETED



Mr. P. Karthi, Assistant Professor I completed in an Online Course on “The Finite Element Method for Problems in Physics” from 01-11-2021 to 31-01-2022, organized by University of Michigan.

Mr. M. A. Vinayagamoorthi, Assistant Professor II participated in a Webinar on “Elsevier - Effective writing skills for promoting research - what do we need to know” on 13-12-2021 organized by Elsevier, New Delhi.



Mr. B. Jeeva, Assistant Professor-I participated in a Webinar on “CII DST Technology Summit 2021” from 16-12-2021 to 17-12-2021, organized by CII and DST, New Delhi. He also participated in another Webinar on “AICTE Awards Awareness Webinar” on 07-12-2021, organized by AICTE, New Delhi.

Dr. S. Balasubramanian, Associate Professor participated in a Webinar on “Elsevier - Vaccinology” on 20-12-2021, organized by Elsevier, New Delhi.



Dr. R. Manivel, Professor participated in a Webinar on “KARMA skill development Programme” on 26-12-2021, organized by AICTE, New Delhi. He also participated in another Webinar on “Institutional Development Initiatives” on 24-12-2021, organized by AICTE, New Delhi.

PROFESSIONAL SOCIETIES' ACTIVITIES

35 students of Second year Mechanical Engineering become the Indian Welding Society Student Member and received the student membership cards through coordination of **Dr. V. Manivelmuralidaran**, Assistant Professor - II.



MoU

MoU renewal has been done from 08.10.2021 to 07.10.2024 between M/s. Ammarun Foundries and KCT (Mech) by KCT faculty coordinators **Dr. V. R. Muruganatham**, Associate Professor and **Mr. P. D. Devan**, Assistant Professor.



STUDENT LEADERSHIP COUNCIL

Leadership is the factor which decides on the future of an organization or a group. A Leader shows the way and guides the follower on how to complete the journey effortlessly. A leader is one who knows the way, shows the way, and goes by the way. A Leader not only leads but also works along with the member community for them and their ideas.

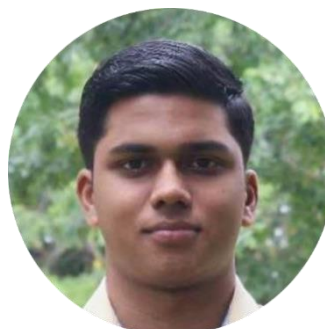
The Leadership council members for the academic year:

- Mr. Sreejith Ravichandran – 18BME082
- Mr. Nishank – 18BME060

They take ultimate responsibility and essentially shapes the aims of the club for the year and support the work of other committee members. They usually have fair idea of who is doing what and keep abreast of all club activity as they are responsible for ensuring that a club or society works effectively. They will build an effective organization that works well and grows in membership while most importantly remaining fun to be a part of.



PRESIDENT – MEA
SREEJITH RAVICHANDRAN



PRESIDENT – SOCIAL
NISHANK

SMART INDIA HACKATHON 2022 (SIH-2022)

About SIH 2022:

Smart India Hackathon 2022 (SIH-2022) is a national initiative launched by AICTE and MoE aimed at providing students with a platform to solve some of the pressing problems we face in our daily lives, and to inculcate a culture of product innovation and problem-solving mentality.

ProjectContest.com
Spreading Innovations

SPREADING INNOVATIONS

SMART INDIA HACKATHON 2022

CONTEST ALERT

#SmartIndiaHackathon2022

World's biggest open platform for the innovators or entrepreneurs of tomorrow to start today towards a smarter India

SIH Jr
School students from 6th to 12th class will be able to showcase their talent and generate out-of-the-box open innovation ideas

SIH Sr
An annual flagship event nurturing participants from all over India since 2017 with its software & hardware edition journey of problem-solving attitude with a positive mindset

© Project Contest Innovations LLP

Who can Apply:

All technology students from AICTE/UGC/IIT/NIT/IISER/IIIT/ Government approved educational institutions for Senior Level & School Students for Junior Level Can apply. Practical offline Workshop on Dismantling and Assembling of IC Engines with Electric Vehicle Demo (Horsepower - 2022), Top Engineers, Practical offline Workshop, Chennai, Tamil Nadu, 6th February 2022

Category: Practical offline Workshop, **Start Date:** 6th February 2022, **End Date:** 6th February 2022, **Organiser:** Top Engineers, **City:** Chennai, State: Tamil Nadu.

