«MECH VIBES NEWS LETTER»

ISSUE 2 | APRIL 2022 | VOL 6

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CONTENTS

DEPARTMENT VISION, MISSION, PEOs & PSOs

DEPARTMENT VISION

To become a global knowledge hub of mechanical engineering fulfilling the industry and society needs with ethical practices.

DEPARTMENT MISSION

DM1: Provide quality education for global requirements.

DM2: Improve pedagogical methods employed in delivering the academic programmes.

DM3: Enhance the knowledge, skill by industry- institution interaction

DM4: Cultivate the spirit of entrepreneurship with the sense of ethical, professional responsibility.

PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

Graduates of Mechanical Engineering will be able to

PEO1: Get good job opportunities or pursue higher studies

PEO2: Exercise latest techniques to get solutions to industrial/engineering problems.

PEO3: Gain the knowledge of other fields of engineering continuously to grab more opportunities

PEO4: Establish as entrepreneurs with continuously leaning, professionalism, managerial skills, social responsibilities and ethical practices.

PROGRAM SPECIFIC OUTCOMES (PSO's)

PSO1. **SKILLS FOR SUCCESSFUL CAREER**: Able to apply engineering knowledge to get through the competitive examinations for employment/higher studies.

PSO2. **PROBLEM SOLVING SKILLS**: Exercise latest techniques, innovative methods and multi disciplinary knowledge in solving engineering problems of industry and serve the society

PROJECTS (2021-22)

1. Analysis of composite leaf spring
2. Modeling and fabrication of multi-purpose agricultural robot
3. Fabrication and analytical analysis of biogas digester
4. Modeling And Analysis Of Grain Bagging Through Vaccum Machine
5. Experimental investigation on enhancement of heat transfer in radiator using water & copper oxide Nano fluids
6. Modelling and analysis of car wheel rim
7. Design and analysis of a combination tool
8. A parametric heat transfer analysis on metals by using Ansys software
9. Fabrication and analysis of electric bicycle
10. Modeling & fabrication of e-baby cradle system
11. Fabrication & analysis of electro magnetic baking system
12. Magnetic Nano fluids-a new approach to thermal management of automobile radiator

Biogas Digester

Electro Magnetic baking system

ARMS EVENTS

As part of the ARMS celebrations, the Department of Mechanical Engineering organized a series of technical competitions to encourage student participation, innovation, and technical skill development.

The following events are conducted:

- **PowerPoint Presentation**
- **Poster Presentation**
- **Engine Assembly**
- **Technical Quiz**
- **Just A Minute (JAM)**
- **Essay Writing**

GUEST LECTURE

S.no	Date	Title	Coordinator	Resource person
1	22-3-2022	Guest Lecture on Penetrantion removal Techniques	N Jahnavi Chandrika	T.Deepak, Assistant Professor, D.M.S.S.V.H.C.E
2	9-3-2022	Guest Lecture on cooling curves	CH.Anusha	G.Karun Kumar Asst.Professor,GEC
3	7-3-2022	Guest Lecture on Quality control techniques	V Satish Kumar	Dr. A.Kiran Kumar Professor DIET
4	04-1-2022	Guest Lecture on Need of worm and worm gears	P. Bhargava Kumar	D.Kiran Prasad, Associate Professor, GEC

FDP Attended by Faculty

The Department of Mechanical Engineering heartily congratulates Ms. N. Jahnavi Chandrika for successfully completing the NPTEL-AICTE course on “Product Design and Manufacturing” during Jan – Apr 2022.Your commitment to continuous learning and professional development is truly commendable and serves as an inspiration to fellow faculty members and students.

