



MECHAZINE

THE DEPARTMENTAL NEWSLETTER



MECHANICAL ENGINEERING DEPARTMENT

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L. E. College, Morbi

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HIGHLIGHTS:

- ❖ **Departmental Activities**
- ❖ **SSIP Activity**
- ❖ **Faculty Corner**
- ❖ **Student Corner**

Departmental Activities: Expert Sessions

Mechanical Department had organized an expert lecture on "Advanced tools used for drafting", 4th Feb, 2020 for 2nd semester students. The session was coordinated by Prof. M.B. Vaghela. Mr. Keyur Patel, CEO, CAD World, Rajkot and Ms. Kajal had conducted the session. They have briefly explained the importance of the designing software like AutoCad and NX for engineering drafting and scope of this type of advance tools in industry. He has also demonstrated the sketch, modeling, assembly and drafting modules of NX. About 36 students had actively attended the expert session.



*Interactive session on
"Advanced tools used for drafting"*

Mechanical Department had organized an expert session on "Importance of Metrology & Introduction of Modern Equipment", 28th Jan, 2020 for 4th semester students. The session was coordinated by Prof. M.B. Vaghela. Mr. Abhishek Suchak, Scientist-B, Centre In-Charge, CMTI, Rajkot had conducted the session. He has briefly elaborated the importance of the metrology, scope in metrology and its application in industry. He has also demonstrated the advance tools used in measurement. About 39 students had actively attended and interacted with the expert.



Expert interacting with the students

Mechanical Department had organized an expert lecture on "Finite Element Analysis using ABAQUS", 21st Jan, 2020 for 6th semester students. The session was coordinated by Prof. M.B. Vaghela. Mr. Divyang Chodvadiya, Application Engineer, Jyoti Electronics Pvt. Ltd., Ahmedabad had conducted the session. He briefly elaborated the FEM, steps of FEM, application and advanced tool used to solve FEA problems. He had also elaborated the ABAQUS software, its application for FEA and industrial application for the same. The expert had solved some structure problems using ABAQUS and the students had done the hands on practice on few problems using ABAQUS. Total 25 students and teaching faculties were enthusiastically involved in the expert session.



Expert delivering the lecture



Faculty Corner

❖ **Faculty Training**

Following Faculty members successfully attended trainings/webinars/development programs:

- Prof. C. A. Maradiya has attended “Induction Phase –II training program”, held during 3rd to 14th February 2020 at NITTTR Extension Centre Ahmedabad.
- Prof. J. H. Solanki has attended “Induction Phase –II training program”, held during 2nd to 13th March 2020 at NITTTR Extension Centre Ahmedabad.
- Various webinars organized by iHub & SSIP, Gujarat like Role of a Mentor and Selecting the Right Mentor, How to build a startup, Success stories of startup, Innovation IPR and Startup and many more were attended by 17 faculty members of mechanical department.
- Online ANSYS training organized by Kodiya CAD centre was successfully attended by 15 Faculty members. The details of training are as follows:
 - i) ANSYS Mechanical + CFD Overview- 01/05/2020
 - ii) Introduction to Structural Simulation in ANSYS- 02/05/2020
 - iii) Process Simulation Using Ansys Additive Print- 06/05/2020
- Prof. A. N. Dave & Prof. R. C. Ghanghas, attended a 5 days e-FDP on “Comprehensive Quality Initiatives for Higher Education in Pandemic era”, organized by IQAC of Uka Tarsadia University, Bardoli during 26th-30th May, 2020.
- Prof. C. A. Maradiya, attended a webinar on “Data Analysis in Engineering, organized by NPTEL on 29th April, 2020.
- Prof. P. B. Tailor & Prof. V. B. Patel, attended a webinar on “Examination Reforms”, organized by AICTE on 24th April, 2020.
- Prof. M. B. Vaghela, attended webinars organized by NDBI, NID Ahmedabad. The details of webinars are as follows:
 - i) Prepare your craft business for the impacts of the COVID-19 – 15/04/2020
 - ii) Design Driven Business - 03/05/2020
 - iii) Future of flexible and co-working spaces in India- 04/05/2020
- Prof. K. K. Dave, attended COVID-19 training organized by Diksha. The details of training are as follows:
 - i) COVID-19 Training for NCC Cadets- 08/04/2020
 - ii) ICU Care and Ventilation Management- 10/04/2020



SSIP ACTIVITY:

Mechanical Department had organized a workshop on “Industry 4.0 Automation, PLC, SCADA” conducted by Possible Automation Pvt. Ltd. Rajkot at L.E. College Morbi on 24th Sept, 2019. Prof. V. P. Pandya, In-charge Principal has welcomed the guest and motivated the students for scope of automation in current technology. Mr. Nirav Meghvani, founder of possible automation had briefly explained the basic knowledge as well as demonstrated the utilization of stepper motor, induction motor, PLC and SCADA and its application in robotics and industry. Total 103 students have taken the benefit of this workshop. Prof. M B Vaghela has coordinated this workshop.



