

NEWS LETTER

ISSUE 7

MECHSCOOP 2021-22

SUPPORT OF

EDITOR'S COLUMN



Sri. S. Jayaram Reddy
President - KRJS



Dr. Vijayasimha Reddy B.G.
PRINCIPAL, VIT

I am pleased to know that the Department of Mechanical Engineering is going to release 7th edition of its newsletter. This newsletter provides a panoramic view of the academic, research, co-curricular activities and achievements of the department during the academic year 2021-22. Our vision is to impart technical educational training of exemplary academic standards to our students. The mechanical engineering department has a rich tradition of pursuing academic excellence and providing congenial environment for the overall personality development of its students. I feel confident that the department is progressing in the right direction and I congratulate the faculty and staff for their hard work and whole-hearted efforts to make the department the choicest destination for aspiring mechanical engineers.

*“Finally, I express my sincere thanks to the management, principal, colleagues and my dear students; who have supported in bringing out this seventh edition of newsletter **MECHSCOOP-22**”*



Dr. LOKESHA G REDDY
Professor & HoD

Vision and Mission of the Department

Vision:

To be recognized in the field of mechanical engineering education and research to produce competent engineers.

Mission

- Impart technical education through effective teaching learning methods.
- Create research ambience to face the current technological challenges for the benefit of society.
- Strengthen industry-institute interface for developing team work, internship and entrepreneur skills.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: Solve real time problems using fundamentals of mathematics and engineering sciences.

PEO2: Design, analyze and evaluate mechanical systems using modern tools for the benefit of society in a conducive environment.

PEO3: Create innovative products with multidisciplinary approaches as an individual and as a team with good interpersonal skills and ethical values.

PROGRAM SPECIFIC OUTCOMES (PSO's):

PSO1: Apply the knowledge gained on metals and structures to show their limitations and make them to think for better procedures.

PSO2: Apply fundamental principles of thermal sciences on energy utilization and its impact on environment.

WORKSHOP

Department of Mechanical Engineering organized a "5-day hands on workshop on PYTHON", from 29th Nov to 03rd Dec 2021 with an intention to enlighten the mechanical students to know the programming language and vast libraries available in PYTHON. Workshop was conducted by industry expert **Saravanan Ganesh**, who is the founder of **TechSparx Technology Training School**. He introduced the students to create simple graphics using turtle module. He introduced them to sequential, conditional, iterative, interactive programming, lists, strings, file handling. Using the practical experience gained in these sessions, students created a mini-project to ensure all the concepts were revisited and concretized. All students completed the mini-project and were awarded with a certificate.



PYTHON hands on workshop

➤ Department of Mechanical Engineering organized a "3-day workshop on Latest Automobile Technologies" from 17th to 19th May 2022. KRJS management along with Bosch executives inaugurated the programme by lighting the lamp.



Inauguration of workshop

Industry experts from automobile manufacturers Ashok Leyland, Bosch, Toyota Kirloskar Motors made presentations on the latest automobile technologies. Industrial experts presented on engine technologies for usage of CNG-Compressed Natural gas, Bio Fuels, Hydrogen gas and Electric Vehicles. Sessions included the topics on trends in hybrid electrical vehicles, Plug in Hybrid Vehicles - PHEV,

Battery Electric Vehicles - BEV and fuel cell electric vehicles.



Speakers at the workshop

Practical session was held with Simulator model of the Toyota Hybrid Electric Vehicle. Complete disassembly and assembly of Tata - Indica 4- stroke diesel engine was done with students.



Disassembly and assembly of 4- stroke diesel engine

Students were taken for industrial visit to Tata Centre Excellence in ITI, Dairy Circle for the demonstration of electric vehicles.



Electric vehicle demo at Tata Centre of Excellence

This workshop has brought an overall development in an individual to understand the requirements for industry readiness. Participation certificates were distributed to the students.

FACULTY DEVELOPMENT PROGRAMME

A 2-day faculty development programme on "Quality in teaching learning and assessment process" was organized from 21st to 22nd March 2022. All the faculty of the college registered for this 2- day program. Dr. H.S. Guruprasad Professor of ISE from BMS college delivered the lectures.

INDUSTRIAL VISITS ORGANISED

An industrial visit for faculty was organized on 25th March 2021 to Karnataka German Technical Training Institute (KGTTI) – Welding. Faculty had discussions with trainer and the student's undergoing internship. Students have expressed their views on welding techniques during internship.



KGTTI-Welding industrial visit

An industrial visit for 5th semester students on 17th December 2021 was organized. Students along with two faculty visited Government Tool Room & Training centre (GTTC), Rajajinagar Industrial Estate, Bengaluru. Mr. Srinivas Gopal, Design Tech coordinator, GTTC, emphasized on the various skill development programmes, technical trainings offered by GTTC to students.

The visit has also thrown light on training programmes such as rapid proto typing (3D printing), CAD-CAM, Automation mechatronics, PLM,IOT,PLC, Robotics and process instrumentation.



