ARAVALI
INSTITUTE OF TECHNICAL STUDIES

Approved by AICTE & Affiliated to RTU, BTER
AN ISO 9001: 2015 CERTIFIED ENGINEERING COLLEGE

Department of Mechanical Enggineering

Newsletter

Mechanical Mirror

VOLUME I, ISSUE III
Published on August 2021

Vision

Towards a Global Knowledge Hub, striving continuously in pursuit of excellence in Mechanical Engineering Education, Entrepreneurship and Innovation

Mission

- To impart total quality education through effective hi-tech teaching-learning techniques and department-industries collaboration.
- To mold the young dynamic potential minds to emerge as full-fledged future professionals so as to achieve top ten ranking status in the national level.
- To achieve international standards to fulfill the Government's "Make In India" industrial policy through innovation and research.

Program Specific Outcomes (PSO's)

PSO1: Ability to challenge the start of an accessible business and address the complex technical issues identified in designing, heat, and creating related businesses with the target device.

PSO2: Ability to directly analyze and recover actual situations related to design using calculation methods and tools. You can work freely under research and mechanical conditions.

PSO3: The ability to intelligently incorporate information received both

verbal and compound.

Message from Director

Dr. Hemant Dhabhai
Director, Aravali Institute of Technical Studies

Mechanical engineering is one of the oldest and broadest engineering disciplines, and plays a significant role in enhancing safety, economic vitality, enjoyment and overall quality of life throughout the world. A prerequisite for development is growth and that is directly related to production or output of a country. If production is done via a sustainable path, it can maintain the sustainability of development.

I am glad to know that the Department of Mechanical Engineering of AITS is bringing out a monthly Newsletter. The college is proud of the achievements of the students and staff of the department and bringing out this Newsletter. I wish all success for the Newsletter and hope they carry forward the vigor and dedication for bringing out the future volumes of Newsletter.

EDITOR DESK

Gourav Purohit
ADSW, Aravali Institute of Technical Studies

It gives me an immense pleasure to introduce **Mechanical Mirror** Newsletter of Mechanical Engineering. This newsletter will help our department stay connected to a given community. As we offer students a regular dose of department-related news and information, we are also giving them another way to contact department and to keep in touch with it. Even as students or faculty graduate and alumni, they will likely stay in contact with the newsletter, thereby preserving the

relationship they have with the department.

Message from HOD

A warm and Green Greetings from the Department of Mechanical Engineering at AITS, Udaipur. The college has been simply unstoppable in its progress as it has been actively involved in various activities that have brought to light the hidden talents of the college students and staff. Mechanical Engineering is a professional Core engineering discipline that deals with the design, production and maintenance of any produce of any industry. The pride of every student and staff would be in his/her department and college.

Our department has a team of highly qualified and experienced faculty, good infra structure and lab facilities. We are striving hard continuously to improve upon the quality of education and to maintain its position of leadership in engineering and technology. We always work with the motto "Nothing can be achieved without genuine effort." The core values of the department help the students to develop their overall personality and make them worthy to compete and work at global level. Our faculty are continuously attending various training programs, publishing research papers, books and filing patents. Many are pursuing research. Our department has been conducting seminar / conferences to keep the faculty and students abreast with the latest developments in the field of technical education. We are happy to share that many students are pursuing higher studies in leading universities in India and abroad. I am certain that our students will prove to be an invaluable asset to an organization. We, Mechanical engineers to build the nation.

