

K S SCHOOL OF ENGINEERING & MANAGEMENT

DEPARTMENT OF MECHANICAL ENGINEERING

NEWSLETTER -2015/16

About the Department

Mechanical Engineering Department at KSSEM activated with the initiation of the college in 2010 with a vision to deliver world-class under-graduate and graduate Engineering education to the society. The curriculum includes the courses like Thermodynamics, Fluid Mechanics, Strength of Materials, Heat Transfer, Manufacturing Processes, Mechanical and Thermal Design, Finite Element Analysis, and System Dynamics. Students also acquire knowledge through various engineering electives in advanced topics including, Theory of Elasticity, Non-Traditional Machining, Composite materials, Theory of Plasticity, Experimental Stress Analysis, Tool Design, and Agile Manufacturing. The structure of the program includes laboratory experiments with respect to the academic syllabus where students go through a live experience with advanced machining, manufacturing, and experimental techniques. The laboratory experience reinforces content presented in the courses and provides students with an opportunity to involve themselves individually with the support of faculty and technical support staff. The acquaintance of the students along with an exposure to industrial scenario is achieved by periodically organizing Conferences, Workshops, Seminars and Industrial visits. The faculty members have proved their competences by guiding students with live projects that were sponsored by Research Institutes. The Research and Development in the Department is well backed by research work done by faculty research scholars in coordination with Principal, Dr. S N Sridhara, Head of Department, Dr. Shailesh Rao and Project Coordinator, Mr. Ramesh S. Placing a stride frontward the Department initiated Master's Program (Master of Technology) in "Engineering Analysis and Design" in the year 2012, the specialization offered by second Institute under VTU.

Department Activities

National Conference on Advances in Mechanical Engineering 2015 (NCAME-2015)

The second National Conference on Advances in Mechanical Engineering held on 28th April 2015 witnessed 43 paper presentations on various topics like advances in Thermal, Design, Materials and Production Engineering arena. It was encouraging to have the participants from all over Karnataka and particularly the research papers indeed showcased their technical upgradation in all the fields of Mechanical Engineering. The inaugural function of the Conference was presided by the Chief Guest for the conference Dr. Ganesha Raj, Dy. Director, RESPOND from Indian Space Research Organization, who spoke about the research opportunities at ISRO and Dr. P. Sriram, Chairman, RAPSRI Engineering Products Ltd., who gave an invited talk on Engineering Education: Its adequacy for employment.



Pioneers release the Conference Proceedings



Dr. Ganesha Raj



Dr. P. Sriram

Industry visit for the Faculty

An Industrial visit to M/s Rapsri Engineering Products Ltd. on 1st April 2015 was organized. Mrs. Jyothi .P.N, Mrs. Alam Radhika and Mr. S. Ramesh were accompanied by Dr. A. Shailesh Rao in the visit. This visit lead to a useful discussion with the Chairman, Dr. P. Sriram on recent research trends in Aluminium and Copper Castings. M/s Rapsri are pioneers in switch gear components, bearing, and bushes which are 100 % export quality. Faculties were given on-hand exposure to various casting, machining and electroplating facilities used for manufacturing in the industry.



Mechanical Faculty Members at Rapsri, and Products of Rapsri Engineering Products Ltd.

Aarohana 2015

Mechanical Engineering students and staff enthusiastically participated in all the competitions organised during college Fest Aarohana '15 and it's a matter of boundless pride to have won "Rolling Trophy" for the overall performance in Aarohana '15. The students also showcased their talents by actively installing stalls of games, food and added sale articles like indoor plants in Kalasante' 15. An appreciable participation was also witnessed in the Tech Fest, Chanakya 15,

