

## DEPARTMENT OF MECHANICAL ENGINEERING

### VISSION:

- To strive for making competent mechanical engineering Professionals to cater the real time needs of Industry and Research Organizations of high repute with entrepreneurial skills and ethical values.

### MISSION:

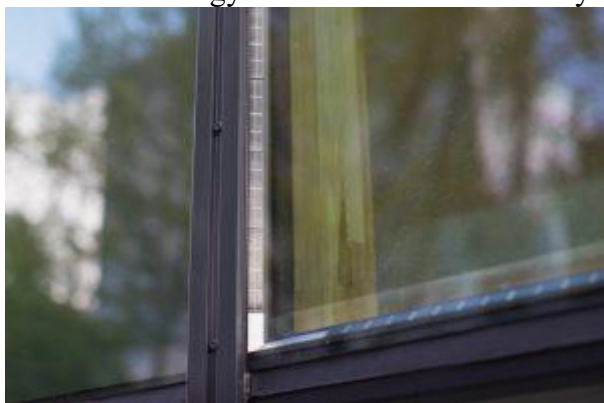
The Department of Mechanical Engineering is committed:

- To train the students with state of art infrastructure to make them industry ready professionals and to promote them for higher studies and research.
- To employ committed faculty for developing competent mechanical engineering graduates to deal with complex problems.
- To support the students in developing professionalism and make them socially committed.

### NEW TREND IN TECHNOLOGY:

#### Windows Double As Solar Panels: Fully Transparent Solar-Power-Generating Windows:

These windows have solar cells installed in the edges at a specific angle, which allows the incoming solar light to be efficiently transformed into electricity. The windows could generate 8 to 10 watts of power, according to Grapperhaus.” Right now, we are looking for iconic projects all over the world to show that a large glass building can be made energy neutral in an aesthetic way.”



**Biodiesel Production from Waste Cooking Oil by Using an Ultrasonic Tubular Reactor:**

The aim of this research is to find an optimum synthesis biodiesel from waste cooking oil (WCO) using an ultrasonic tubular reactor. The experimental studies explored the variations in reaction time, molar ratio WCO to methanol (MeOH), amount of catalyst, the frequency of ultrasonic and output power ultrasonic on the ester contents. Comparisons of type ultrasonic and also the mechanical stirring method based on time reaction were investigated.



The optimum results of the biodiesel process is the reaction time of 5 minute, NaOH catalyst 1%wt of WCO, molar ratio WCO to MeOH of 1:6, frequency ultrasonic of 20 kHz and output power ultrasonic of 650 W. The reaction time reduced 12-24 times compared to both of method and the yield of ester contents was obtained at 96.54% wt.

### FACULTY ACHIEVEMENTS:

A team of six faculty members from the Dept of Mechanical Engineering, have filed and published for the patent rights on the invention of "A-SIDE-STAND: AUTOMATIC SIDE-STAND SPORTBIKE/ MOTORCYCLE" on 21-8-2020 with reference no - 202041031638 A

Faculty Members:

- 1)Dr. M. SREENIVASA KUMAR (PRINCIPAL AND PROFESSOR)
- 2)Dr. DONTHAMSETTY SUNEEL (PROFESSOR AND HOD)
- 3)Dr. D. JAGADISH (PROFESSOR)
- 4)Dr.B. VENKATA SIVA (PROFESSOR)
- 5)Mr. VENKANNA BABU MENDI (ASSISTANT PROFESSOR)
- 6)Mr. PENUGONDA SURESH BABU (ASSOCIATE PROFESSOR).

T. VENKATA DEEPTHI assistant professor from Mechanical Engineering department awarded with Ph.D degree in production from KL UNIVERSITY.

P. SURESH BABU associate professor from Mechanical Engineering department awarded with Ph.D degree in production from KL UNIVERSITY.

Dr. D. SUNEEL, P.SURESHBABU, participated in International Conference on Intelligent Manufacturing and Energy Sustainability and published paper on "An ANN Approach for Predicting the Wear Behaviour of Nano SiC Reinforced A356 MMNCs Synthesized by Ultrasonic Assisted Cavitation" submitted on 25-04-2020 to ICIMES 2020 organizing at Malla Reddy College of Eng. & Tech., Hyderabad during 21<sup>st</sup> -22<sup>nd</sup> August 2020.

Dr. S.B. VENKATA SIVA participated in a 5 days International E-Conference on "AI, Robotics and Automation" Organized by ICT Academy Global Technology Forum 2020, Tamilnadu during 14-10-2020 to 18-10-2020.

Dr.B.VENKATA SIVA participated in International conference on "Analysis of Machinability Behavior of Metal Matrix Composite Developed from coal mines waste using mathematical modelling" Organized by NIT Jamshedpur. During 31-10-2020 to 01-11-2020

#### DEPARTMENT ACTIVITIES:

On 28-8-2020 (Friday), Department of Mechanical Engineering, organized a webinar on ADVANCED MANUFACTURING PROCESSES. For this webinar Mr.B. Gopala Krishna, ME-MCTE, Tool Design Engineer, CAX Department, CITD, Hyderabad acted as a resource person.

#### STUDENT FOCUS:

##### Student Workshops:

##### "Design Now" Workshop held in NEC Campus:

In order to participate in India Design Week 2020 competition in December 2020 (Tentative), the Department of Mechanical Engineering, organized a "Design Now" workshop in Association with ICT Academy and Autodesk for B.Tech 3rd Year 1st Sem Mechanical Engineering Students. A total of 55 students participated in the event.

Students got first hand designing experience from P Kranthi Kumar (Senior Technical Trainer - ICT Academy). Students were trained for the design competition and also got a demo of installation and usage of education licensed Autodesk Fusion 360

software and how to work in fusion 360 Software for India Design Week 2020 competition.

NEC is one of the three colleges in AP hosting "Design Now" Workshop in Association with ICT Academy.



Department of Mechanical Engineering, organized a one-week workshop on "SOLID MODELING USING CREO SOFTWARE" from 21-12-2020 to 28-12-2020. For this workshop B.Gopalakrishna Naik, Tool Design Engineer, CAX Department, CITD, Hyderabad acted as a resource person.



#### Student Achievements:

CHINNAHULTHI. PRASAD from Department of Mechanical Engineering achieved Junior Research -JRF position in National Rail and Transportation Institute Gujarat.

#### ALUMINI VOICE:



Finding the right path to success at the right time is really very important and for that way I had selected NEC. Getting admission into NEC was the first milestone I achieved in the pursuit of my career and then in four years of my graduation, I walked through different aspects of life. I am highly indebted to the entire NEC family, in particular, DEPARTMENT OF MECHANICAL ENGINEERING for helping me achieve great heights in these four years.

.....SK. ABDUL GHANI Batch (2017-20),  
Assistant Engineer, Kia Motors, Anantapur.

### STUDENT VOICE:



The journey of my college is incredible. I have excellent teaching faculty and well knowledge technicians. I can able to access well equipped labs and highly sophisticated equipment. I can do many online and offline mechanical software courses offered by department. Many training courses and

provided by department so that it is easy for me to update my knowledge.

.....P. ANJI BABU  
Regd. No: 18475a0305, IV B. Tech.

At each increase of knowledge, as well as on the contrivance of every new tool, human labour becomes abridged. .... Charles Babbage

If You'r a Mechanical Engineer Don't Feel So Proud, Because You Can Repair Everything Except Your Own Heart" ... Dr. A.P.J. Abdul Kalam