

Overview of the Department:

Mechanical Engineering has been on an integration phase with other disciplines for the past few decades and offers many challenging career opportunities for the students. The Department of Mechanical Engineering in VJIT was established in 1999 and is accredited by NBA in 2010. Going by the technological advances the Department has been actively engaged in transforming the learning systems and creating a sound knowledge base in the minds of the students. Innovations, hands on workshops, community projects & industry internships fine tune the students into industry ready.

VISION OF INSTITUTE:

To develop into a reputed Institution at National and International level in Engineering, Technology and Management by generation and dissemination of knowledge through intellectual, cultural and ethical efforts with human values.

To foster Scientific Temper in promoting the World class professional and technical expertise

Vision of Department:

To be recognized as a center of excellence in providing Mechanical Engineering education of international standards leading to well qualified engineers who are innovative, immediate contributors to their profession, successful in advanced studies and employable globally.

Mission of Department:

To educate, prepare and mentor students to excel as professionals and grow throughout their careers in the field of Mechanical Engineering. This can be accomplished by:

Providing the facilities and environment conducive to a high quality education, strong foundation in the fundamental principles of Mechanical Engineering and preparing them for diverse careers.

Engaging in academic activities, which strengthen the students' regional, national and international reputation.

Program Educational Objectives (PEOs):

PEOI: To induce thorough understanding of basic sciences, mathematics and mechanical engineering in students to demonstrate their ability both in theory and practical.

PEOII: To encourage students to analyze & acquire real time core engineering knowledge and contemporary industrial practices.

PEOIII: To pursue higher studies, become globally employable, imbibe the essence of team work and become entrepreneurs in a multidisciplinary environment.

PEOIV: To encourage students to develop leadership and communication skills, through which they can demonstrate their environmental, social, ethical responsibilities, and to provide a platform for lifelong learning and inculcate the culture of R&D.

Program Specific Outcomes (PSOs):

PSO1:

An ability to analyze and solve problems of welding special materials and employing reverse engineering techniques for the design of mechanical engineering components.

PSO2:

An ability to design, develop and implement mechanical engineering solutions in view of sustainability, environmental issues with social responsibility.

Department Advisory Board:

Department of Mechanical Engineering has constituted a Departmental Advisory Board with the following members for the academic year (2016-17):

Dr.G.Sreeram Reddy	Chairman
Dr.V.V. Satyanarayana	Convener Program Coordinator
Dr. B.V.Reddy	Member
Mr. Rajesh Kumar	Member
Mr. Ramesh, M.D., CanterCADD, Suncity, Hyderabad	Member
J. Laxma Reddy	Member
G.Sowmya	Member
VarunReddy(1691A03J7)	Member

PROGRAM ASSESSMENT COMMITTEE:

Department of Mechanical Engineering has constituted Program Assessment Committee with the following members for the academic year (2016-17):

S.No	Name	Position
1	Dr. Sree Ram Reddy	Chairman
2	Dr. V.V.Satyanarayana	Convener
3	Dr. N. Ravinder Reddy	Members
4	Mrs. J. Emeema	Members
5	Mr. K. Rajesh Kumar	Members
6	Mr. J. Jagadesh Kumar	Members

Research Publications:**Faculty:**

Name of Faculty	Title of Paper	Journal Name
Dr. V.V.Satyanarayana	Optimization of a single cylinder 4 stroke diesel engine performance parameters using diesel/cotton seed oil blend with hydrogen induction by Taguchi method	IJMET
Dr. V.V.Satyanarayana	Experimental investigation of effect of heat treatment on nose radius of insert and temperature at cutting area in turning of titanium	IJMET
Dr. Afroz Mehar	Performance Analysis of Ply Orientation in Composite Laminates	ELSEVIER- Materials Today Proceedings
Dr. N. RAVINDER REDDY	Friction Stir Welding of Aluminium alloys - a review	IJMET
Dr. N. RAVINDER REDDY	Applications of Multivariate Quality Control techniques in a manufacturing Industry	JIE
Dr. N. RAVINDER REDDY	Outcome Based Education in Engineering Institutions: Role of Industries	ICTIEE