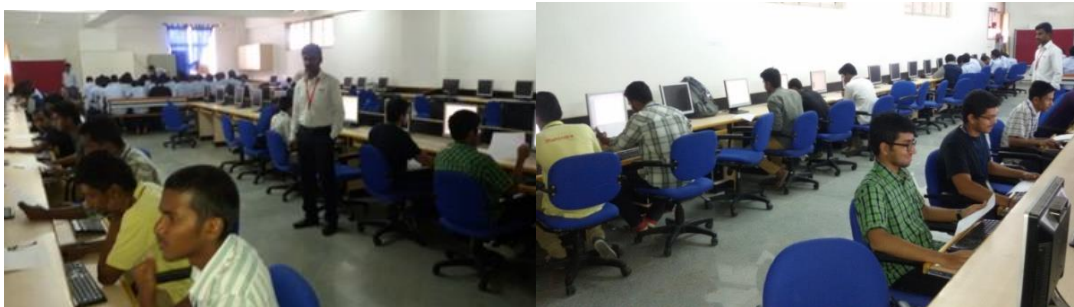
wherein students participated in the Technical Quiz, Model Making and Technical Debate competition.



Rolling Trophy at home!!! Mechanical Engineering Department as Winners of Aarohana '15

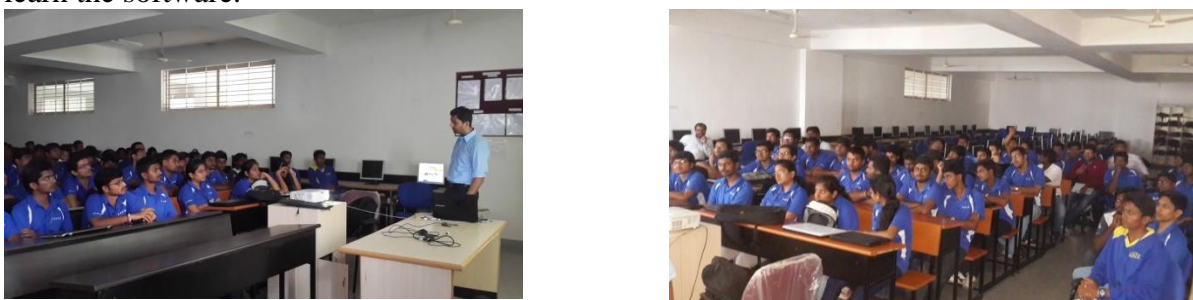
Design Competition and “Fusion 360”

CADD Centre, Bangalore, conducted a preliminary design competition for students of 6th semester on Thursday, 5th March '15 at CAED Lab which attracted more than 20 students to take part.



Students engrossed in Design Competition

An introductory presentation on the software “**Fusion 360**” by **Auto desk** was arranged for students of 6th semester on 6th March 2015 at CAED Lab. The software finds its applications in new product development which is similar to Solid Edge used in the present curriculum. Easier modeling options in the software generated interest amidst the students to learn the software.



“Fusion 360” software introduced by a staff of Auto Desk

Activities under MECHTRIX Forum

Technical Talk

MECHTRIX Forum organised a technical talk on “Aerospace Material Search – A continuum” lead by **Dr. P. Raghothama Rao** former **Regional Director CEMILAC** at Kavirathna Kalidasa Auditorium, on 26th August 2014 for 3rd and 1st semester students of Mechanical Engineering. The students understood the practical implication of various subjects like Material Science and Manufacturing Processes in aerospace structure building processes. The interactive session instigated the students to explore possible avenues in aerospace industry.



Dr. P. Raghothama Rao talks on “Aerospace Material Search- A continuum”

Industrial Visit

Under MECHTRIX Forum, 5th semester students of Mechanical Engineering went for an Industrial visit to Solar Power Plant at Belkavadi village, Mandya District in Karnataka on 22nd Sept 2014. In this visit students acquired knowledge of how the power is been generated using Solar Photovoltaic Cell Technology, functions of Power Conditioning Unit, inverters and SCADA system . Students also had a bird view of Hydel Power Station.



Mechanical Engineering students at Solar Power Plant, Mandya

Freshers' Party

The 1st semester students of 2015 batch were received by 3rd semester students of Mechanical Engineering Department through a grand welcome function conducted on 26th August 2014 in Kaviratna Kalidasa Auditorium. The program began with a cake cutting event done by the staff,

followed by a briefing session about the departmental activities by Head of the Department Dr. A. Shailesh Rao. Several games, invited songs and dance kept the students on their toe and a milieu of brotherhood was generated amongst the students.