Robot at GTTC



Demonstration at GTTC

An industrial visit to Asset Engineering, Rajajinagar Industrial Estate, Bengaluru was organized for 5th semester students on 17th Dec 2021. Around 62 students accompanied by 3 faculty, participated in the visit and got exposed to traditional machining processes such as precision grinding, milling, drilling, internal threading operations using CNC machines.



ASSET Engineering Company

Students gained knowledge on how a small-scale industry operates in the market. They also learnt the professional ethics followed in an industry.



Staff & Students at ASSET Engineering.

An industrial visit to International Machine Tool and Manufacturing Technology Exhibition (IMTEX), Tumkur Main Road, Bengaluru was organized for 4th and 6th semester students on 20th June 2022.



IMTEX Exhibition

WEBINARS

Department of Mechanical Engineering, Vemana Institute of Technology organized a webinar on "Recent Trends in Manufacturing Technology" on 15th July 2021 for all Mechanical students of Vemana I.T. The speaker of this webinar was Mr. A K Samanta, Technical Consultant, Steel Processing Industries. He emphasized on Steel Making, Steel Processing & User Industries.



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DEPARTMENT OF MECHANICAL ENGINEERING

ORGANISING WEBINAR ON
"RECENTS TRENDS IN MANUFACTURING TECHNOLOGY"
[STEEL MAKING, STEEL PROCESSING & USER INDUSTRIES]

KEY SPEAKER
MR. A K SAMANTA
TECHNICAL CONSULTANT,
STEEL PROCESSING INDUSTRIES

DATE : 15/07/2021
Time : 12PM Onwards

Meeting on 

Chief Patron: Karnataka ReddyJana Sangha
Patron: Dr. Vijayasimha Reddy B G, Principal
Convenor: Dr. Lokesha G Reddy, HoD - ME

For Details Contact
Prof. Aswathappa C M +91 9448884456
Prof. Kiran Kumar N +91 9902029650

GUEST LECTURES

Guest lecture on "How python programming is relevant for Mechanical engineering" was organized on 29th October 2021 for 4th year Mechanical students of Vemana I.T. The speaker of this guest lecture was Mr. Sarvanan Ganesh. He emphasized on need of programming language for mechanical engineers, he discussed about basics in python and solved various problems of mechanical engineering using python tool. He also showed how python can be a game changer in the field of mechanical engineering when it is properly utilized.



Guest Lecture on Python

The Department of Mechanical Engineering, Vemana Institute of Technology hosted a guest lecture on "Lifestyle to achieve Excellence" for the benefit of faculty members and students of 5th & 3rd semesters on 09.11.2021. The guest lecture was delivered by Mr. Manohar Rao Shivaji Shinde, Oil and Gas Industrial Curriculum Development Analysts at ARMACO in Saudi Arabia. He emphasized on how to control the anger, what are all its impact on human body organs and motivate the students to achieve success in their life.



Guest Lecture on Lifestyle to achieve excellence

Guest lecture on "Inculcating positive attitude through critical thinking" was organized on 6th May 2022 for 6th and 8th semester mechanical students.



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DEPARTMENT OF MECHANICAL ENGINEERING

ORGANISING
GUEST LECTURE ON
"INCUICATING POSITIVE ATTITUDE THROUGH
"CRITICAL THINKING"

KEY SPEAKER
MR. DHIRAJ A RAO
FREELANCE TRAINER

DATE : 06/05/2022
Time : 11 AM Onwards
Venue : Seminar Hall

Chief Patron: Karnataka ReddyJana Sangha
Patron: Dr. Vijayasimha Reddy B G, Principal
Convenor: Dr. Lokesha G Reddy, HoD - ME

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Guest Lecture on Positive Attitude.

PROJECT EXHIBITION

➤ The student project committee organized the project exhibition on 15/7/2022. The inaugural function started at 10:00 AM, presided by honourable President, Sri. S. Jayaram Reddy and attended by honourable General Secretary Sri. K.N. Krishna Reddy, honourable Joint Secretary P. Sadashiva Reddy and industry experts, Mr. Santhosh Kumar Adinarayan, Chief Design Engineer,

Maxim Analog Devices, Dr. Babu Rao Ponangi, Senior Engineer, FEA Quest Global Engineering Services Pvt. Ltd., Mr. Saravanan Ganesh, Managing Director, and Chief, Coding coach, Principal Dr. Vijayasimha Reddy B. G., all HoDs, teaching and non-teaching staff. 6 projects out of 16 were selected for exhibition. The experts from the industry and an internal evaluator evaluated the projects based on the rubric parameters - idea, methodology, demonstration, outcome, and interaction. 2 projects were selected for cash award.

I PRIZE

Project Title: Design and development of E-motor cart.

Project group: Nachiketa S, Suman D, Nistchith S, Amogh. H.S.

Guide: Dr. Lokesh G Reddy.

II PRIZE

Project Title: Fabrication of automatic corn roasting machine.

Project group: Gagan Kumar G, Lokesh R, Nivas R N, Naveen Kumar M.

Guide: Mr. Rakesh B G.



E-moto cart

Corn Roasting machine.

FUNDED PROJECTS RECEIVED

Two final year projects were funded by 45th series KSCST – SPP.

➤ Performance and emission characteristics of amoor oil blend with diesel in CI engines.