J. Jagadesh Kumar	Applications of multivariate quality control techniques in a manufacturing industry	IIEJ
J. Jagadesh Kumar	Design Considerations of Radom's: A Review	IJMET
G. Sowmya	A Review on Corrosion of Steel Structures	IJSRSET
G. Sowmya	A Critical Review on Casting Types and Defects	IJSRSET
G. Sowmya	Experimental Investigation on the Effect of Annealing on Fatigue Life of SAE 202 and 440C Steels	IJCET
S PRASAD KUMAR	Design and fabrication of super heater used in boiler	IJSRSET
K. RAJESH KUMAR & V.R. RAO	FABRICATION OF PNEUMATIC 3-AXIS DUMPING TROLLEY	IJMETMR
J.SANDEEP KUMAR	Compressor less solid state mini refrigerator with thermo electric cooling technology powered by solar energy.	IJMETMR
J.SANDEEP KUMAR	Analysis of shell and tube heat exchanger by CFD tool	IJSRSET
RNSV.RAMAKANTH	Analysis of shell and tube heat exchanger by CFD tool	IJSRSET
RNSV.RAMAKANTH	A REVIEW ON DESIGN AND EXPERIMENTAL ANALYSIS OF TESLA TURBINE	IJIRSET
RNSV.RAMAKANTH	FUNCTIONAL DESIGN AND FABRICATION OF TRAVELLING TYPE SWIVEL CHUTE WAGON FILLER	IJSRSET
RNSV.RAMAKANTH	A REVIEW OF DESIGN OF SHELL AND TUBE HEAT EXCHANGER WITH USING HELICAL BAFFLES	IJSRSET
RNSV.RAMAKANTH	Experimental Determination and Comparison of Heat Transfer	IJCET

	Coefficient and Pressure Drop for Water and Copper Oxide Nano Fluid in Shell and Tube Heat Exchangers using Helical Baffles	
S RAMAKRISHNA	Analysis of shell and tube heat exchanger by CFD tool	IJSRSET
S RAMAKRISHNA	A review on anti-roll bars used in locomotives and vehicles	IJECT
B.Sudhabindu	Static analysis and experimentation of Jute fibre reinforced with E-glass	IJIRAE
B.Sudhabindu	National Conference was published based on "Micro structural studies of Fiber Reinforced E-Glass with Jute Fiber"	NIT WARANGAL
P. Chandra kumar	Theoretical and thermodynamic of portable peltier based indoor air conditioning system 2.thermoelectric portable air conditioning system	ijemr 2.ijmetmr

By Students:

Name of Student	Title of Paper	Journal Name
Valdas Ravi Kumar, Shaik Shahed Ahamed, Jakkarihari Vijay Kumar, Shaik Mujeeb	Fabrication of Pneumatic Three Axis Dumping Trolley	IJMETMR
D Sai Abhishek, K. Harsha Vardhan, V. Shubhanyu, U Raj Kumar	Effect of Quenching and Partitioning Process in Carbon Steels	IJCET
P Bharath Kumar, K. Upender Reddy, K. Sairam Goud	Magnetic iron Oxide nanoparticles: Various Preparation methods and Properties	IJSRSET
K. Upender Reddy, K. Sairam Goud, G. Bharath Kumar	Preparation of Magnetic Nanoparticles by Novel arc discharge method and its Applications	IJCET

S.madhukar, A.Shravan, P. Vidyanand Sai	A Critical Review on Cryogenic Machining of Titanium Alloy (Ti-6AL-4V)	IJMET
Paaka Vidyanand Sai, Samatham Madhukar, Sumith Kumar	Experimental Investigation on Effect of Heat Treatment on mechanical Properties of Titanium Alloy (Ti-6Al-4V)	IJCET
Paaka Vidyanand Sai, Samatham Madhukar, Malis Krishna Prasad Reddy	A Review on machinability Aspects of Titanium Grade-2	IJSRSET
Samatham Madhukar	An Experimental Investigation on Machinability of Titanium (Grade-2)	ICAMES
Samatham Madhukar, Birudala Raga Harshith Reddy, Rontala Saketh Reddy	Experimental investigation of effect of heat treatment on nose radius of insert and temperature at cutting area in turning of titanium (Grade-2)	IJMET
Samatham Madhukar. Sumith Kumar. Birudala Raga Harshith Reddy. Pusuluri Sriharsha	Experimental investigation on ceramic surface coatings on aluminum using detonation gun	IJCET
Samatham Madhukar, N.Vamshidhar Reddy, A V Vishnu Vardhan Reddy, Patlolla Srujan Reddy	Experimental investigation on effect of heat treatment on mechanical properties of steels and titanium	IJCET
Samatham Madhukar, Bootla Akhil, Aitha Shravan	Experimental and numerical analysis of metal removal rate and surface finish on Al-Ti alloy	IJSRSET
Samatham Madhukar, Kallalu Harika, Tummala Likhitha, Sumith Kumar	Experimental investigation for the determination of characteristics of nano particles using nano particle analyser	IJSRSET
Sreeram Reddy Gundeti, Sree Krishna Guthena	The comparison of deviations of freeform surfaces using re-engineering by non-contact scanners	IJMPERD
Sree Krishna Guthena, Sai Teja Kanaparthu	The comparative analysis of deviations with different non-contact scanners of freeform surface using reverse engineering approach	ICFEAST
N.Akhil, N.Sainath Reddy,	Design and analysis of rocket motor	IJSRSET