Cake cutting and fun at Freshers' Party

CATIA-V5 Training




To enhance the technical skills of the students so as to meet the rapidly growing requirements of the industry, a 10 days induction program on CATIA-V5 R21 was organized from 21st July '14, by the Department of Mechanical Engineering in association with MECHTRIX Forum. This training session was lead by CATIA trainer **Mr. Ganesh A Bhargav**, which improved the students' soft skill of 3D modeling, a primary phase of any product development.










5th Semester Students at CATIA-V5 R21 Training Session

ACHIEVERS

Faculty Achievers

 <p>Dr. S.N. Sridhara</p>	<p>Project entitled, “Comfortable coconut tree climber”, has been awarded “BEST PROJECT” for the year 2014-2015, carried out by 8th semester students, Mohan Kumar Aradhya H M, Monish H R, under the guidance of Dr.S.N.Sridhara and Mr. Akashdeep B N</p>
 <p>Mr. Akashdeep B N</p>	<p>Akashdeep B N, et.al. “Optimization of time and rotational speed of disc for tinned milk using numerical simulations for uniform heat distribution”, International Journal of Advanced Technology in Engineering and Science ,Volume No.02, Issue No. 08, August 2014 ISSN (online): 2348 – 7550</p>
 <p>Dr. Shailesh Rao. A</p>	<ol style="list-style-type: none">1. Shailesh Rao A, P N Jyothi, “Processing of ZA-27 Based MMC Reinforced With Al₂O₃ By Centrifugal Casting”, International Journal of Advancements in Mechanical and Aeronautical Engineering– IJAMAE, Volume 2: Issue 1 [ISSN: 2372-4153], Publication Date: 30 April, 20152. Shailesh Rao A, et.al. “Investigation of Particle Segregation and Solidification Time in FGM’s Using Centrifuge Casting Techniques”, Applied Mechanics and Materials, accepted for publication3. Shailesh Rao A, “Effect of melt flow with various rotational speeds in vertical centrifugal casting process on appearance, microstructure and hardness behavior of Al-2Si alloy”, Journal of Materials and Manufacturing Processes, Taylor and Francis, DOI.10.1080/10426914.2015.1019093 (IF: 1.48)4. Shailesh Rao A, et.al., “Effect of melt flow with various rotational speeds in vertical centrifugal casting process on appearance, microstructure and hardness behaviour in Al-2Si alloy”, METTRANS B, DOI 10.1007/s11663-014-0257-y (IF: 1.323)5. Shailesh Rao A, Jyothi P N, et.al., “Processing of ZA-27 Based MMC Reinforced with Al₂O₃ by Centrifugal Casting”, October 25-26, 2014, Int.Conf on AMRE 2014, Zurich, Switzerland.6. P. N. Jyothi, Rao A. Shailesh, et.al, “Influence of Refiner in ZA-12 Alloys During Centrifugal Casting Process” Journal of Materials, Spinger, Vol. 66, No. 5, 2014, pp 720-725.

 <p>Mr. J. Prashanth</p>	<p>A project entitled “Experimental Investigation to study the performance and emission characteristics of DTSI engine using Ethanol - Gasoline fuel blend” has been selected for sponsorship by KSCST for the year 2015, under the guidance of Mr. J. Prashanth, Asst. Professor, Department of Mechanical Engineering.</p>
 <p>Mr. Shivanand</p>	<p>Shivanand, “Effect of stain rate on fracture toughness of HEMP fiber composites”, International conference on engineering, science, management and advances in research technology (ICESMART-15)”, T. John Institute of technology, 29th and 30th April, 2015, Bengaluru, India</p>
 <p>Mrs. P. N. Jyothi</p>	<ol style="list-style-type: none"> 1. Shailesh Rao A, P N Jyothi, “Processing of ZA-27 Based MMC Reinforced With Al₂O₃ By Centrifugal Casting”, International Journal of Advancements in Mechanical and Aeronautical Engineering– IJAMAE, Volume 2: Issue 1 [ISSN: 2372-4153], Publication Date: 30 April, 2015 2. P. N. Jyothi, Rao A. Shailesh, et.al, “Influence of Refiner in ZA-12 Alloys During Centrifugal Casting Process” Journal of Materials, Spinger, Vol. 66, No. 5, 2014, pp 720-725.

