

**DEPARTMENT OF MECHANICAL ENGINEERING**

**VIBRANT**

**AN ANNUAL MAGAZINE OF MECHONS**

**VOLUME 1**



**2021-2022**

**MANAKULA VINAYAGAR INSTITUTE OF  
TECHNOLOGY**

**Kalitheerthalkuppam, Puducherry – 605 107**

### VISION:

*" The Mechanical Engineering Department aspires to be acclaimed globally for renowned education and research to accelerate well qualified engineers who are creative ,entrepreneurial and flourishing in advanced fields of engineering and research ".*

### MISSION:

*Higher order Thinking: To assure Quality Education to the students and broaden their profession to make them globally competent Mechanical Engineers.*

*Continuous learning: Nurturing vital state of art, Research facility to provide students and faculty with outstanding opportunities to discover, illustrate , implement and disseminate wisdom .*

*Competency: To develop alliance with world class R & D Organizations and Educational Institutions in India and overseas for teaching, research and consultancy services.*

*Entrepreneurship: To provide the students with academic environment of excellence, leadership and ethical guidelines needed for lifelong prospective career.*

### ABOUT THE DEPARTMENT:

*Under graduation Education (UG) Course B.Tech in Mechanical Engineering is a Comprehensive degree program. The goal of Mechanical Engineering Curriculum is to create a flexible undergraduate educational experience in Design, Mathematics, Modeling, Computation, Quality Management, Engineering Science & Humanities.*

*The Department of Mechanical Engineering has been continuously striving to make progress in Teaching and Research. The Department was started with an intake (UG) OF 60 students in 2012 and 120 students in 2015. The Mechanical Department is well equipped with excellent laboratories to make the students to easily understand and study the latest research areas such as Computational Fluid dynamics, Mechanics of Robot, Aerospace and Defense field, etc and also has separate Department library houses, best books in the technical field this vast reservoir of knowledge is a source of constant value addition to the students and faculty members the library is rich in manufacturing , Design , Metallurgy , Drawing and Materials science . To enhance the Technical skills of the students , the department also organizes various program such value added course ,Quiz Competition ,seminars , workshops , Industrial Visits and Guest Lectures which would make them globally competitive as well as students to become as indispensable Engineer and earn the income they deserve .*

**GOALS AND STRATEGIES**

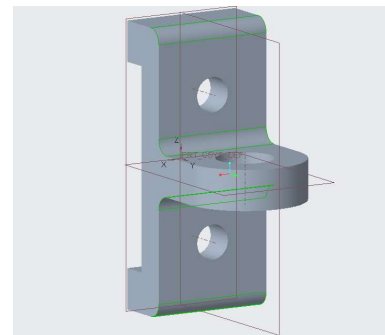
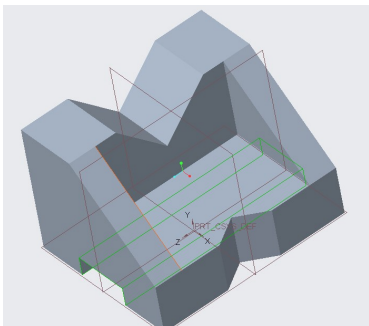
- a. Ensuring the preeminence of learning.
- b. Providing high quality programs that meet the evolving needs of our students, community and sector.
- c. Ensuring scholarly and creative activity.
- d. Making collaboration integral to our core sectors.
- e. Creating an environment where all students have the opportunity to succeed.
- f. Expanding connections and partnerships with our peers.

**Design Competition**

The art of designing stimulates the creativity of engineers in fast changing dynamic world. In our department we conducted AUTOCAD design Competition in this our friends from second year Mechanical Engineering Department **Mr.A.Mohammed Imthiyas** and **Mr.M.Abdue Fahad** have participated in the competition. **Mr.A.Mohammed Imthiyas** have won the first place and **Mr.M.Abdue Fahad** has won the second place. Both were appreciated for the efforts taken by them.

Few words from the winner,

*“Hi friends I am Mohammed Imthiyas.A from Second year Mechanical Engineering , well in early periods I have no much idea about designing . In my Department faculties and students friends supported me to learn lot of information on design tools this encouraged me to do lot of things in designing.*



**A.VENKAT RAGAV**

**Articles**

**3D PRINTING**

**ADDITIVE MANUFACTURING**

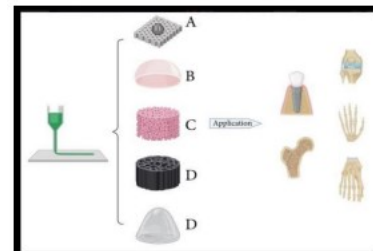
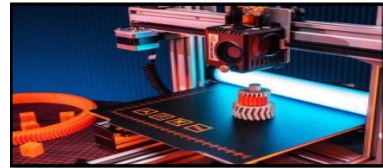
3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file. The creation of a 3D printed object is achieved using additive processes. In an additive process an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced cross-section of the object. 3D printing is the opposite of subtractive manufacturing which is cutting out / hollowing out a piece of metal or plastic with for instance a milling machine.