PRACTICAL OFFLINE WORKSHOP ON DISMANTLING AND ASSEMBLING OF IC ENGINES WITH ELECTRIC VEHICLE DEMO (HORSEPOWER - 2022)

VENUE: IIT MADRAS RESEARCH PARK, No. 32, Kanagam Rd, Kanagam Periyar Nagar, Taramani, Chennai, Tamil Nadu 600113. (IITM Research Park is only a venue, and the event is organized by TOP ENGINEERS only)

CERTIFICATE FROM TOP ENGINEERS WITH ISO CERTIFIED NUMBER AND HOLOGRAM WILL BE PROVIDED BY THE END OF THE WORKSHOP WHICH WILL ADD VALUE DURING PLACEMENTS.

- INR 900/- PER PERSON (INDIA) (including GST)
- \$100 USD (FOR OTHER COUNTRIES)
- GROUP DISCOUNT OFFER
- Group of 5 & above will get 5% Discount
- Group of 10 & above will get 10% Discount

DATE: 06.02.2022 (SUNDAY)

TIME: 9.00 AM – 5.00 PM

AGENDA

1. BASICS
2. BIKE ENGINE DISMANTLING
3. BIKE ENGINE ASSEMBLING
4. ELECTRIC BIKE DEMO

CONTACT: 09940322437 / 9840728806

MAIL: admin@topengineersindia.com

WEBSITE: www.topengineersindia.com

**EAI International Conference on Intelligent Technologies in Security and Privacy for Wireless Communication EAI ITSPWC 2022,
Cheran College of Engineering,
International Conference, Karur, Tamil Nadu,
14th - 15th May 2022.**

Category: International Conference **Start Date:** 14th May 2022 **End Date:** 15th May 2022
Organiser: Cheran College of Engineering **City:** Karur **State:** Tamil Nadu

The EAI International Conference on Intelligent Technologies in Wireless Communication Security and Privacy: Novel concepts based on algorithms, surveys, regulations, structures, communication difficulties, and future research elements will be covered during the conference. Network and Computing Technologies, Wireless Networks, and Internet of Things (IoT), Futuristic Computing Technologies, Communication Technologies, Security and Privacy are just a few of the courses that may be of interest. All writers will be able to submit to one of four technical tracks during the conference. As a result, each author may choose the most appropriate route for their article/research paper submission. The conference is suggested as an annual continuing event that would bring scholars together on a single platform to share their ideas and views. It will undoubtedly develop over time as a long-term intellectual asset. In the future years, efforts will be made to make this conference one of the finest in its field. After a favourable blind peer review by at least two reviewers with a satisfactory score, research papers from each track will be chosen for oral presentation during the conference.

STEERING COMMITTEE

Chair: Imrich Chlamtac, Bruno Kessler Professor, University of Trento, Italy

REGISTRATION FEES : Nil

CONTACT DETAILS

Mr. S. Kannadhasan
B.E.,M.E.,M.B.A.,[Ph.D].,PGDCA., PGVLSI., PGESDI., PGDRD. DCHN, DCP., ADSE. ,PGDBI., B.Sc., M.Sc., M.A
Membership of Professional Society: MIE., MISTE., MIETE., CSI., IACSIT., IAENG., IEAE., ICSEC., SPG., SEEE., SDIWC., IJSPR.INSC., IARDO., EAI
Assistant Professor
Department of Electronics and Communication Engineering
Cheran College of Engineering, K.Paramathi
Karur, Tamilnadu-639111
Ph: 9677565511 (Whatsapp), 8838586305.

