



VISHWAKARMA GOVERNMENT ENGINEERING COLLEGE MECHANICAL ENGINEERING DEPARTMENT

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Head of the Department's Message



Dear Students & Faculty Members,

Year 2021 ends with some new lessons that we learnt in pandemic. We all learnt to use various teaching and learning aids in online mode. Campus has started blooming again with the smiling face of students after long gap. Now we face the new challenge to engage student physically again in classrooms.

In last six months we have arranged seminars, workshops and expert talks for overall development of the students and to enable them to gain knowledge beyond syllabus too. Through this newsletter I thank all experts, speakers and industries who had spared their valuable time for our students. This New Year has brought the challenge to continue the efforts and maintain the quality of education and facilities for students in line with our vision and mission of institute and department. We are confident that, we will reach the chair of triumph with the same team spirit in the forth coming years too. At the end I wish one and all including students, staff and faculty, a very happy, healthy, peaceful and prosperous New Year. With the advent of the New Year, we welcome new hopes and aspirations to make a better tomorrow.

Dr. Dhaval M. Patel

Contents

1. Departmental Activities
2. SAEINDIA Club Activities
3. Research or Publication
4. Expert Lectures Delivered
5. Training Attended
6. Faculty Achievement
7. Achiever Section
8. Department Faculty

Newsletter Committee

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❖ **Vision**

To create an excellent environment for quality based education in the field of Mechanical Engineering for preparing socially responsible technocrats and entrepreneurs.

❖ **Mission**

1. Impart quality education and enhance the creative and innovative skills to nurture globally acceptable mechanical engineer.
2. Provide state-of-the-art laboratories and teaching-learning environment through qualified faculties.
3. Develop linkages with Industry for excellence in research and consultancy services.
4. Encourage life-long learning, ethical values and entrepreneurship culture for industrial and societal needs.

❖ **Program**

**Educational
Objectives
(PEOs)**

1. Apply core subject knowledge to various challenging problems.
2. Adopt technical skills and leadership capability to explore the problems and present the solutions with professional ethics.
3. Plan and manage the production of components as per needs of the society.
4. Utilize engineering software and experimental capabilities to pursue research, higher education and entrepreneurship.

❖ **Program**

**Specific
Outcome
(PSOs)**

1. Graduates will be able to apply technical knowledge to identify, formulate and solve Mechanical Engineering problems relating to thermodynamics, fluid sciences, materials science, design and dynamics and industrial management.
2. Graduates will utilize their skills to solve industrial and R&D problems using modern engineering tools, latest software and equipment for environment friendly solution.
3. Graduates will be able to pursue their career as