Inaugural Ceremony



Demonstration by expert and Group photograph

- Prof. L. M. Rola & Prof. A. N. Dave, attended a 2 days e-FDP on “Online Innovative Teaching & Research Practices”, organized by Academic Researchers Association. Puducherry during 7th-8th May, 2020.
- Prof. A. B. Khant, attended webinars on “Basic of COVID-19 & Infection Prevention and Control”, organized by iGOT on 26th-27th April, 2020.
- Prof. R. C. Ghanghas, attended a webinar on “Importance of Fe-C, TTT & CCT”, organized by IIW-India Baroda Branch on 5th May, 2020.
- Prof. H. D. Patel, attended a webinar on “Sustainable Manufacturing: Concepts and Practices”, organized by GEC, Bhavnagar on 23rd May, 2020.
- A webinar on “NBA Accreditation”, organized by IQAC, GTU & InPods India Pvt. Ltd. on 11th June, 2020 was attended by 7 faculties from department.
- Prof. D. B. Patel has attended “Induction Phase –II training program”, held during 16th to 27th Sept., 2019 at NITTTR Bhopal.
- Prof. V. P. Pandya has attended a training on “Effective Strategies for Workshop Management”, held during 16th to 20th Dec., 2019 at NITTTR Bhopal.
- Prof. H. M. Shah, successfully completed the Elearning program on “Compressor”, organized by TATA Steel, 2nd May, 2020.
- Prof. R. C. Ghanghas, successfully completed the Elearning program on “Basic Metallurgy & Heat Treatment of Steel”, organized by TATA Steel, 2nd & 3rd May, 2020.
- All the faculties members of mechanical department have attended an online webinar on “LEC SSIP Start-up Stories” organized by LEC, Morbi on 15th May, 2020.
- All the faculties members of mechanical department have attended an online training on “Access Announcement for ASME & ASCE for Lukhdhirji Engineering College Morbi” organized by GIST Empowering Research and Learning on 12th May, 2020.

❖ **Faculty Achievement:**

- Prof. D. M. Joshipura has completed his Ph.D. degree from Rai University, Ahmedabad. He delivered his Ph.D. Viva Voce online presentation on his research topic "Critical Analysis and Investigation of Variants of Fused Deposition Modelling Process" on 5th June, 2020.

❖ **Paper Publication**

- Prof. M.B. Vaghela, published a paper titled "Numerical study of edge crack interaction with inclusion and void of an isotropic plate under different loadings by extended finite element method", in Journal of Materials Science and Engineering in June 2020.
- Prof. R. C. Ghanghas, presented a paper titled “In-Situ Dissolution Behavior of Secondary Alloy Phases in Al-Zn-Mg-Cu-base AA7055 Aluminum Alloy”, at Asia-Pacific Microscopy Conference (APMC 2020), Hyderabad during 3rd-7th Feb, 2020.
- Prof. J. H. Solanki along with final year students, published a paper titled “Design for a Solar Powered Water Aerator”, in International Journal for Scientific Research & Development, March 2020.
- Prof. V. B. Patel, published a paper titled “Scheffler reflector for cooking application-a review”, in International Journal of Ambient Energy, May 2020
- Prof. V. B. Patel, published a paper titled “Wear Behaviour of Aluminium Bronze Cast by Vertical Centrifugal Casting Process”, Indian Foundry Journal, Nov 2019



Student Corner

❖ **Paper Presentation**

- Abhishek Patel, Harshit Savaliya, Darshil Dholakiya, Krunal Thummar, Prof. J. H. Solanki, published paper titled “Design for a Solar Powered Water Aerator”, in International Journal for Scientific Research & Development, March 2020.

❖ **Extracurricular activities:**

- Vadgama Rajnishchandra, final year student has participated in a 20 days online Internship Program on “Vehicle Dynamics” conducted by Fraternity of Mechanical and Automobile Engineers (FMAE Academy) from 15th June-4th July, 2020.
- Katar Gautam, 5th semester student, participated in skill development webinar on “Solar Energy & Future Aspects” organized by Electrical Engineering Department, KITRC, Kalol on 20th June, 2020.
- Katar Gautam, 5th semester student, successfully completed the Elearning program on “Compressor”, organized by TATA Steel.
- Katar Gautam, 5th semester student, successfully completed the Elearning program on “Measuring Instrument”, organized by TATA Steel.

❖ Creative skills

અક્ષરો ને આંધળો આવકાર આપુ છું
અને શબ્દોનો સુંદર શામિયાનો બનવું છું
મારી વ્યથા ને સરળ શબ્દમાં રજૂ કરું છું
હા હું પણ થોડીક કવિતા લખું છું..!

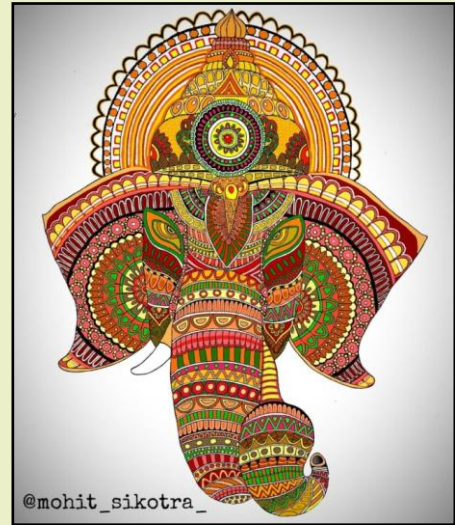
Katar Gautam, 5th semester
(190313119003)



Sumit Pithudiya, 3rd Semester
(180310119047)



Dasadiya Aagam, 7th semester
(170310119013)



Mohit Sikotra, 7th semester
(170310119050)

MECHANICAL ENGINEERING DEPARTMENT

Vision of the Department

To deliver quality engineering education for Mechanical Engineers with Professional competency, Human values and Acceptability in the society.

Mission of the Department

- To nurture engineers with basic and advance mechanical engineering concepts.
- To impart Techno-Managerial skill in students to meet global engineering challenges.
- To create ethical engineers who can contribute for sustainable development of society.

❖ EDITORS:

1. Prof. Hiral M. Shah
2. Prof. Amisha B. Khant
3. Prof. Renu C. Ghanghas

❖ STUDENTS COORDINATOR:

1. Vaghela Mitesh (Final Year)
2. Mohit Sikotra (7th Sem)
3. Jeet Makwana (7th Sem)