<p>Mr. Akashdeep B N</p> 	<p>Mr. Akashdeep B. N. has attained 100% result in the subject “Theory of Plasticity” for the 7th semester students and in the subject “Tribology” for 8th semester students.</p>
 <p>Mr. Harsha J</p>	<p>Mr. Harsha J has attained 100% result in the subject “Hydraulics & Pneumatics” for the 7th semester students.</p>
 <p>Mr. Yuvaraj Naik</p>	<p>Mr. Yuvaraj Naik has attained 100% result in the subject “Experimental Stress Analysis” for 7th semester students.</p>
 <p>Mr. Bharath Kumar</p>	<p>Mr. Bharath Kumar has attained 100% result in the subject “Agile Manufacturing” for 7th semester students and “Power Plant Engineering” for 8th semester students.</p>

Student Achievers

1. **Mr. Dhananjaya Kulakarni** secured **third Rank in M.Tech [Engineering Analysis and Design]** in the University Examinations for the academic year 2012-14.



Dhananjaya Kulakarni

2. **Pavan Kumar A**, final year BE Mechanical student got placed as **Graduate Engineering Trainee** in Engine Quality Control Division of **Kirloskar Toyota Textile Machinery**, Jigani through placement drive at KSIT, Bangalore on 24th Feb 2015.



Pavan Kumar A

3. **Abhinav Raj**, final year BE Mechanical student was selected as a **Technical Support Associate** at **IBM**, through placement drive held at K.S. I.T, Bangalore on 18th October 2014.



Abhinav Raj

4. Project entitled, “**Comfortable coconut tree climber**”, is awarded “**BEST PROJECT**” for the year 2014-15 carried out by 8th semester students, **Mohan Kumar Aradhya H M, Monish H R**, under the guidance of **Dr.S.N.Sridhara** and **Mr. Akashdeep B N**



Mohan Kumar Aradhya H M



Monish H R

5. Alumni of Mechanical Engineering branch, **Mr. Prasad B.G** (2010 Batch) represented K.S. Group of Institution's **Aero Modelling club**, at **CMC National Level Symposium** held at **Coimbatore Marine College** from 25th to 27th March 2015 and **won special prize for the new concept DRONE-AD.**



Prasad B. G. receives award at CMC National Level Symposium

6. **Award from KSCST for student project**

A project entitled “**Experimental Investigation to study the performance and emission characteristics of DTSI engine using Ethanol - Gasoline fuel blend**” submitted by **Mr. Rajesh .T. S, Mr. Vinay.H.K and Mr. Manjunath. H.R** of 8th semester has been selected for sponsorship by KSCST for the year 2015. under the guidance of **Mr. J.Prashanth, Asst. Professor, Dept. of Mechanical Engineering.**



Vinay.H.K



Manjunath H.R



Rajesh .T. S

7. **Abhishek K, Vinayaka K C, Pratham C**, bagged **3rd place** in **Junkyard Wars competition** held at **IIT Delhi** as a part of annual technical fest **TRYST-15**. The competition was all about to build a tanker that fires table tennis balls to the target and that provided hands on experience to build a robot from junk.

Mr.Abhishek K, won **1st place** in mechanical quiz held at **IIT Delhi** as a part of annual technical fest **TRYST-15**, an individual quiz event based on general mechanical aspects.