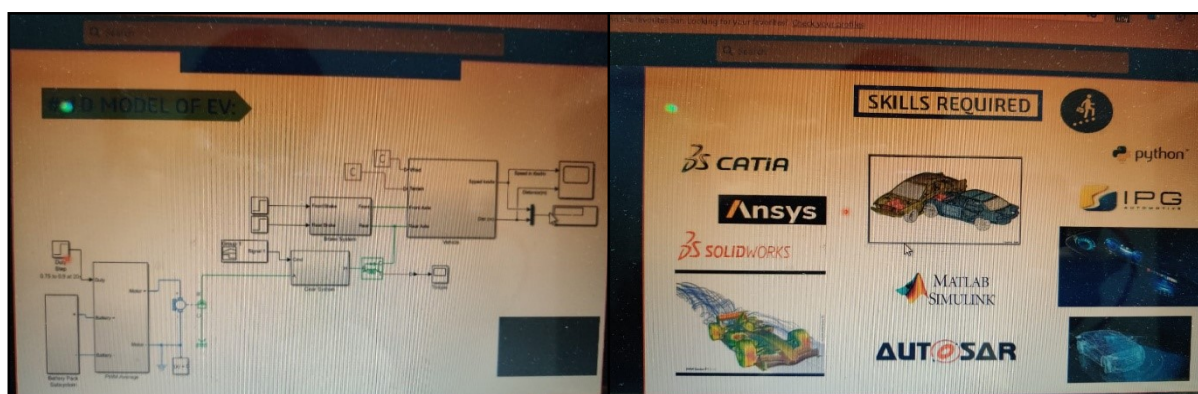
1. Departmental Activities

- ❖ Webinar on "Industrial 4.0 and Intellectual Property Rights" was held on 11 July 2021 through MS Teams, successfully organized and executed by the Mechanical department under the guidance of Prof. M. V. Vyas in collaboration with Mechanical Engineering Students Association (MESA) and SSIP e-cell. Mr. Padmin Buch, senior IPR domain expert and advisor was cordially invited as the speaker of the session. The objective of the event was to make students aware about the patent laws and copyright. Prof. M. V. Vyas welcomed the speaker with his inviting speech. Mr. Padmin Buch took us through the importance of innovation & the judicial procedures for engineering patents. A memento was presented to the speaker by the president of MESA.



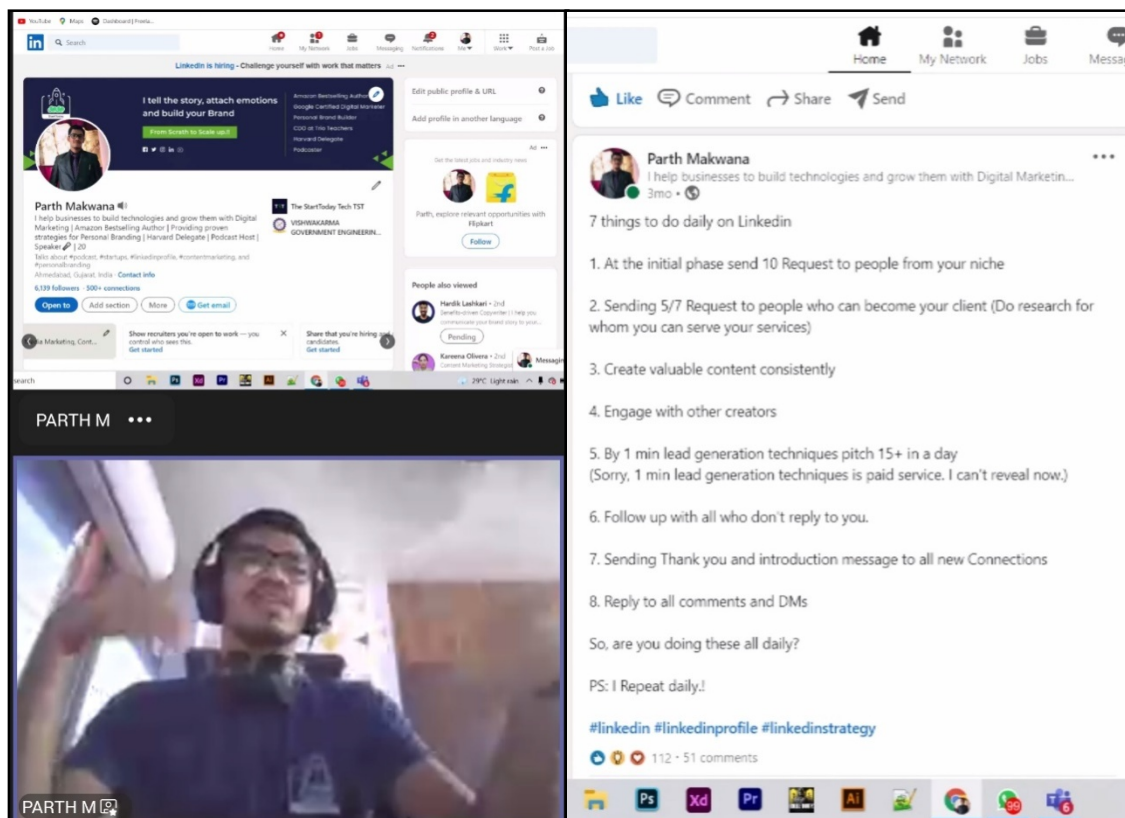
Webinar on Industrial 4.0 and Intellectual Property Rights

