



SREYAS INSTITUTE OF ENGINEERING AND TECHNOLOGY

Beside Indu Aranya, GSI, Bandlaguda, Nagole, Hyderabad, Telangana

DEPARTMENT OF MECHANICAL ENGINEERING

QUARTERLY NEWS LETTER

1. Vision and mission of the institute

- **Vision** : To be a centre of excellence in technical education to empower the young talent through quality education and innovative engineering for well being of the society.

- **Mission** :

- M1 Provide quality education with innovative methodology and intellectual human capital.
- M2 Provide conducive environment for research and developmental activities.
- M3 Inculcate holistic approach towards nature, society and human ethics with lifelong learning attitude.

- Interact with industry to integrate R&D activities along with academic learning to apply engineering solutions in response to the change requirement, needs of the society and industry.

FDP Programs participated

Faculty participation in FDP programs is a regular affair in the Department of Mechanical Engineering.



2. Vision and Mission of the Department

- **Vision** : Striving for global recognition for development of innovative systems for building value based society.
- **Mission**:
 - Providing quality education to the students and enhancing their skills to make them globally sustainable Mechanical Engineers.
 - Providing state of the art laboratory and research facilities to the students and faculty with opportunities to create, interpret, apply and disseminate practical knowledge.

Mr. K P Reddy, Asst.Professor; Mr. Ashok Kumar, Asst.Professor; and Mr. Sanjanna, asst.professor attended FDP program on Engineering graphics at CVSR college of engineering, Hyderabad organized for two days from 5-6 July 2017. The resource person is the author for Engineering Graphics famous author Dr. K.L. Narayana given very good tips for teaching engineering drawing.

Participation of Faculty in entrepreneur Development Program



Prof. K.Sainath attended FDP on entrepreneurship skills program in July 2017 organized at CVSR college of engineering. It was organized by NEN an American group to bring awareness among the faculty on Entrepreneur skills.

FDP Program on Joining of Advance Metals

The department organized the Faculty Development Program on joining of advanced metals on 11.07.2017. Faculty from the department attended the program. The program helped the faculty to learn new concepts in welding of advanced metals.



Project reviews

Mini project reviews were conducted during the month of July under the co-coordination of Prof. K.Sainath. All students of IV B.Tech presented the mini project done during the summer. In order to improve the quality of projects regular review of projects is a regular practice in Sreyas.

Faculty Joined with the Department

S.No	Name	qualification	Domain
1	Mr Umamaheswer	M.Tech, Ph.D*	Material Science
2	Mr. Vsistha Bhargav	M.Tech	Material Science

DST team visit to R & D center in the Department



A team from Directorate of Science and technology (DST) visited the R&D center of the Department on 27.07.2017. Dr. M.H. Bala Subrahmanya, Professor; Dr. K.N Krishnaswamy, and H S Krishna, Research scholar from Department of management studies, IISc visited on the job of evaluating R& D center of our department to evaluate the successful implementation of MSME project. The team came as per the information provided by Prof. Asharani, EDC cell, JNTUHyderabad.

Freshers day Celebrations in Mechanical Engineering Department

Freshers day celebrations held in the department very effectively on 19.08.2017. The seventh batch of Mechanical admitted students were welcomed by the present second year students.

Secretary Sri Ravi, Dr A Suresh, Principal; Director academics, Dr D. Venkateswarulu, HOD Mr ACS Reddy attended the freshers party and expressed their satisfaction with the arrangements made by the students.

The seniors inspired the freshers as that " you are in this college, primarily to study, and this mainly forms the base of whatever you do. None the less, explore yourself, extend your limits, challenge your capabilities take part in as many activities you can, meet as many people you can... express yourself. spread your wings of freedom. But in this endeavor, be responsible, do not loose your track, remain the kind of person, your true friends wish you to be.