REGISTER: <https://itspwc.eai-conferences.org/2022/>

**International Conference on Operations and Supply Chain Management
ICOSCM 2022, Symbiosis Institute of Operations Management,
International Conference, Nashik, Maharashtra, 22nd January 2022.**

Category: International Conference

Start Date: 22nd January 2022

End Date: 22nd January 2022

Organiser: Symbiosis Institute of Operations Management

City: Nashik

State: Maharashtra

Symbiosis Institute of Operations Management (SIOM), Nashik is organizing the International Conference on Operations and Supply Chain Management (ICOSCM 2022) digitally on the theme "NEXT GENERATION SUPPLY CHAINS: Closed loop, humanitarian & Technology driven". The event is going to take place on 22 January 2022. The main objective of this conference is to aim for deeper insights into the challenges and innovations that are taking place in the next generation of the supply chain, SIOM takes immense pride in organizing the event this year in a more exciting and challenging way to witness an insightful display of extensive knowledge from across the globe.

CONTACT DETAILS

Harsh Srivastava (Vertical Head) – 7753828864

The event is going to take place on 22 January 2022. The main objective of this conference is to aim for deeper insights into the challenges and innovations that are taking place in the next generation of the supply chain.

MECH WHIZ:

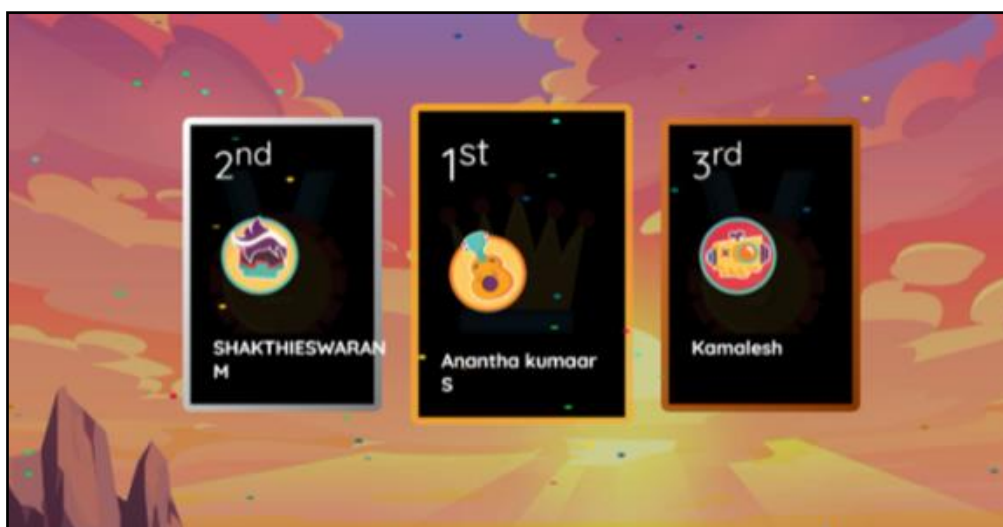
To Evaluate the student's academic depth of knowledge in mechanical course, MEA has planned to conduct an Event named as MECH WHIZ. In this event, participants are asked to answer the MCQ quiz.

MECH WHIZ was conducted on 8th December 2021 in physical mode through QUIZZES, an online quiz platform. Questions are selected from the basic Mechanical Science and its applications. 60 questions were displayed, and 20 seconds are provided for each question. Person with maximum score at the end of a quiz will be announced as a winner.



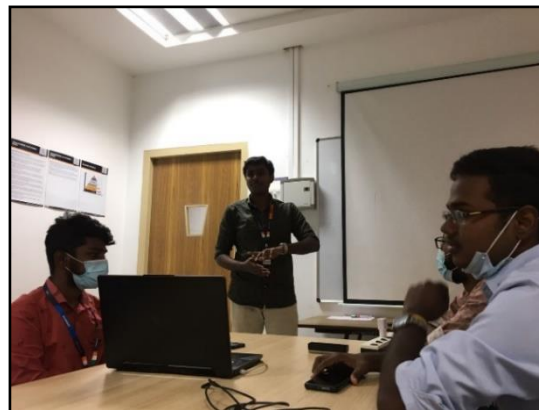
This Event was successfully coordinated by Mr. Ashwinth K V from 3rd year Mechanical Engineering and Mr. Imayan K T from 2nd year Mechanical Engineering. More than 20 students were participated in this event. Mr. Anantha kumaar from 2nd year Mechanical Engineering was announced as Winner of this event and Mr. Shakthieswaran from 2nd year Mechanical Engineering Was announced as 1st Runner of this event. The Winner and the Runner was awarded with the Amount of Rs. 2000.