3D printing enables you to produce complex shapes using less material than traditional manufacturing methods.

3D printing has developed rapidly as a new industrial technology recently. Unlike traditional subtractive manufacturing, this additive manufacturing method is widely used in aerospace, vehicle manufacturing, energy storage, bioengineering, medical devices, and dentistry .

3D printing, also known as additive manufacturing (AM), refers to the use of print heads, nozzles, or other printing technologies to produce powdery metals, plastics, biological materials, and other adhesive materials by layer by-layer printing based on digital models .

This is the article written and expressed by Mr.B.Praveen Kumar of Second year from Department of Mechanical Engineering, MVIT.



**SPORTS MEET (2021-2022)**

Education and sports are the two important faces in life. Sports in schools are compulsory in today's education culture. Both Teachers and parents should promote the children on their own level to play the game for their growth and development of every individual to stay fit health wise by having strong physique.

**FEW WORDS FROM THE WINNERS**

“We have been working hard for this tournament, practicing for days , we are glorified that we made our institution and our parents proud ,and we will work harder to succeed in the upcoming events.

Mr.Anurudh,Mr.Rahul,Mr.AkshayandMr .Sharannath of final year mechanical engineering has participated in intercollegiate league in Football on 6<sup>th</sup> and 7<sup>th</sup> May 2022 hosted by Manakula Vinayagar Institute OfTechnology.



## Department Of Mechanical Engineering

### ONE DAY WORKSHOP ON FIRE SAFETY:



A one day workshop was organized on 19<sup>th</sup> April 2022 by the Department of Mechanical Engineering in association with National Institute for Quality & Reliability (NIQR) –MIT Mechanical Engineering Students Chapter, Puducherry on the topic “ International Value Added & Career Opportunities in Safety Engineering “ by Mr.N.Karthikeyan , Former Associate Professor & Trainer , TUV Rheinland ,NIFE Academy Private Limited was the chief guest for the program and Mr.Jaganraj Panneerselvam , Business Development Manager , TUV Rheinland ,NIFE Academy Private Limited was the resource person .

### SIGNING OF MOU WITH TUV RHEINLAND



Manakula Vinayagar Institute of Technology has signed MOU with TUV Rhienland Private Limited to provide Industry oriented training courses for the students of Mechanical Engineering in the area of safety Engineering .

**INDUSTRY SUPPORTED LAB TIE UP:**



Under the Guidance of Dr.B.Radjaram, Professor & Head, Department Of Mechanical Engineering signed MOU along with Chairman Shri.M. Dhanasekaran , Sri Manakula Vinayagar Educational Trust with Industry partner Haier India Limited for establishing the industry supported lab in the Department Of Mechanical Engineering for executing Research and Development activities in the area of Refrigeration systems & Air Conditioning .

**GUEST LECTURE**



A Guest Lecture was organized on 25<sup>th</sup> April 2022 by the Department of Mechanical Engineering in association with Institution of Engineers India (IEI) Mechanical Engineering Students Chapter, Puducherry on the topic “3D Printing and Laser Cutting “by Mr.Jagan, Founder of Vector solutions, Puducherry was the chief Guest for the program.



### **WORLD ENGINEERING DAY:**



On the occasion of world Engineering day, Guest Lecture was organized by Department of Mechanical Engineering on 19<sup>th</sup> March 2022. In association with Institution Of Engineers India (IEI) Mechanical Engineering students Chapter, Puducherry. **Mr.V.Sathyanarayanan**, Senior Vice President, Head HR (Global) & Corporate Quality CSS Corp, Global Technology Services, Chennai was the chief guest for the program.

### **INDIAN PLUMBING ASSOCIATION /MIT STUDENT'S CHAPTER INSTALLATION:**



Inauguration of “Indian Plumbing Association “**IPA students Chapter** was organized by the Department of Mechanical Engineering at **Manakula Vinayagar Institute of Technology (MVIT)** on **11<sup>th</sup> July 2022**. As a part of program Guest lecture was organized in the same day on topic “ Importance of Plumbing in Refrigeration & Air



## **Department Of Mechanical Engineering**

conditioning “ by Mr.J.Frederic Arul Raj , Senior Manager , GRUNDFOS ,Chennai was the resource person for the program .

### **URJAVARAN INTERNATIONAL CONFERENCE:**



On behalf of the ISHRAE Puducherry Sub Chapter URJAVARAN 2022 A National Conference on Energy, Environment and Sustainable HVAC &Architecture was organized at Manakula Vinayagar Institute of Technology on 05.03.2022.