Teachers Day Celebrations at SREYAS

A good teacher has greater influence in shaping the life of an individual even more than his/her parents. In our country's culture, a teacher has been given a place above the almighty god. A good teacher's proper guidance and support is very important in achieving one's goal in life.



By recognizing the importance of teachers in shaping the lives of students, the students from Mechanical Engineering celebrated teachers day by honoring the department HOD and other faculty on 04.09.2017 as 5th September is a holiday. All staff expressed their happiness for the surprises arrangements for celebrating the teachers.

Two day workshop on Robotics

The department in collaboration with Robo Ventures-Hyderabad conducted two day workshop on robotics and programming language for robot. 65 students were participated for two day workshop on 20th and 21st September. The secretary, Principal, HOD and faculty attended the inaugural function on 20th September.



The two day workshop helped many students for gaining hands on experience on robotics construction. The participation certificates were also distributed to all participants.

Short Note on History of Design of Experiments

- "All experiments are designed experiments, it is just that some are poorly designed and some are well-designed."
- ★ If we have sufficient time and money for experimentation, then probably no need to do lot of efforts for design of experiments. In mechanical engineering for quality production and control, it is essential minimize efforts in producing best quality products with less number of trial runs. To achieve optimum parameter setting with less number of experimentation is only possible through the design of experiments.
- ★ Robustness is a concept that enters into statistics at several points. At the analysis stage robustness refers to a technique that isn't overly influenced by bad data. Even if there is an outlier or bad data you still want to get the right answer. Regardless of who or what is involved in the process - it is still going to work.
- ★ Model of a system : Every experiment design has inputs. In simple cake baking the ingredients such as flour, sugar, milk, eggs are used. Regardless of the quality of these ingredients we still want our cake to come out successfully. In every experiment there are inputs and in addition there are factors (such as time of baking, temperature, geometry of the cake pan, etc.), some of which you can control and others that you can't control. The experimenter must think about factors that affect the outcome.
- ★ Four Eras in the History of DOE
 - ★ The agricultural origins, 1918 – 1940s
 - ★ R. A. Fisher & his co-workers Profound impact on agricultural science Factorial designs, ANOVA

- ★ The first industrial era, 1951 – late 1970s Box & Wilson, response surfaces Applications in the chemical & process industries
- ★ The second industrial era, late 1970s – 1990 Quality improvement initiatives in many companies CQI and TQM were important ideas and became management goals Taguchi and robust parameter design, process robustness
- ★ The modern era, beginning circa 1990, when economic competitiveness and globalization is driving all sectors of the economy to be more competitive.
- ★ Sir Ronald Fisher from UK in the first half of the 20th century laid the foundation for statistics and for design of experiments. He and his colleague Frank Yates developed many of the concepts and procedures that we use today. Basic concepts such as orthogonal designs and Latin squares began there in the 20's through the 40's.
- ★ Immediately following World War II the first industrial era marked another resurgence in the use of DOE. It was at this time that Box and Wilson (1951) wrote the key paper in response surface designs thinking of the output as a response function and trying to find the optimum conditions for this function.
- ★ In the 1960s Japanese products quality started improving drastically in car and other industry. They adopted statistical quality control procedures and conducted experiments which started this new era.
- ★ Taguchi, a Japanese engineer, discovered and published a lot of the techniques on orthogonal arrays. He came up with the concept of robust parameter design and process robustness.
- ★ The Modern Era: Around 1990 Six Sigma, became popular. This is a technique that uses statistics to make decisions based on quality and feedback loops.

From editor desk

The Students attitudes and interests are very much influenced by the global scenarios. Time has come to save our educational institutes and the universities from the hands of business minds. The violence and terrorism is trying to influence the students and has entering into the educational institutions. In this regard, the students should be made aware of national issues and should be taught accordingly. Hence motivating students towards nation building activities is one of challenging works to be taken by the teachers and is of prime importance too..... Editor

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4. II,III and IV B.Tech C Rs.