This Event was organized by MEA under the guidance of Dr. V R Muruganantham, AP and Mr. M A Vinayagamoorthi, AP (II).



SPELL AND BELL:

To learn new emerging terms in the field of Mechanical Engineering and to improve their public speaking skills and their managing skills in a situation, MEA has planned to conduct an event named as SPELL AND BELL.



SPELL AND BELL was conducted on 22th December 2021 in physical mode. This event was consisting of two rounds, A word puzzle which is about reconstructing the jumbled letters into a meaningful word. Open talk for a minute about a random topic with a minute of preparation. The word puzzle was framed based on the curriculum of mechanical course. 30 questions and 15 minutes were provided to the participant through MS Forms for the 1st round. In this round, participants are asked to Re-arrange the Jumble words where the technical Words are misarranged. Person with maximum score at the end of the 1st round will be allowed to attend the 2nd round. In round 2, participant was chosen a random number where the technical topics were hidden. Then they have a minute of time to prepare for the JAM Session as an open talk. Once a minute of time was over, they must deliver a content about the topics that what they have choose. Marks for the Round 2 was consider based on their performance by the panel members from 3rd year Mechanical Engineering. This Event was coordinated by Mr. Kishore Krisna S from 3rd year Mechanical Engineering. The Event was Successfully Executed by Mr. Nithesh S V from 2nd year Mechanical Engineering and Mr. Kalaiselvan from 2nd year Mechanical Engineering. More than 30 students were participated in this event. The Winner and the Runner was awarded with the Amount of Rs. 1200 and Rs. 800 respectively. This Event was organized by MEA under the guidance of Dr. V R Muruganantham, AP and Mr. M A Vinayagamoorthis, AP (II).



INTERNSHIP

Following students took up internship in M/s. BASCET Engineering & Services, Saravanampatti, Coimbatore – 641035 from 15.09.2021 to 31.10.2021.

- Mr. B. Praveen (18BME092)
- Mr. Joshua Peter (18BME084)
- Mr. B. Akash (18BME222)
- Mr. Karuthu Vinayaga Ayyappan (18BME201)
- Mr. R. Mitheleshwaran (18BME080)
- Ms. V. Nandhini (18BME068)
- Ms. R. Pavithra (18BME106)

- Following students formed teams and participated in in 5's Football Tournament organized by KCT Football team from 21/12/2021 to 23/12/2021.
 - Mr. Rogitraaj (18BME019)
 - Mr. Karutthu Vinaayaga Iyyapan I N (18BME201)
 - Mr. Sreejith Ravichandran (18BME082)
 - Mr. Joshua Peter A (18BME084)
 - Mr. Vinayak M R (18BME223)
 - Mr. Niranjana S (18BME116)
 - Mr. Ganesh Raghul S (18BME147)
 - Mr. Arun Kumar R (18BME205)
 - Mr. Aakash Kumar V (20BME002)
 - Mr. Jaishankar S (20BME047)
 - Mr. Pranesh Anand T (20BME085)
 - Mr. Vivien Wilfred S (19BME009),
 - Mr. George John Panicker (19BME007)
 - Mr. Thiruchitrabalam M (19BME066)
 - Mr. Sabarishkumar R K (19BME045),
 - Mr. Sarvesh Chinniah A (19BME052),
 - Mr. Sai Mithun S (19BME015) ,
 - Mr. Mohammad Arfaan Khan (19BME041),
 - Mr. Ajith Kumar G (19BME063),
 - Mr. Aakash Kumar V (20BME002),
 - Mr. Gopinathan M (20BME033),
 - Mr. Sangeeth R (20BME099)

- Mr. N. Lalitkishore – (20BME227) of second year Mechanical Engineering B section attended a Workshop named as “Design thinking and new product development” from 01/11/2021 to 10/11/2021 organized by Chander VR.