Abhishek K



Pratham C



Vinayaka K C



Abhishek and Vinayaka K C in action during the competition

Paper published in International Journal

1. Akashdeep B N, et.al. “Optimization of Time and Rotational Speed of Disc for Tinned Milk Using Numerical Simulations for Uniform Heat Distribution”, International Journal of Advanced Technology in Engineering and Science ,Volume No.02, Issue No. 08, August 2014 ISSN (online): 2348 – 7550
2. Mr. Shivanand, “Effect of stain rate on fracture toughness of HEMP fiber composites”, IJERT, Volume 3, Issue 19,30th May, 2015
3. Shailesh Rao A, et.al. “Investigation of Particle Segregation and Solidification Time in FGM’s Using Centrifuge Casting Techniques”, Applied Mechanics and Materials, (accepted for publication)
4. Shailesh Rao A, P N Jyothi, “Processing of ZA-27 Based MMC Reinforced With Al₂O₃ by Centrifugal Casting”, International Journal of Advancements in Mechanical and Aeronautical Engineering– IJAMAE, Volume 2: Issue 1 [ISSN: 2372-4153], Publication Date: 30 April, 2015
5. Shailesh Rao A, et.al., “Effect of melt flow with various rotational speeds in vertical centrifugal casting process on appearance, microstructure and hardness behaviour in Al-2Si alloy”, METTRANS B, DOI 10.1007/s11663-014-0257-y (IF: 1.323)
6. Shailesh Rao A, “Effect of melt flow with various rotational speeds in vertical centrifugal casting process on appearance, microstructure and hardness behavior of Al-2Si alloy”,

Journal of Materials and Manufacturing Processes, Taylor and Francis, DOI.10.1080/10426914.2015.1019093 (IF: 1.48)

Paper presented at International Conference by faculty.

1. Mr. Shivanand, “Effect of strain rate on fracture toughness of HEMP fiber composites”, International conference on engineering, science, management and advances in research technology (ICESMART-15)”, T.John Institute of technology, Bengaluru, 29th and 30th April 2015
2. Dr. Shailesh Rao, Jyothi P N, et.al., “Processing of ZA-27 Based MMC Reinforced with Al₂O₃ by Centrifugal Casting”, , Int Conf on AMRE 2014, Zurich, Switzerland, October 25-26, 2014

Papers Presented at National Conference by faculties.

- 1 Dr. S N Sridhara, et.al , “Peak Temperature Prediction for Device in Flat Heat Pipe Using 1D -Network Model”, 2nd National Conference on Advances in Mechanical Engineering-2015,K.S.School of Engineering and Management, Bangalore,28th April 2015.
- 2 Harsha J, et.al , “Fabrication and Evaluation of Solid Oxide Fuel Cell stack components”, 2nd National Conference on Advances in Mechanical Engineering-2015,K.S.School of Engineering and Management, Bangalore,28th April 2015.
- 3 Shashwath Pakkala,“Development and implementation of database management system for garment industry”, 4th National Conference on “Emerging Trends On Engineering Technologies ” ,Jyothi Institute of Technology, Bangalore, 21 Feb 2015



Papers Presented at National Conference by Students

- K R Kishan, Lakshmi Kesari , et.al , “A Review on Shape Memory Alloys”, 2nd National Conference on Advances in Mechanical Engineering-2015,K.S.School of Engineering and Management, Bangalore,28th April 2015
- Susmitha.M, Sharan P, et. al , “Recent Advances in 3D Printing Technology”, 2nd National Conference on Advances in Mechanical Engineering-2015,K.S.School of Engineering and Management, Bangalore,28th April 2015
- Avilash Jha, Gnana Murthy D.B, Sriranga T A, Vaibhav M.S, “A Review on Making of Cylinder Liner”, 2nd National Conference on Advances in Mechanical Engineering-2015, K.S.School of Engineering and Management, Bangalore, 28th April 2015.
- Mohan Kumar Aradhya H M, Monish H R ,et.al, “Comfortable Coconut Tree Climber” ,2nd National Conference on Advances in Mechanical Engineering-2015,K.S.School of Engineering and Management, Bangalore,28th April 2015.
- Jagath J K, Anjan R ,et.al “Effect of Honge Oil on Cutting Parameters during Turning Operation for Mild Steel”, 2nd National Conference on Advances in Mechanical Engineering-2015,K.S.School of Engineering and Management, Bangalore,28th April 2015.
- G .S.Sandesh, et.al “Topology optimization of active strut incorporated with piezoelectric stack actuators”, National conference on topical transcend in mechanical technology (TTMT-15), SJB Institute of Technology, Bengaluru, 9th May 2015

Papers Presented at National Conference by Non-teaching Faculty.