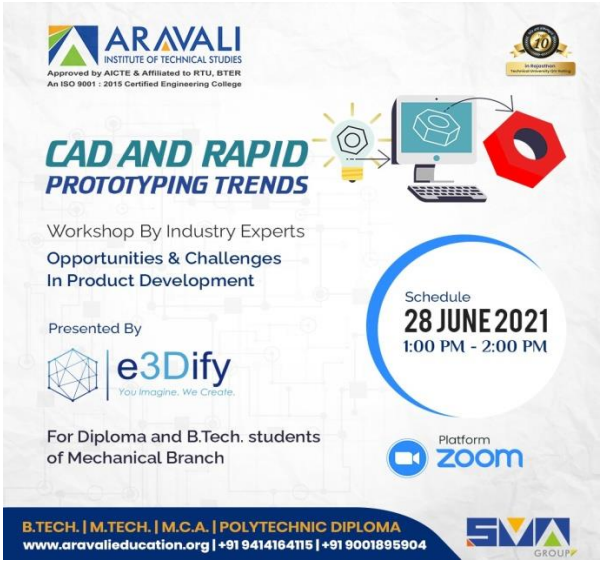
Dr.Vijayendra Singh Sankhla

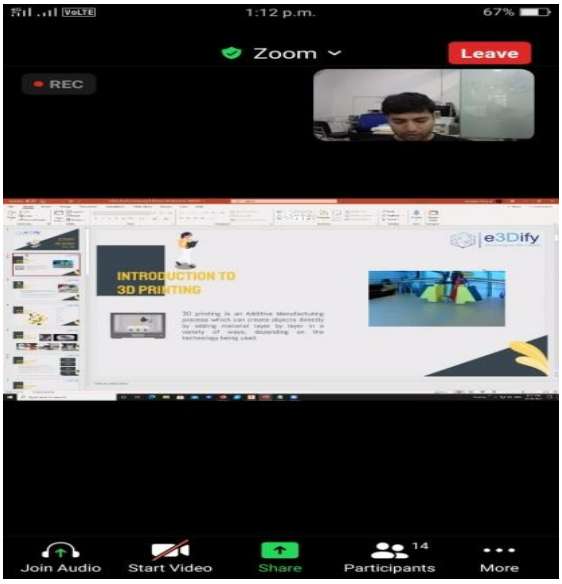
Professor and Head Department of Mechanical Engineering

Workshop: Opportunities & Challenges in Product Development

Date: 28th June 2021

keynote speaker : Mr. Kamlesh Joshi, E3Dify”





Workshop on Energy Swaraj: Essence of Sustainability

Prof. Chetan Singh Solanki, IIT Bombay

Date: 09 th Feburary 2021

Online Workshop: Evolution of Automobile & Role of Mechanical Engineers in Automobile Industry

Date: 28 th January, 2021

Keynote speaker: Mr. Bhupendra Verma,
Trainer Learnet Skill Ltd. (Founder & CEO, JP Survey Academy & Associates, Bhopal)