S.No	Name of the Faculty	Institution/Organization	Name of the Topic
1	Ms. N. Jahnavi Chandrika	NPTEL-AICTE	Product Design and manufacturing

Faculty Publications

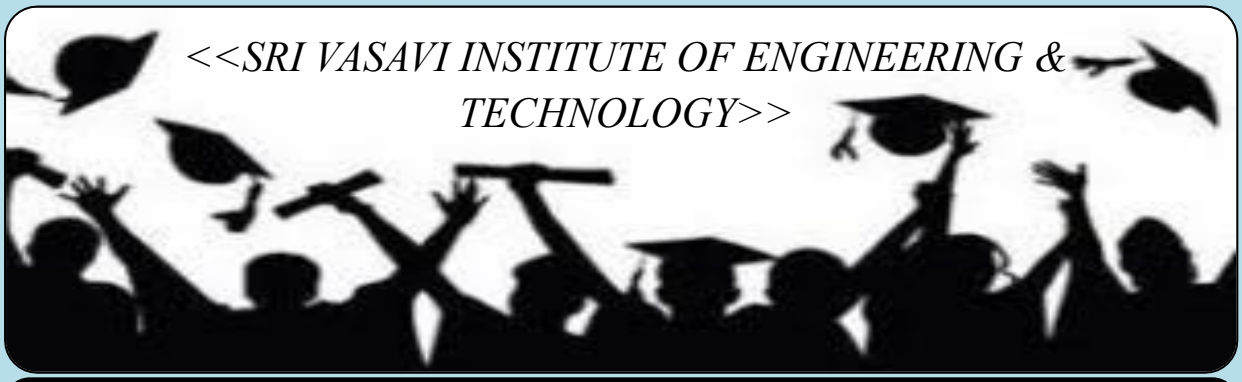
The Department of Mechanical Engineering extends its heartfelt congratulations to Dr. D. Raja Ramesh,Vice Principal for the successful publication of his research paper titled"Machinability Study of SAE 8822 Alloy Steel in CNC Turning" in the prestigious SCI / Scopus indexed journal Advances in Materials Science and Engineering,published in January 2022 (ISSN: 1687-8434, E-ISSN: 1687-8442).Your valuable contribution to research and academic excellence brings great pride to the department and inspires both faculty and students alike.We wish you continued success in your research journey!

S.No	Name Of The Faculty	Title Of The Paper	Name Of The Journal	Indexing
1	Dr.D.Raja Ramesh	Machinability Study of SAE 8822 Alloy Steel in CNC Turning	Advances in Materials Science and Engineering	SCI/ Scopus

MOTIVATIONAL QUOTES

PLEASING OF OUR SELF IS THE DOMINANT THING, BUT ONE THING HAS TO BE REALIZE .....
NEVER **REMORSE** AT ANY POINT OF TIME YOU RETHINKING THE PROCEEDINGS OF SELF-PLEASING

.....Empowering Minds



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INDUSTRIAL VISIT

An industrial visit to Vijayawada Thermal Power Station (VTPS) was organized on 2nd December 2021 for the students of the Mechanical Engineering Department.During the visit, students gained valuable insights into the working of a thermal steam power plant, including the processes involved in electricity generation using steam turbines. They observed various units such as the boiler, turbine, condenser, and generator, and understood the overall workflow from fuel combustion to power output.

GUEST LECTURE

The Department of Mechanical Engineering organized the following guest lectures in December 2021 to enhance students' understanding of advanced topics and provide real-world industry insights:

◈ 1. Guest Lecture on "Strip Layout Design"

Date: 25th December 2021

Coordinator: Ms. Ch. Anusha

Resource Person: Mr. A. Rajesh, Assistant Professor, GEC

The session focused on the fundamentals and techniques of strip layout design, a crucial part of sheet metal component manufacturing. The resource person discussed various design strategies used in forming operations, optimizing material usage, and increasing production efficiency. The lecture helped students understand practical aspects of process planning in manufacturing industries.

