



# The Mechanical News

## MECHANICAL ENGINEERING DEPTT.

### VISSION AND MISSION OF COLLEGE

*“Press forward. Do not stop, do not linger in your journey, but strive for the mark set before you.”*

#### VISSION OF COLLEGE

□ TO BECOME A RENOWNED CENTRE OF OUTCOME BASED LEARNING AND WORK TOWARDS, ACADEMIC, PROFESSIONAL AND SOCIAL ENRICHMENT OF THE LIVES OF INDIVIDUALS AND COMMUNITIES.

#### MISSION OF COLLEGE

- FOCUS ON EVALUATION OF LEARNING OUTCOMES & MOTIVATE STUDENTS TO INCULCATE RESEARCH APTITUDE BY PROJECT BASED LEARNING.
- IDENTIFY, BASED ON INFORMED PERCEPTION OF INDIAN, REGIONAL & GLOBAL NEEDS, THE AREAS OF FOCUS & PROVIDE PLATFORM TO GAIN KNOWLEDGE & SOLUTIONS.
- OFFER OPPORTUNITIES FOR INTERACTION BETWEEN ACADEMIA AND INDUSTRY.
- DEVELOP HUMAN POTENTIAL TO ITS FULLEST EXTENT SO THAT INTELLECTUALLY CAPABLE & IMAGINATIVELY GIFTED LEADERS MAY EMERGE.

### VISSION AND MISSION OF MECHANICAL DEPTT.

#### VISSION OF DEPARTMENT

□ THE MECHANICAL ENGINEERING DEPARTMENT STRIVES TO BE RECOGNIZED GLOBALLY FOR EXCELLENT TECHNICAL KNOWLEDGE AND TO PRODUCE QUALITY HUMAN RESOURCE, WHO CAN MANAGE THE ADVANCE TECHNOLOGIES AND CONTRIBUTE TO SOCIETY THROUGH ENTREPRENEURSHIP AND LEADERSHIP.

#### MISSION OF DEPARTMENT

- TO IMPART HIGHEST QUALITY TECHNICAL KNOWLEDGE TO THE LEARNERS TO MAKE THEM GLOBALLY COMPETITIVE MECHANICAL ENGINEERS.
- TO PROVIDE THE LEARNERS ETHICAL GUIDELINES ALONG WITH EXCELLENT ACADEMIC ENVIRONMENT FOR A LONG PRODUCTIVE CAREER.
- TO PROMOTE INDUSTRY-INSTITUTE LINKAGE.

#### SPECIAL POINTS OF INTEREST:

- 3-D Printing
- BDC'17
- Joy of Giving
- ASE 2017 @MNIT

## PROGRAMME OUTCOMES

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### 3-D PRINTING WORKSHOP BY SKYFI LABS

A workshop on 3-D printing was organized by Mechanical department for final year students on 25-26 October in

tronic data source such as an Additive Manufacturing File (AMF) file. Stereolithography (STL) is one of the most common file types that 3D printers can read. Thus,

posits a binder material onto a powder bed with inkjet printer heads layer by layer. More recently, the term is being used in popular vernacular to encompass a wider variety of additive manufacturing techniques. United States and global technical standards use the official term additive manufacturing for this broader sense. In this workshop students learned application/use of 3D printing and ma-



material removed from a stock in the conventional machining process, 3D printing or AM builds a three-dimensional object from computer-aided design (CAD) model or AMF file by successively adding material layer by layer.



unlike china code (M/G codes). Stu-

association with SKYFI Labs (Bangalore). The faculty in-charge was Mr. Satyendra Kumar. 3D printing, also known as additive manufacturing (AM), refers to processes used to create a three-dimensional object in which layers of material are formed under computer control to create an object. Objects can be of almost any shape or geometry and typically are produced using digital model data from a 3D model or another elec-

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dents also developed the new 3D printer in the department .