- ❖ Webinar on "Electric Vehicle" took place on 18 July 2021, organized by Mechanical Engineering Students Association (MESA) and SAE. Mr. Dev Shah, the leader of SAE BAJA, VGEC was invited as the speaker. The objective of this event was to elaborate the mechanisms of an electric vehicle and its rising importance in the automobile industry. It was a 2 hr long session where speaker talked about the EV industries across India. He explained different types of softwares that are being used in manufacturing of the Electrical Vehicle. Q&A session was specifically arranged at the end of the session.



Webinar on Electric Vehicle

- ❖ Webinar on "Embracing the power of LinkedIn" was organized on 08 August 2021 by the Mechanical Department in collaboration with Mechanical Engineering Students Association (MESA) through MS Teams. Mr. Parth Makwana, a student of Computer department was called in as the speaker who walked us through the importance of having a LinkedIn profile and how managing it properly can get us numerous jobs and internships. The event as a whole encouraged many students to create a LinkedIn profile and some of the profiles were reviewed and given feedback by the speaker. The beauty of the event was magnified by 175+ students' participation.



Webinar on Embracing the power of LinkedIn

- ❖ A Two Week Training Workshop on "Programming & Operations of CNC Milling Machine" was organized by the Mechanical Engineering Department under RUSA in collaboration with CIPET, Vatva, Ahmedabad. Objective of workshop was to help students in enhancing their skills in CNC milling field. Shri K. C. Rathod, Asst. Technical Officer, CIPET conducted this workshop and his expertise helped students to gain the knowledge about programming codes and various operations on CNC Milling Machine. This 72 hour program was conducted from 16 September 2021 to 1 October 2021 at CIPET, Vatva, Ahmedabad. Prof. Rupal Vyasa and RUSA team coordinated the event. 21 students participated in the program.



Workshop on Programming and operations of CNC milling machines

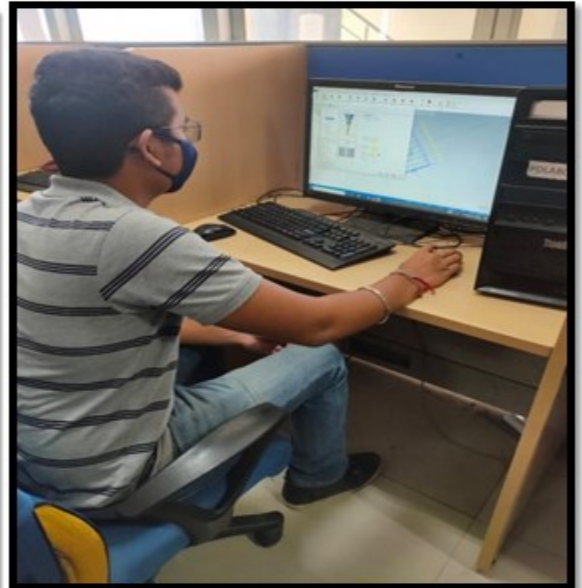
- ❖ A short-term course on "Mould Flow Analysis of Injection Moulding Plastic Part" for the students of VGEC sponsored by Gujarat Knowledge Society, Gandhinagar CIPET - Institute of Technology, Vatva, Ahmedabad has conducted from 13-24 September 2021. Mr. Jaimit Rana, Asst. Technical Officer, CIPET was expert of the event. Various topics related to injection moulding of plastic parts were covered. Prof. Rupal Vyasa and RUSA team coordinated the event. 11 students participated in the program.