N.Sai Kiran Reddy	casing	
S.Pranavadithya,M.Sreeteja	Experimental investigation on the effect of annealing on fatigue life of SAE 202 and 440C Steels	IJCET
Anurag cingireddy, Ambika G, Manohar Lottla, Bharath Teja B, Anurag Cingireddy, Sampath Reddy N, manohar Lottla	CFD Simulation of wind - lens at different velocities	IJSRSET
G.V.S.Karthik, Gajula Rakesh	A Review on corrosion of steel structures	IJSRSET
T.Nikhil, Goutham Kumar, V.Madhu, M. Laxmi Kusuma Tulasi, B.Vamshi Krishna	A Review on design and experimental analysis of tesla turbine	IJIRSET
K.Saikrishna, K.Srikanth, T.Karan, S.Parameshwar	Design, Fabrication and Testing of linear motion bucket wheel reclaimer - a prototype	IJSRSET
Kallalu Harika, Tummala Likhitha, Karnati Hema	Fabrication of shell and tube heat exchanger using helical baffles based on kern's principle	IJCET
Kallalu Harika, Tummala Likhitha, Pulla Varsha Rani	Experimental determination and comparison of heat transfer coefficient and pressure drop for water and copper oxide nano fluid in shell and tube heat exchangers using helical baffles	IJCET
K.Harika, T.Likhitha, P.Varsha	Review on shell and tube heat exchangers using helical baffles and nanofluids	IJSRSET
B.Saikiran,V.Nenil, B.Anil, M.Vidya Sagar	Compressor less solid state mini refrigerator with thermoelectric cooling technology powered by solar energy	IJMETMR

PROFESSIONAL BODY ACTIVITES:

Indian Institute of Welding

- On 4th Feb 2017, department has conducted a seminar of the students and staff on “Latest Trends in welding engineering”.

Society of Automobile Engineers:

- On 21st Jan 2017, Scope of Hybrid engines in India
- On 4th March 2017, effect of coating in I.C. engine pistons.
- On 24th June, 2017 Modeling and Analysis aspects of IC Engine components.

Industrial Visits:

Students of the department have been to companies to gain the practical Knowledge at various departments of the company:

Name of the Company	No. of Students
Chemtech Industrial Equipments	30
Premier Engineering Industries	30

Industrial Internship / summer training:

As a part of curriculum students of the department have been to various companies for industrial internship/ training:

Name of the Company	No. of Students
HMT machine Tools Limited	4
Rane Engine Valves Limited	5
Coastal Gujarat Power Limited (CGPL)	1
Variety Automotives Pvt Ltd	2
MSME	3
Engineering CADD Center	1
Engineering CADD Center	1
CADD CENTER	1

PLACEMENTS:

Department of Mechanical Engineering feels proud to announce that the following number of placements have taken place for the batch 2013-17:

Name of the Company	No. of Students Placed	Month of Campus Placement
TCS	7	January, 2017
Delloite	3	January, 2017
Tech Mahindra	6	January, 2017
Attrra Infotech	4	January, 2017
Vistex	4	February, 2017
Lattice Cloud	3	March, 2017
Cyient	7	June, 2017

FDP/ Seminar/Workshop Conducted In the Department:

- On 10th, March, 2017 the department has conducted seminar on Advanced Research in Composite Materials.

FDP/Seminar/Workshop attended by Faculty:

- **TRANSFORMATIONS IN ENGINEERING EDUCATION ICTIEE-2017** at Vardhaman College from 6th to 8th January, 2017.
- **A WORKSHOP ON ADVANCES IN RESEARCH AND INNOVATIONS IN MECHANICAL ENGINEERING** at MJCET on 30th Jan to 1st February.
- **FDP ON THERMAL AND FLUID ANALYSIS-CFD** at GRIET from 27th Feb to 4th March.
- **ONE WEEK WORKSHOP IN EMERGING TRENDS IN CAD/CAM TECHNOLOGIES** at JBREC from 9th to 14th March, 2017.
- **EMERGING TRENDS IN COMPOSITES MATERIALS & INDUSTRIAL APPLICATIONS (ETCMIA-17)** at CBIT from 20th to 25th March.
- **A WORSHOP ON NANO, MICRO AND BULK MATERIAL PROCESSING AND NANO TECHNOLOGY** at GRIET from 20th to 26th March.

- **INTERNATIONAL CONFERENCE ON FRONTIERS IN ENGINEERING , APPLIED SCIENCES & TECHNOLOGY** at NIT, Tiruchy, on 31st March and 1st April, 2017.
- **CURRENT TRENDS IN MATERIALS AND MANUFACTURING** at CMRIT from 15th to 27th May.
- **3rd INTERNATIONAL CONFERENCE ON TRANSFORMATION IN ENGINEERING EDUCATION ICTIEE16** at College of Engineering Pune from 8th to 12th June, 2017.

Mech Vidya