The term "3D printing" originally referred to a process that de-

## B L O O D   D O N A T I O N @ J E C R C

*A journey to save some lives  
 Helping smiles thrive  
 Each blood drop is elixir  
 Like gems that are rare  
 Let this chain go till infinity  
 Let blood bind us till eternity*

**Aashayein-The Life Saviours** organized a Blood Donation Drive on October 11th, 2017 in JECRC Campus, JECRC University and JECRC UDML. The day long blood donation camp was organised with a prime motive to unfurl awareness and enhance smiles of the one's in need. The youth showed active participation with high spirits and enthusiasm. A healthy atmosphere and a positive energy proliferated the ambiance. The camp was devoted to all the girl donors, who besides all the fears and myths came forward to break the stereotype and was a massive success with a total of 1427 blood units collected. The event was graced by auspicious presence of Dr.Naveen Jain (M.D., National Health Mission), Mr.Arun Gautam (General Major), Mr.Uday Kumar R Yaargati (Director,MNIT) and Mr.Alok Mishra ( ACP , Traffic police). Donors were awarded certificates of appreciation and thank you cards as a token of remembrance. The blood units collected would be of immense help to the patients of various blood related diseases.





**JOY OF GIVING BY ZARURAT@JECRC**

The greatest joy lies in bringing happiness to others' lives. Every little effort that goes into this noble cause is commendable.

This "Daan Utsav - Joy of Giving Week" was celebrated by Team Zarurat with full zeal and zest in JECRC Foundation from

Day 3-Building the same moral values in the lives of the toddlers who would become the better future of the Nation, the third act of giving consisted of a Spiritual session for the kids at the Spiritual Cell of JECRC Foundation.

simple & easily available materials. Thus, enhancing their creative skills as well as spreading awareness about environmental issues.



4th to 10th October 2017.

Day 1- To inculcate the same values in those young spirits, the first chapter of The Joy Of Giving Week initiated with a Sports Day celebration, spreading out the joyous laughter on those most innocent faces.

Day 2- The second chapter of the "Joy of Giving Week" continued with a movie session to inculcate these virtues in the kids.

Day 4- The fourth day of The "Joy of Giving Week" was dedicated to this delicacy, as the kids enjoyed their bowl of yummy & tasty Maggi.

Day 5- The fifth day of the Joy of Giving Week was a special one as the kids visited BM Birla Planetarium & learned about the solar system & outer space explorations .

Day 6- Keeping this in mind, Day 6 of the Joy of Giving Week was about 'Best out of Waste' activity

Day 7-final chapter of the Joy of Giving Week saw the Goodie bags being distributed among the toddlers, spreading delightful smiles on their innocent faces.





**SHORT TERM COURSE ON "APPLIED STATISTICS FOR EXPERIMENTERS" ATTENDED BY ER. LALIT KUMAR SHARMA & ER. NIKHIL JAIN AT MNIT JAIPUR FROM 9-13 OCT. 2017**

A short term course ASE-17 was organized by MNIT Jaipur from 9-13 October.

The course is started with inauguration By Dr. Uday Kumar Yara-gatti Director MNIT. He explain the Im-portance of Statistics in the area of Re-search. Then Dr. Amar Pat-naik give the introduction about various statistical tool like Mat lab, SPSS, DOE,

Excel , Six Sigma. The five day course was addressed by dignitaries of Educational

Experts from RSDO/IIT/ Central universities gave an insight & shared there experi-ence in the particular field.

The course ended with certificate distribution by Dr. S.L. Soni.



institute industry experts and

**PAPER PUBLISHED**

1. Dr. Bhuvnesh Bhardwaj & Mr. Nikhil Jain research paper entitled "Effect of Al<sub>2</sub>O<sub>3</sub> powder in deionized water on tool wear during electro discharge machining of AISI H11 die steel " accepted at ICAME 2018.

**DO NOT WAIT; THE TIME WILL NEVER BE 'JUST RIGHT.' START WHERE YOU STAND, AND WORK WITH WHATEVER TOOLS YOU MAY HAVE AT YOUR COMMAND, AND BETTER TOOLS WILL BE FOUND AS YOU GO ALONG.**  
GEORGE HERBERT