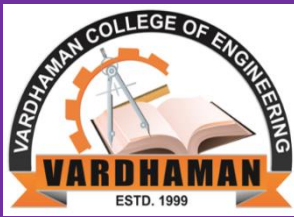


# Vardhaman College of Engineering

## Department of Mechanical Engineering

# YANTRIK

News letter



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### About the Department

Engineering advancements happening in the world's workshop, so with the standard of engineering consistently rising, mechanical engineering is creating ripples in the technology world.

The department is established in the year 2006 with an intake of 60 and the number is increased upto 90 in 2009 and 120 in 2013. The department is headed by Dr.B.Subbaratnam. Mechanical Engineering is a fast growing discipline in tune with the demands in the core areas of infrastructure and Manufacturing.

### Vision of the Department

To be a premier center for producing competent mechanical engineers to cater the ever changing industrial demands and societal needs.

### Mission of the Department

- To impart knowledge and skills in basic and applied areas of Mechanical Engineering through innovative learner-centric approach.
- To associate with industries and research organizations for gaining real time practical knowledge.
- To facilitate continuous learning based on dynamic needs of the society.

### Program Educational Objectives (PEOs)

- Graduates make their way to the society with proper scientific and technical knowledge to identify, formulate and solve Mechanical Engineering problems.
- Graduates adapt to rapidly changing environment in the areas of Mechanical Engineering and explore possible profession in industry, academic, research and self-employment opportunities.
- Graduates excel in career by their team-working ability and communicate effectively to complete task with minimal resources.
- Graduates commit to professional and ethical practices encouraging diversity, continuous improvement and lifelong learning.

### Program Specific Outcomes (PSOs)

- Demonstrate knowledge in the area of design, analysis and fabrication of mechanical systems.
- Apply learned concepts and management skills to associate professionally in industry or as an entrepreneur.

**Student Articles****NANOTECHNOLOGY**

**Nanotech Applications: The Good.** Technology is all about making things smaller, and to that end, right now they're working on making the smallest things possible. Nanotechnology is the science of making robots that aren't much bigger than a molecule, and there are lots of reasons for doing it. Imagine sending a million microscopic machines into a person's bloodstream programmed to attack a tumor, or shoot the AIDS virus with tiny little phasers. Imagine swarms of little cleaning droids mopping up the pollution in our rivers, or tiny manufacturing droids that can build anything we want, in seconds, molecule-by-molecule. The big problem is, of course, how you actually build trillions of these little machines. Simple: you teach them to replicate like cells, using materials from the environment. Nanotechnology can actually revolutionize a lot of electronic products, procedures, and applications. The areas that benefit from the continued development of nanotechnology include nano transistors, nano diodes, OLED, plasma displays, quantum computers, and many more. The development of more effective energy-producing, energy-absorbing, and energy storage products in smaller and more efficient devices is possible with this technology. Such items like batteries, fuel cells, and solar cells can be built smaller but can be made to be more effective with this technology.

**Market Crashes: The Bad.** You will also find that the development of nanotechnology can bring about the crash of certain markets by lowering the value of oil and diamonds due to the possibility of developing alternative sources of energy that are more efficient, rendering fossil fuels obsolete. This can also mean that since people can develop products at the molecular level, diamonds, emeralds, rubies, gold and other precious material can now be mass produced and would lose their value.



**The LHC's 17 mile tunnel circular tunnel located  
100 meters underground**

**Unstoppable NanoBots: The Ugly.** K. Eric Drexler, one of the founding fathers of the whole nanotechnology concept, came up with a number of spine-chillingly plausible doomsday scenarios. The problem is our nanobots would be like cellular terminators, much more advanced than any of the creations nature invented. They could out-compete organic life overnight. Taken to its extreme, we have the scenario affectionately known as the gray goo problem, which speculates the machines would simply start replicating out of control until everything in existence is just a mass of tiny, scuttling robots, which scientists imagine would look like a pile of gray slop floating through the void. Scary right?

**Advancements in Research: The Good.** About 100 years ago physicists were at a standstill and had many conflicting theories about the universe. Then Einstein introduced relativity and quantum theory, and if you know anything about physics you will understand how many discoveries followed this. Without the collider, scientists cannot further their understanding of quantum theory and other scientific phenomenon. The knowledge from basic science is what propels new and unforeseen technology and gives us a better understanding of the universe we live in, and a better understanding leads to better engineering and technology.