REPUBLIC DAY CELEBRATION

Date: 26th January, 2021

VOLLEYBALL TOURNAMNET-2021

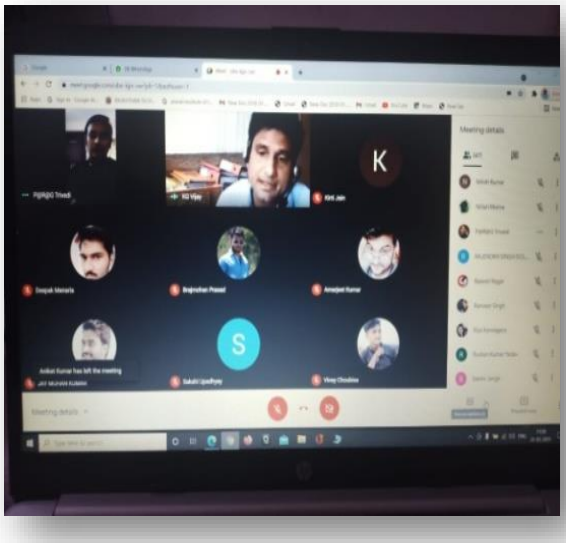
Date: 05th Feb. 2021

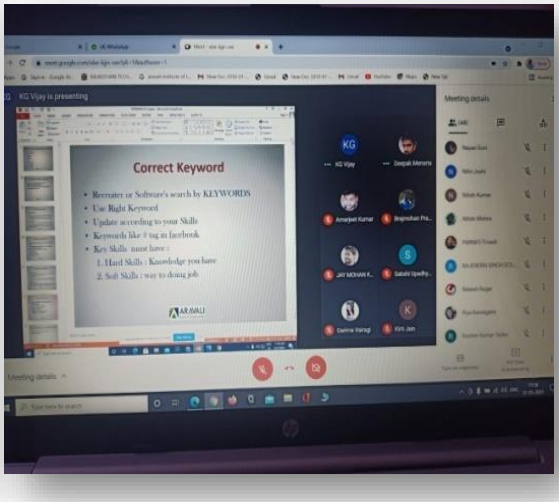
Mechanical Engg. Department

Workshop: How to Create Profile on Job Portals

Date: 14 June, 2021

Keynote speaker: Mr. K.G. Vijayvargiya (TPO, AITS) & Mr. Parag Trivedi (Senior Software Testing Engineer)





Sudoku is a logic puzzle which is harder than an easy one and requires certain tactics to solve it.

	9	4						3
								4
			4	9	3	8	2	7
5		2	8		7			
			5	6			7	8
7						5	3	
4			6					
		3	7	2			4	
9				4	1	7		5

	6			1			7	
3			8				5	
7			4				3	
						9		2
		9	1					7
		3		6		5	2	
9				2				
8				5			1	

Pi - The Magic Ratio

pi, in mathematics, the ratio of the circumference of a circle to its diameter. The symbol π was devised by British mathematician William Jones in 1706 to represent the ratio and was later popularized by Swiss mathematician Leonhard Euler. Because pi is irrational (not equal to the ratio of any two whole numbers), its digits do not repeat, and an approximation such as 3.14 or 22/7 is often used for everyday calculations. To 39 decimal places, pi is 3.141592653589793238462643383279502884197.

The Babylonians (c. 2000 BCE) used 3.125 to approximate pi, a value they obtained by calculating the perimeter of a hexagon inscribed within a circle and assuming that the ratio of the hexagon's perimeter to the circle's circumference was 24/25. The Rhind papyrus (c. 1650 BCE) indicates that ancient Egyptians used a value of 256/81 or about 3.16045. Archimedes (c. 250 BCE) took a major step forward by devising a method to obtain pi to any desired accuracy, given enough patience.

By inscribing and circumscribing regular polygons about a circle to obtain upper and lower bounds, he obtained $223/71 < \pi < 22/7$, or an average value of about 3.1418. Archimedes also proved that the ratio of the area of a circle to the square of its radius is the same constant.

Over the ensuing centuries, Chinese, Indian, and Arab mathematicians extended the number of decimal places known through tedious calculations, rather than improvements on Archimedes' method. By the end of the 17th century, however, new methods of mathematical analysis in Europe provided improved ways of calculating pi involving infinite series. For example, Isaac Newton used his binomial theorem to calculate 16 decimal places quickly. Early in the 20th century the Indian mathematician Srinivasa Ramanujan developed exceptionally efficient ways of calculating pi that were later incorporated into computer algorithms. In the early 21st century computers calculated pi to 62,831,853,071,796 decimal places, as well as its two-quadrillionth digit when expressed in binary (0).

Pi occurs in various mathematical problems involving the lengths of arcs or other curves, the areas of ellipses, sectors, and other curved surfaces, and the volumes of many solids. It is also used in various formulas of physics and engineering to describe such periodic phenomena as the motion of pendulums, the vibration of strings, and alternating electric currents.

Chief Editor

Mr. Gourav Purohit

Assistant Professor

Department of Mechanical Engineering, AITS

Editors

Dr. Vijayendra S Sankhla

Head of Department

Department of Mechanical Engineering, AITS

Student Editors

Mr. Chandan Lodha

B.Tech. 2 nd Year

Department of Mechanical Engineering, AITS

Vision:

Tomorrow will take care of itself if one does an excellent job today. To nurture and develop talent, blended with values and technology to strengthen the technical manpower of the nation.

Mission:

- Impart quality education along with industrial exposure.
- To provide industry interface for faculty and students to work on projects with end goal of real time knowledge.
- Enhancing the quality of life through sustainable development.
- To continuous development of infrastructure and enhance state-of-the-art equipment to provide our students a technology up-to-date and intellectually inspiring environment of learning, research, creativity, innovation and professional activity and provide ethical and moral values.

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