Ar.Suhasini Iyer, (Green solutions Awardee, COP26 Submit Glasgow UK) Architect , Urban Planning and Development, Auroville Design Consultant , CSR Auroshilpam, Auroville Delivered the First Key Note Address on the topic of **“Climate Change impact on Sustainable settlement planning & Design”**.

The Panel discussion was moderated by Prof. Dr. Elumalai, Professor and Head, Department of Green Energy, Pondicherry University and Discussion was with Dr. Veerappan, MEP Consultant, Chennai, Mr. Shyam Sunder, Architectural Engineer and Design Consultant, Qatar, Mr.Dillibabu Haier Company

Second Key Note session was delivered by Kunnakudi V. Srinivasan Principle Architect Founder Director Bagyaan Associates Chennai & Professor, MEASI Academy of Architecture on the topic of **“Sustainable HVAC & Architecture”**

First Case Study Presentation was done by Mr.Balaji, HVAC Engineer and Consultant, Chennai.

Second Case Study Presentation was done by Er. Shyam Sunder, Architectural Engineer and Design Consultant, Qatar on the Topic of “District Cooling”

Dr. Veerappan, CMD, SUNVEER Consultant gave presentation about MEP and Its Job opportunities for Students

About 200 Students and teachers from various fields, Technicians and researchers benefited from attending the conference.

## Department Of Mechanical Engineering

### ADVANCED CNC TRAINING PROGRAM:



Department of Mechanical Engineering has organized training program on “Advanced CNC training “for Diploma students in Mechanical Engineering which was inaugurated on **17th August 2021** in order to promote the importance of advanced manufacturing techniques to diploma level students.

### TRAFFIC SURVEY IN PUDUCHERRY:



Department Of Mechanical Engineering has conducted program on “Traffic Survey “ in Puducherry region on 8<sup>th</sup> July 2022 with the support of students from all years of Engineering along with Department faculty members under the guidance of Puducherry traffic police department .

**ACRE SERVE & REFSAFE:**



ACRE SERVE & REFSAFE events comprising 5 lectures by Industry experts from Chennai, was organized by ISHRAE Puducherry subchapter in association with MVIT ISHRAE students chapter. Around 400 participants from AC & Refrigeration service sector, polytechnic colleges and ITI's attended the program.

**ENERGY CONSERVATION RALLY:**



Energy conservation day was observed by organizing “Energy Conservation Awareness Rally” with students in kalitheerthalkupam village on 7<sup>th</sup> January 2022.



**GUEST LECTURES:**



Shri .E.Mohanraj , Scientific Officer/E, Materials Chemistry & Metal Fuel Cycle Group ( MC&MFCG), IGCAR,DAE, Kalpakkam was the chief guest of program “ Technical Talk “ Titled “ An Introduction to HVAC and its Opportunities “ , Organized by ISHRAE MVIT Students chapter , Pondicherry on 9<sup>th</sup> October 2021.



ISHRAE MVIT students Chapter , Pondicherry have conducted Technical talk on “ **Energy simulation in Buildings** “ with **Dr.V.Antony Aroul Raj** , Zonal Chair south , ISHRAE students activities and **Professor & Research Coordinator** , Easwari Engineering college as chief guest of the program on **8<sup>th</sup> December 2021**.

**WORKSHOPS:**



**Mr.K.Palani, Manager – Safety & Environment, Ashok Leyland, Chennai addressed topic on “COVID impact during Pandemic in Auto Industries & Its safety Measures “which was conducted on 20.9.21 organized by the Institution of Engineers India (IEI) Puducherry state center, MVIT Students Chapter Mechanical Engineering.**



**Mr.R.Ganesan, General Manager (Retired), Axles India, Chennai was the resource person for the session titled “Quality & Reliability “, Organized by National Institution for Quality & Reliability (NIQR), MIT (Students Chapter ) Mechanical , Puducherry on 29.9.21.**

**External Webinar:**

**Dr.B.Radjaram , Professor & Head , Department of Mechanical Engineering , Manakula Vinayagar Institute Of Technology , Pondicherry has delivered a lecture on “ Cobot Technology “ under the Professional Body Association –The Institution for Engineers India (IEI) – Tripura Chapter on 7<sup>th</sup> May 2022.**

### **ABOUT VIBRANT**

Vibrant is a yearly Magazine compiled and published among students by the students community in Manakula Vinayagar Institute of Technology from the Department of Mechanical Engineering. Students from all years can indulge in Innovative and interested topic related either engineering related trends or in Non Technical related topics.

Students can express their own confession or any other ideas they can give for the development of Mechanical Engineering Department and the Institution.

Students Extracurricular and all other stuffs that they were really interested and want to develop can indulge in this magazine and show case their talent.

### **Chief Editors**

Mr. A.Mohamed Imthiyas/Second  
year/Mechanical Engineering

Mr.M. Abdue Fahad /Second  
Year/Mechanical Engineering

### **Associate Editor**

Mr.B.Praveen Kumar/ Second  
Year/Mechanical Engineering

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