WORLD AID's DAY

World Aids Day is celebrated on December 1 every year to raise awareness about the deadly disease named - **"AIDS"**, Acquired Immuno Deficiency Syndrome. To observe this occasion, we **Red Ribbon Club of KCT** conducted the Event - **"Sayonora AIDS"** means Goodbye Aids. The main objective of this event to create and involve the people of KCT to take part in the awareness by Signing the petition and by distributing **Red Ribbons** as a sign that they took part in this awareness.



TEAM EVOKE

We the dance club of KCT have explored, experienced, and achieved a lot. Teamwork makes the dream work to come out successfully. Being a evoke family, our team achieved many prizes in different competitions. We are only team from the state of Tamilnadu to become the finalist of the mood indigo (IIT BOMBAY). The two big light fests of KCT are JANANAM and YUGAM. We showcase our talents in different styles of dance and rock the stage with flying colours. JANANAM, we can say that it's a mini dancing ground for all. It's a fest where non team members can also dance to show their talents.



Yugam, south India's biggest fest where the campus is made more colorful and we intend to make it more amazing with our dance performance. To make our team more competitive we conduct a battle inside team. we spilt up into two teams and we get trained.

During this pandemic we have striked a spark of 1 million+ views on Instagram. Dance made us a team, but emotions made us a family. Here we join our hands in both ups and downs and we strive our best all the time . We come here with the empty hand and go with limitelss bond and memories .

Rishimaran E- 19BME018, Hariharan S - 19BME116, Rohi Jaganathan - 19BME125, Nikhilesh - 18BME052, Ponmukesh - 18BME133 are the students of Mechanical department, who took part in this.



GREEN BUILDING



Mr. Suvanraj R
19BME100
3rd year mechanical - B

Introduction:

'Sustainable building', 'high-performance building', or 'green building' is a resource-efficient construction that is designed, constructed, or operated to mitigate the negative impact and magnify its positive effect on the environment. A green building follows the sustainable approach in the entire lifecycle of the building that improves the quality of life by judicious planning. The term 'green' refers to a feasible plan that ensures efficient use of resources such as water, energy, and other materials.

**Benefits of implementing sustainable building technology:**

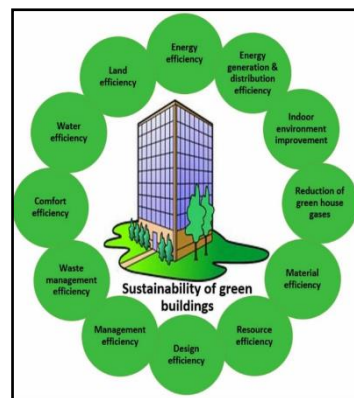
- Low operation, maintenance costs & Increased efficiency.
- Improved public health & Healthy indoor environment.
- Reduced carbon footprint & pressure on water bodies.
- Upcycling & protecting the ecosystem.
- Promotes sustainable architecture & Energy-efficient construction.

Elements of green architecture:

1. Active sustainable design
2. Passive sustainable design
3. Renewable energy system
4. Native landscaping
5. Storm water management

1. Passive sustainable design

Passive strategies, such as considering sun orientation and climate when siting and being thoughtful about window placement and operation, are used to best manage daylighting and natural ventilation and go a long way in reducing energy requirements for the building. In certain climates, thermal mass techniques can be used to harness solar energy. In such cases, thick walls absorb heat from the sun during the day and release it into the building at night.