1. S. Chandrashekar, “Development of Precision Blanking and Piercing Punches”, 2nd National Conference on Advances in Mechanical Engineering-2015, K.S.School of Engineering and Management, Bangalore, 28th April 2015





Faculties Registered for Ph.D.







	<p>Mrs. Alam Radhika registered for Ph.D. under the guidance of Dr. Shailesh Rao. A with the title of research as “Experimental Studies on Cutting Parameters during Machining Process using Bio- Oils as Cutting Fluids”</p>
	<p>Mr. Santosh Kumar K J registered for Ph.D. under the guidance of Dr. Rajanna. S, with the title of research as “Study of Wear and Fatigue Properties of Austempered Ductile Iron”</p>

Class Toppers











MECHANICAL ENGINEERING 2011 BATCH TOPPERS

Toppers	Semester I	Semester II	Semester III	Semester IV
1 st				
	<p>Kishan .K.R 79.09%</p>	<p>Kishan .K.R & Karthik S Murthy 77.04%</p>	<p>Vaibhav Murlidhar Sondur 74.20%</p>	<p>Karthik S Murthy 78.33%</p>







2nd				
	Karthik S Murthy 77.29%	Abhinav Raj 76.00%	Sriranga.T.A 73.40%	Avilash Jha 77.22%

Toppers	Semester V	Semester VI	Semester VII
1st			
	Karthik S Murthy 78.00%	Karthik S Murthy 74.33%	Abhinav Raj 84.67%
2nd			
	Abhinav Raj 75.22%	Vaibhav Murlidhar Sondur 74%	Karthik S Murthy 79.33%



MECHANICAL ENGINEERING 2012 BATCH TOPPERS

Toppers	Semester I	Semester II	Semester III	Semester IV	Semester V	Semester VI
1st						
	Guru Prasad.N.R 83%	Abhinab Baruah 82.90%	Guru Prasad.N.R 79.00%	Guru Prasad.N.R 84.22%	GURU PRASAD 84%	
2nd						
	Abhinab Baruah 77%	Guru Prasad.N.R 82.19%	Lakshmi Kesari 76.77%	Shashi Shekar T C 74.77%	SHASHI SHEKAR 78%	







MECHANICAL ENGINEERING 2013 BATCH TOPPERS

Toppers	Semester I	Semester II	Semester III	Semester IV
1st				
	<p>Govinda Raju 74.58%</p>	<p>Shiva.N 78.83%</p>	<p>Balaji R 69.33%</p>	
2nd				
	<p>Sachin Gowda 71.74%</p>	<p>Shreyas.G 76.38 %</p>	<p>Shreyas G 67.44%</p>	



MECHANICAL ENGINEERING 2014 BATCH TOPPERS

Toppers	Semester I	II
1 st		
	Korapati Poornakumar 74.96%	
2 nd		
	Akshay S Bhardwaj 70.66%	

MECHANICAL ENGINEERING M.Tech 2013 BRANCH TOPPERS

Toppers	Semester I	Semester II	Semester III
1st			
	Deepak.V 70.47%	Prasanna. C.V 75.5%	Madhusudhana N 71.4%
2nd			
	Prasanna. C.V 70.35%	Sandhesh G.S 71.12%	Sandhesh G.S 71.2%

MECHANICAL ENGINEERING M.Tech 2014 BRANCH TOPPERS

Toppers	Semester I	Semester II
1 st		
	Subrahmanya S.K 74.47%	
2 nd		
	Akshitha G 74.23%	

Faculty and Staff of Mechanical Engineering Department