Short term course on Mould flow Analysis of Injection Moulding Plastic Part

- ❖ Short Term Course on "MASTERCAM" for the students of VGEC Chandkheda sponsored by Gujarat Knowledge Society, Gandhinagar from 13-30 September 2021. The event was aimed to provide the basic knowledge of CAM software to students. MASTERCAM was the CAM software which had been

used for the training purpose. Students got the opportunity to use different machining tools and methods used in manufacturing using this software. Prof. Rupal Vyasa and RUSA team coordinated the event. 11 students participated in the program.



Short term course on MASTERCAM

- ❖ The Mechanical Engineering Department in collaboration with the Mechanical Engineering Students Association (MESA) organized a field workshop on “Conventional Machining” on 16 October 2021. The field workshop was organized to make the students aware of the current scenario of industrial requirements and recent machine advancements. Mr. Dev Shah (ATV TEAM Leader, Member of SAE) VGEC explained basic terminologies of the various machines like Centre Lathe, Drilling, Milling, and Grinding. Hands on session were conducted on lathe machine and numerous operations were performed. Prof. Mohammedyasin Mustufabhai Modan & MESA team coordinated the event. Total 42 students attended the event.

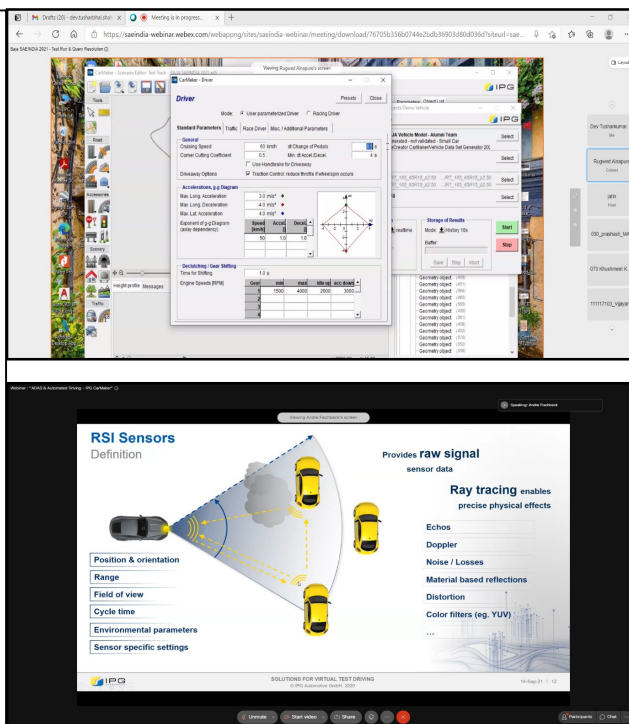


Field Workshop on Conventional Machining

2. SAEINDIA Club Activities

AUTONOM INDIA 2021 is a first of its kind autonomous vehicle technology challenge for engineering students in the country organised by SAEINDIA Northern Section. India's biggest futuristic mobility student competition will be based on Indian traffic situations and will require student to design and develop autonomous four-seater electric vehicle for urban mobility. There were total 3 rounds started from 8 November 2021 to 25 April 2022.

We have participated as "Team AuroRex" with 10 members and our team ID was 1971356. Prof. Kintu R. Patel and Dr. Dhaval M. Patel were the faculty guide of team.



3. Research or Publication

1. Vanvirsinh Chauhan, Ashish Darpe and Jayashree Bijwe, "Susceptibility of eco-friendly brake-pads to Noise-Vibration emanation due to siloxane treatment on alumina particles", Applied Acoustic (2022), 185: 108377. <https://doi.org/10.1016/j.apacoust.2021.108377> (Mechanical dept.).

4. Expert Lectures Delivered

1. Prof. A. A. Pujara delivered an expert lecture on "Industry 4.0" at Current Trends in Industrial Engineering", 2nd to 8th March, 2021 at G H Patel College of Engineering, on 03 march 2021.