2. Active sustainable design

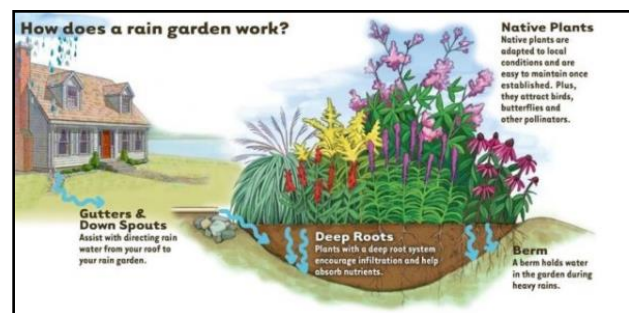
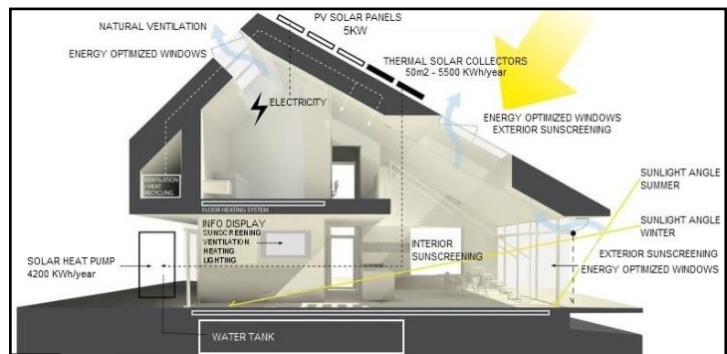
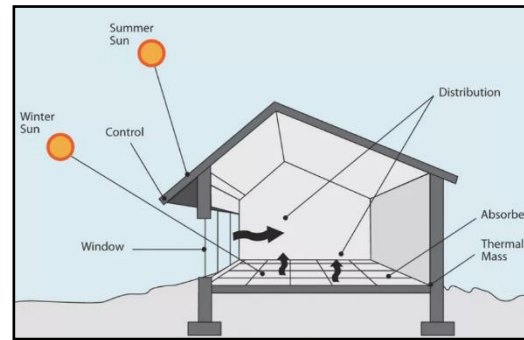
Architects consult with mechanical and electrical engineers to implement high-efficiency electrical, plumbing, HVAC, and other systems, which are designed to have small environmental footprints.

3. Renewable energy system

Renewable energy systems, including those that harness solar and wind energy, are also great options for some buildings. These systems are often used in conjunction with passive design strategies.

4. Native landscaping

- Landscaping choices can make a big impact in civic building water consumption.
- By using trees, plants, and grasses that are native to the area, architects can greatly reduce irrigation needs.
- Landscaping can also be used as part of a passive energy strategy.
- By planting trees that shade the roof and windows during the hottest time of the day, solar heat gain inside the building can be reduced.



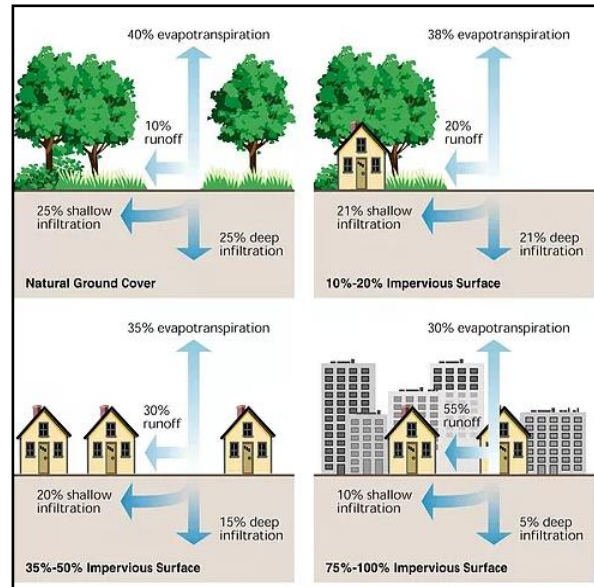
5. Storm water management

When rain falls on an untouched site, the water that doesn't evaporate absorbs back into the ground, replenishing the natural water table.

However, when a building is placed on the site, along with parking lots, sidewalks, access roads, and other hardscaping, rainfall behaves differently.

The water runs off these surfaces and into storm drains.

By implementing stormwater management strategies, such as pervious pavement that helps to reduce runoff and retention ponds that capture runoff and slowly release water back into the ground, the negative environmental impact of buildings can be reduced.



Conclusion:

By following the principles of sustainable building, our natural resources will be conserved. The energy obtained is only by means of renewable energy i. e. wind energy, solar energy . Following the natural vegetation techniques, the surrounding of the building is very greenish, and it is pollution free. Therefore, when one should create a plan for new building , green building principles should be considered for better life.