By  
Shashikant D  
IV YEAR

**CO-CURRICULAR ACTIVITIES ATTENDED**

S No	Name of the Event	Venue	Date	No of Students Participated
1	BAJA SAEINDIA2017	Pithampur, Madhya Pradesh	16 <sup>th</sup> To 19 <sup>th</sup> Feb-2017	25
2	Virtual BAJA SAEINDIA2016	Christ University, Bengaluru	24 <sup>th</sup> & 25 <sup>th</sup> June-2016	46

**EXTRA-CURRICULAR ACTIVITIES ORGANIZED**

S No	Name of the Event	Venue	Date	No of Students Participated
1	Paper Presentations	PG-Lab	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	08
2	Poster Presentations	Block 2	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	05
3	Best out of Waste	Bolck-2	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	24
4	Get the Nemo	Block 2	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	36
5	Vaahan 2K16	Bolck-3	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	25
6	Water Rocket	Bolck-2	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	10
7	MQ	PG-Lab	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	69
8	Auto Enthusiasts	1001	23 <sup>rd</sup> & 24 <sup>th</sup> September, 2016	40

**EVENTS ATTENDED UNDER PROFESSIONAL SOCIETIES**

S.No	EVENT	Name of Co-curricular Activity	Organized Period	No. of students participated
1	TECHNOLITES - 2K17	BEST OUT OF WASTE	15 <sup>th</sup> & 16 <sup>th</sup> September, 2017	12
		TACHO		15
		BRAIN IT ON		18
		MECCI POP		60
		RC TRACKING		16
		MQ7		16
		VAAHAN		36

**FACULTY RESEARCH PUBLICATIONS: (JOURNALS)**

SI No-	Manuscript Title
1	<b>T.Vijaya Babu</b> and J.S Soni , Investigation of Process Parameters Optimization in Die - Sinking Edm to Improve Process Performance Using Taguchi Technique, 2016, IOSR Journal of Mechanical and Civil Engineering, Vol-13(5), pp.130-133.
2	<b>T.Vijaya Babu</b> , J.S Soni and S. Ajaya Kumar , An experimental investigation of machining parameters on electrical discharge machining of m-250 (maraging) steels, 2016, International Journal of Engineering Sciences & Research Technology, Vol-5(12), pp. 55-60.
3	<b>T.Vijaya Babu</b> and Dr.J.S Soni , B Sures Kumar, S. Ajaya Kumar Electrical Discharge Machining (EDM): A Review ,2016, International Journal of Engineering Trends and Technology (IJETT), Vol-40(6), pp. 371-375.
4	<b>T.Vijaya Babu</b> , J.S Soni, S. Ajaya Kumar , Experimental study of surface finish on AISI 316 Stainless steel during Electro Discharge Machining , 2016, International Journal of Engineering and Management Research (IJEMR), Vol-6(6) , pp. 279-281.
5	Sharma, Rakesh and <b>K, Deepak</b> , Thermoelectric refrigerator with patterned air flow arrangement, 2016, International Journal of Research in Engineering and Technology, Vol-5(12), pp. 43-46.
6	<b>K Deepak</b> and A.V.S.S.K.S. Gupta, Modeling and analysis of Low Temperature Kalina Cycle System, 2016, Journal of Chemical and Pharmaceutical Sciences, Special issue(2), pp.35-40.
7	<b>T. Vijaya Babu</b> and J.S Soni, Optimization of WEDM parameters for surface roughness on AISI 316 L stainless steel using ANOVA, 2017, International Journal of Current Engineering and Technology ,Vol.(7)(3), pp.1127-1131.

**Faculty Research Publications : Conferences**

SI No.	Manuscript Title
1	<b>U Pranavi</b> , Perumalla Janaki Ramulu, Ch Chandramouli, Dasari Govardhan, PVS.Ram Prasad, Formability analysis of aluminum alloys through deep drawing process, 14–16 July 2016, Bangalore, IOP Conf. Series: Materials Science and Engineering, Vol-149, doi:10.1088/1757-899X/149/1/012025.
2	H Jeevan Rao, Perumalla Janaki Ramulu, <b>M Vishnu Vardhan</b> , CH Chandramouli, Failure Prediction in Fiber Metal Laminates for Next Generation Aero Materials, 14–16 July 2016, Bangalore, IOP Conf. Series: Materials Science and Engineering, Vol- 149, 012102 doi:10.1088/1757-899X/149/1/012102.
3	Mohammed Sohaila, <b>S. Venukumar</b> , and M. Venkateswar Reddy, An outline of piping design using CAESER II, , International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM-2016): Organized by MLR Institute of Technology, Hyderabad, Telangana, India, Published in Materials Today: Proceeding, Vol-4(8), pp. 8269-8278.
4	<b>Reddy D.V. Ramana</b> , Gunda Jagadish Babu, Padal K.T. Balaram, Post-buckling Behaviour of Imperfect Cylindrical Panels Subjected to Axial Compressive Load: Experimental vs. Theoretical, International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM-2016): Organized by MLR Institute of Technology, Hyderabad, Telangana, India, Published in Materials Today: Proceedings, Vol-4(8), pp.8665-8677.
5	G Venkatesh, <b>P Ramakrishna Reddy</b> , Sairam Kotari, Generation Producer gas using coconut shells and sugar cane bagasse in updraft gasifier, International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM-2016): Organized by MLR Institute of Technology, Hyderabad, Telangana, India, 2017, Published in: Materials Today: Proceedings, Vol-4(8), pp. 9203-9209.
6	<b>B. SubbaRatnam</b> , D.V. Ramana Reddy and Jagadish Babu Gunda "Dynamic Stability