5. Training attended

1. Prof. S A Solanki attended a FDP titled "NBA Accreditation and Teaching-Learning in Engineering (NATE)" through online MOOC training during 18 January 2021 to 9 April 21 and received a certificate in August 2021.
2. Prof. S A Pawar attended a FDP titled "NBA Accreditation and Teaching-Learning in Engineering

(NATE)” through online MOOC training during 18 January 2021 to 9 April 21 and received a certificate in August 2021.

3. Prof. Digant S. Mehta attended online MOOC course on “Heat Exchangers: Fundamentals and Design Analysis” organized by IIT Kharagpur under NPTEL during 26 July 2021 to 15 October 2021.
4. Prof. S A Pawar attended online MOOC training on “Developing soft skill and personality” organized by NPTEL during 23 August 2021 to 15 October 2021.
5. Prof. J M Joshi attended online MOOC training on “Developing soft skill and personality” organized by NPTEL during 23 August 2021 to 15 October 2021.
6. Prof. S A Solanki attended online MOOC training on “Joining Technology for Metals” organized by NPTEL during 23 August 2021 to 15 October 2021.
7. Prof. S A Solanki attended a FDP titled “Train the Trainers for faculty (basic), organized by iACE,PDPU during 20 September 21 to 24 September 21.
8. Prof. K R Patel attended a FDP titled “Current field Practices for Energy and Utility Systems” organized by GEC,Dahod during 6 December 2021 to 10 December 2021.

6. Faculty Achievement

1. Prof. Vanvirsinh Chauhan, Prof. Jayashree Bijwe and Prof. Ashish Darpe filed a patent on “Copper-free eco-friendly friction materials/brake-pads/shoes”, Indian patent, FITT, IIT Delhi under No. 202111038295 dated 24th August 2021 in the name of INDIAN INSTITUTE OF TECHNOLOGY DELHI) (Patent ID: FT-IDF-12-2020-169.

7. Achievers Section

Students Placed (Dec 2021)

1. KEDAR BANKIMCHANDRA SOMPURA (Adani Enterprise).
2. RAJAT BIPINBHAI PARMAR (Amrut Energy).
3. ASHUTOSHAH RABINDRAKUMAR SAH (BYJYUS),
4. DHANJI JAGDISHBHAI PARMAR (Zydus Cadilla Healthcare Ltd).

8. Department Faculty (As on December 2021)

Sr. No.	Name of Faculty	Designation	Higher Qualification	Teaching Experience
1	Prof. D M Patel	Professor	Ph.D. (Mechanical)	19
2	Prof. M I Vyas	Professor	Ph.D. (Mechanical)	22
3	Prof. R P Vyasa	Associate Professor	M.E. (Mechanical) (CAD/CAM)	28
4	Prof. H A Miskin	Associate professor	ME(CAD CAM)	22
5	Prof. R K Patel	Associate Professor	M.E (Cryogenic)	19
6	Prof. K R Patel	Associate Professor	M.E (IC Auto)	16
7	Prof. S A Pawar	Assistant Professor	M.E (Thermal Science)	12
8	Prof. V J Chauhan	Assistant Professor	M.E (IC Auto)	12
9	Prof. J M Joshi	Assistant Professor	M.E (Cryogenics)	16
10	Prof. D B Patel	Assistant Professor	M.Tech. (Design Engineering)	8
11	Prof. A A Pujara	Assistant Professor	Ph.D. (Mechanical)	13
12	Prof. S B Pipaliya	Assistant Professor	M.TECH. (Thermal Engineering)	9
13	Prof. M M Modan	Assistant Professor	M.E. (CAD/CAM)	7
14	Prof. K T Dodiya	Assistant Professor	M.E. (Mechanical) (Cryogenic)	9
15	Prof T Y Rathod	Assistant Professor	M.E (Machine Design)	13
16	Prof. S A Solanki	Assistant Professor	M.E (Jet Prop. & Gas Turbine Plant)	13
17	Prof. J B Dabhi	Assistant Professor	M.E (Thermal Engineering)	8
18	Prof. V A Thakar	Assistant Professor	B.E (Production Engineering)	12