BOUNCE INFINITY E1

Introduction:



Mr. Nithesh S V
20BME080
2nd Mech.- B

Bounce infinity is the first electric scooter in India that does not need charging. It has a simple process of swapping the battery and using the scooter. This is made in India. This company gives a variety of different schemes in which the customer can be benefitted.



The company states few statements about their scooter.

- Made in India for Indian roads
- No power to full power with battery swap
- Simply stop, swap and use
- Charge everywhere at any plug points

Bounce infinity E1:

It is an electric scooter which is available in 2 different variants and with 5 different colours. It gets its starting price from Rs. 52,940, and goes upto the top variants pricing, Rs. 75,607. The top variant includes the battery pack whereas the other variants give an option of renting the battery pack. This scooter is Indian made and is designed for Indian roads.



Specifications:

It is powered by a 1500 W powered BLDC motor. The motor gives a maximum torque of 83 Nm and top speed as 65 kmph. It is supported by a 1.87 kWh powered Lithium-Ion battery, with a charging time of 4 hours. It gives a maximum range of 85 km.

It gets both front (230 mm) and rear disc (203 mm) brakes, with Combi braking system (CBS). It gets a beautiful 12-inch alloy wheels with tubeless tyres. It gets a Telescopic hydraulic front suspension and twin shock absorbers at the rear. All these are placed in a very well-designed tubular chassis frame.

Features :



It gets a beautiful digital odometer and speedometer which consists of many features. It has reverse mode, regenerative braking system, mobile app connectivity, GPS & Navigation, low battery indicator and LED head and tail lamps. It also includes some safety features like Anti-theft system, Geo fencing which all can be easily accessed through mobile app. It also has power mode, ECO mode, Toe alert. It also gets a boot space of 12L.

Colour Variants :

Sparkle black, Comet Gray, Sporty red, pearl white, Desat silver.

Warranty :

The company gives warranty for both motor and battery as 3 years or 40,000 km. Whichever comes earlier, claims can be done.



**KUMARAGURU**
college of technology

COIMBATORE – 641 049

Department of Mechanical Engineering**INSTITUTE VISION:**

The vision of the college is to become a technical university of International Standards through continuous improvement.

INSTITUTE MISSION:

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic, and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

DEPARTMENT VISION:

To emerge as a centre, that imparts quality higher education through the programme in the field of Mechanical Engineering and to meet the changing needs of the society.

DEPARTMENT MISSION:

The department involves in sustained curricular and co-curricular activities with competent faculty through teaching and research that generates technically capable Mechanical Engineering professionals to serve the society with delight and gratification.

B. E. MECHANICAL ENGINEERING**PROGRAM EDUCATIONAL OUTCOMES (PEO's):**

- PEO 1 :** Graduates will take up career in manufacturing and design related disciplines.
- PEO 2 :** Graduates will be involved in the execution of Mechanical Engineering projects.
- PEO 3 :** Graduates will take up educational programme in mastering Mechanical sciences and management studies.

PROGRAM OUTCOMES (PO's):

- 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
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.
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.
5. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
6. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
7. **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.
8. **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.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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.
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.
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 (PSO's):

1. Apply the fundamentals of science and mathematics to solve complex problems in the field of design and thermal sciences.
2. Apply the concepts of production planning and industrial engineering techniques in the field of manufacturing engineering.

M. E. INDUSTRIAL ENGINEERING**PROGRAM EDUCATIONAL OBJECTIVES (PEO's):**

- PEO 1 :** Graduates will be mid to higher level management / engineering professionals with responsibilities in engineering management, data analysis and business operations.
- PEO 2 :** Graduates will be engineering professionals, and technology leaders who would manage such functions as plant engineering, production, supply chain and quality management.
- PEO3 :** Graduates would function as educators or researchers in academic institutions.

PROGRAM OUTCOMES (PO's):

- P01 :** An ability to independently carry out research /investigation and development work to solve practical problems.
- P02 :** An ability to write and present a substantial technical report/document.
- P03 :** Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.

PROGRAM SPECIFIC OUTCOMES (PSO's):

- PS01 :** Graduates able to apply the engineering management and data management concepts in industrial engineering areas.
- PS02 :** Graduates able to apply industrial engineering skills and knowledge to manage the functions of production and supply chain management.