	Behaviour of Cantilever Beams Resting on an Elastic Foundation Subjected to Axial Periodic Loads" Proceedings of 61st Congress of ISTAM ( <a href="http://istam.iitkgp.ac.in">http://istam.iitkgp.ac.in</a> ) Held at: VITU - Vellore, India, Dec. 11-14, 2016 pp:1-12. ( <a href="http://www.vit.ac.in/">http://www.vit.ac.in/</a> ).
7	<b>B.Venkatesh</b> , Bharti Malvi and Manish Roy "Elevated Temperature Erosion of Multilayer Fe-Cr Hardfaced Layer" International Conference on Coatings, Thin Films, Multi Layer Devices & Systems-I Organized by NFTDC, Hyderabad, India during 14-16 December 2016.
8	Rishab Basutkar, Vishlesh Varaganti, <b>Tharakeshwar Appala</b> "Gyroscopic Stabilization of a Two-Wheeled Vehicle: Modeling and Simulation" Proceedings of International Conference on Design and Manufacturing, IIITDM Kancheepuram, 16-17 December, 2016.
9	<b>B.Venkatesh</b> , Bharti Malvi and Manish Roy "Influence of Processing Condition on Erosive Wear of Hardfaced Stellite Layer" Indo-Australian Symposium on Advances in Materials Engineering (AME-16) Organized by IIT Bombay, Mumbai, India during 19-20, December, 2016.
10	<b>B.Venkatesh</b> and Manish Roy "High Temperature Erosion of Hardfaced Stellite Layer" Fifth International Conference on Wear and Corrosion: Synergistic Effects and Road Mapping solutions for Mitigation in Industrial & Service Environment Organized by NFTDC, Hyderabad, India during 12-13 December 2016.

### Participation of Faculty in FDP/STTPs/Workshops/Guest Lectures

S. No	Name of faculty	Title of Event	Seminar /FDP STTPs/ Workshop Attended	Venue	Period	No. of Days	Faculty Attended	Relevance Of Training Program
1.	G.Ravi Chandra	Behavior of Composites	Workshop	CVR, Hyderabad	23 <sup>rd</sup> -25 <sup>th</sup> , Dec-2016	03	01	Material Science
2.	K. Sairam	Behavior of Composites	Workshop	CVR, Hyderabad	23 <sup>rd</sup> -25 <sup>th</sup> , Dec-2016	03	01	Material Science
3.	P. Rama Karishna Reddy	Behavior of Composites	Workshop	CVR, Hyderabad	23 <sup>rd</sup> -25 <sup>th</sup> , Dec-2016	03	01	Material Science
4.	T.V.Seshiah Naidu	Behavior of Composites	Workshop	CVR, Hyderabad	23 <sup>rd</sup> -25 <sup>th</sup> , Dec-2016	03	01	Material Science
5.	Ch. Chandra Mouli	Behavior of Composites	Workshop	CVR, Hyderabad	23 <sup>rd</sup> -25 <sup>th</sup> , Dec-2016	03	01	Material Science
6.	K Raja Shekar Reddy	Behavior of Composites	Workshop	CVR, Hyderabad	23 <sup>rd</sup> -25 <sup>th</sup> , Dec-2016	03	01	Material Science
7.	P Sarkar	Behavior of Composites	Workshop	CVR, Hyderabad	23 <sup>rd</sup> -25 <sup>th</sup> , Dec-2016	03	01	Material Science
8.	S.Naresh Kumar	Product Design and Manufacturing	FDP	C-DAC , Hyderabad	24 <sup>th</sup> -28 <sup>th</sup> , Oct, 2016	05	01	Manufacturing
9.	M.Vishnu Vardhan	Essential Techniques for Research Problems in Manufacturing and Measurements	FDP	NIT, Warangal	11 <sup>th</sup> -15 <sup>th</sup> Jul, 2016	05	01	Production Technology

## Editorial Members

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