◈ 2. Guest Lecture on "Drawbacks of Mechanical Vibrations"

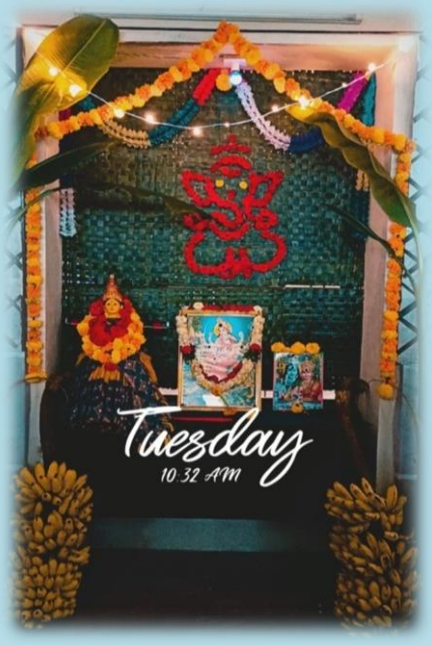
Date: 21st December 2021

Coordinator: Mr. P. Bhargava Kumar

Resource Person: Mr. L. Ramesh, Assistant Professor, GEC

This lecture provided insights into the adverse effects of mechanical vibrations on machinery and structures. The resource person highlighted topics such as resonance, wear and tear due to vibration, noise generation, and methods to control or minimize vibrations. The session enhanced the students' conceptual clarity on vibration analysis and its impact in real-world engineering systems.

AYUDHA POOJA



As a part of **Dasara celebrations**, the **Department of Mechanical Engineering** organized **Ayudha Pooja**, a traditional worship dedicated to **Goddess Durga**, on **12th October 2021**.

This ritual, deeply rooted in Indian culture, symbolizes respect and gratitude towards tools, machines, and instruments that support our daily work. The celebration involved the ceremonial cleaning and decoration of laboratory equipment and machinery, followed by pooja offerings and traditional rituals.

The event was conducted with devotion and enthusiasm by both faculty and students, promoting cultural values and unity within the department.

WORKSHOP

A two-day workshop on CATIA (Computer Aided Three-dimensional Interactive Application) was organized by the Department of Mechanical Engineering on 29th and 30th October 2021. The workshop aimed to equip students with essential CAD modeling skills, focusing on real-world design and simulation practices using CATIA software.

CATIA is a powerful design software widely used in industries for product design, simulation, and manufacturing processes. The workshop was designed to provide students with hands-on experience and a foundational understanding of its applications.

Workshop Highlights:

- Introduction to the CATIA interface and environment.
- Sketching, part modeling, assembly, and drafting modules.
- Practical sessions on creating 3D components and mechanical parts.
- Design of assemblies and simulation of motion.
- Industry relevance and real-time applications of CATIA in automotive and aerospace sectors.

FDPs attended by faculty

S.No	Name of the Faculty	Institution/Organization	Name of the Topic	Date
1	Mr K. Sukumar	NPTEL-AICTE	Fundamentals of Convective Heat Transfer	Jul-Oct 2021
2	Mrs. Ch. Anusha	NPTEL-AICTE	Design Practice - II	Aug-Oct 2021
3	Ms.N.Jahnavi Chandrika	NPTEL-AICTE	Design Practice - II	Aug-Oct 2021

We are delighted to congratulate the following faculty members of the Department of Mechanical Engineering for their successful completion of NPTEL-AICTE certified courses, showcasing their commitment to continuous learning and professional development:

1. **Mr. K. Sukumar** – Successfully completed the course on *Fundamentals of Convective Heat Transfer* during **July–October 2021**.
2. **Mrs. Ch. Anusha** – Successfully completed the course on *Design Practice - II* during **August–October 2021**.
3. **Ms. N. Jahnavi Chandrika** – Successfully completed the course on *Design Practice - II* during **August–October 2021**.

Wishing you continued success in all your future endeavors!

Motivational Quotes

- It is not about performing miracles. It is about recognizing the miracle of life that you are.

…….Empowering Minds