➤ Design and fabrication of a wind turbine for low power applications

ONGOING RESEARCH AREA

1. Ballistic Impact Gas Gun
2. Alternative fuels
3. Stress wave propagation of bars
4. Design and Development of a Split Hopkinson Pressure Bar test setup

RESEARCH PUBLICATIONS

➤ Mujeeb Pasha, Vijayasimha Reddy “External Inversion of aluminium tubes under static and dynamic compression”, J. of Manufacturing Technology Today, Vol 20, Issue 56, June 2021. ISSN 0972-7396.

➤ Mujeeb Pasha, Vijayasimha Reddy, T.Y.Reddy, “In Situ Calibration of a Load Cell during an Impact Test”, J. Inst. Eng. India Ser. C 102(6), December 2021.

➤ Mujeeb Pasha, Vijayasimha Reddy “Experimental validation of analytical models for mean crush load under quasi-static and dynamic compression of thin-walled aluminium tubes”, Int. J. of research in Engineering and Technology, Vol 10, Issue 7, July 2022. ISSN (E): 2321–8843.

➤ Vijayasimha Reddy.B.G, Mujeeb Pasha “Development of Velocity Measurement Device and Calibration Using SHPB and Ballistic Impact Setup”, IJSRSET, Vol 9, Issue 4, Aug 2022, ISSN : 2394-4099.

➤ Loksha G, Mujeeb Pasha, “Stress Wave Propagation in Bamboo Solid Bar”, IJSRSET, Vol 9, Issue 4, Aug 2022, ISSN : 2394-4099.

CONFERENCES

1. Dr. Lokesh.G and Dr. B. Aparna have presented a paper on “Heat transfer and flows of natural convection in a fluid-saturated porous medium of a trapezoidal cavity with convective boundary conditions, in First Biennial Int. Conf. on Hybrid and Electric Automotive Technologies, PES University on 29th October 2021.
2. Mr. Kiran Kumar has presented a paper on “Tribological analysis of Aluminium alloy A356 with Al₂O₃” in Int. Conf on Advanced Materials and Mechanical Characterization, SRM Institute of Science and Technology on 2nd December 2021.
3. Mr.Tippeswamy.M.S has presented a paper entitled “Investigations on fracture characteristics of Aluminium 6082-T6 alloy by using single edge notch bending” in 4th Int. Conf. on Materials Science and Manufacturing Technology, on 8th April 2022 at Akshaya college of Engineering and Technology, Coimbatore.
4. Mr.C.N.Ashok Kumar has presented a paper on “Energy absorption of open cell Aluminum structures under Quasi-static and dynamic compression”, Int. Conf. on Recent Advances in Science, Technology, Engineering and Management, Brindavan College of Engineering, Bengaluru on 29th April 2022.
5. Mr.Tippeswamy.M.S has presented a paper entitled “Effect of thick film coating on scratch resistance of aluminium 6082-T6 alloy under varied loading conditions” in 2022 Second Global Conference on Recent Advances in Sustainable Materials on 29th July 2022 at A.J. Institute of Engineering & Technology, Mangalore .

CO-CURRICULAR ACTIVITES

Drop hammer is used to test and quantify the impact energy absorption capacity of different materials under low velocity impact. Gas gun is used to understand the ballistic behaviour of different materials and structures under impact loading. SHPB is to characterize the mechanical properties at a strain rate in the order of 10¹/s to 10³/s. Department of Mechanical Engineering exhibited experimental setups on Dynamic Behaviour of Materials Drop Hammer, Ballistic



i2 academia pavilion

Gas gun and Split Hopkinson Pressure Bar (SHPB) at **i2 academia pavilion 2022**, Bengaluru (IMTEX-2022) held during 16th June to 21st June 2022 and won second prize.

8th semester students Rakesh S, Kaviarasu M, have participated in group skit and photography events at Mysore open University on 13th and 14th of May 2022.

Editorial Board:

1. Dr. Lokesh G Reddy
2. Mr. Krishna Kumar K N
3. Mr. H. Gujjaragowda
4. Ms. Dharani. N

Academic results (2021-22 EVEN Sem) - 8th Semester Class Toppers

Sl. No.	USN	NAME	PERCENTAGE	MARKS
1	1VI18ME032	SUMAN D	94.2	471
2	1VI18ME023	RITHIK MANJU	93	465
3	1VI18ME028	SHRAVAN R SHETTY	92.8	464

Academic results (2021-22 EVEN Sem) - 6th Semester Class Toppers

Sl. No.	USN	NAME	PERCENTAGE	MARKS
1	1VI19ME002	AKASH GUPTA	77.22	695
2	1VI19ME053	POOJA S	76.77	691
3	1VI19ME052	Y.SAI RACHANA	76.44	688

Academic results (2021-22 EVEN Sem) - 4th Semester Class Toppers

Sl. No.	USN	NAME	PERCENTAGE	MARKS
1	1VI20ME003	H. GUJJARAGOWDA	80.33	723
2	1VI21ME401	ARVIND PRASAD	72.00	648
3	1VI21ME406	SRINIVAS.K. V	67.56	608