

1st issue



NEWS LETTER

JULY -DECEMBER 2024

Presented By:

**Mechanical
Department**



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ABOUT GEC GANDHINAGAR SECTOR 28

The Government Engineering College, Gandhinagar (GECG) was established in 2004 to give higher education in engineering and technology. The institute is recognized by the All-India Council of Technical Education (AICTE), New Delhi, and the institute of Engineers (India). The college is administered by the Directorate of Technical Education, Gujarat State, Gandhinagar, and is affiliated with Gujarat Technological University (GTU).

All the courses of this college were taught according to the GTU (Gujarat Technological University) syllabus and exams.

In November 2007, the college moved to its new campus at Sec-28, near GEB, inaugurated by Smt. Aanandiben Patel, Minister for Higher and Technical Education. It is spread over 33 acres (130,000 m²) of land.

PRINCIPAL'S MESSAGE



Dr. Sweta Dave
PRINCIPAL GECG

Dear faculty, staff & students,

“ To those who see with loving eyes, life is beautiful. To those who speak with tender voices, life is peaceful. To those who help with gentle hands, life is full. And to those who care with compassionate hearts, life is good beyond all measure! "I, with a compassionate heart, invite you to have an initial peek at our organization's vision and values." Government Engineering college Gandhinagar primarily stands to nurture the shelved potential hidden in the young talent. We intend to provide a platform to the students to let out their creativity and channelize their knowledge and young inspirational energy. At GEC Gandhinagar, the joyful experience of academics and the energetic bursts of co-curricular activities integrate to create an all-round experience for our students and attendees. Our highly qualified faculties and management makes sure our students become capable to stand the competition in the outside world.

GEC Gandhinagar brings a holistic academics as well as a practical approach for the students to become compatible and knowledgeable to the market needs. And we believe in this statement a lot. Our faculties are well qualified and trained to deliver the knowledge in a playful form and not letting students just to mug up.

At last, I want to convey that we focus on the overall development of our students. We also look after the staff members and the college resources to provide students with the highest quality of academic value's , I will heartily welcome you to join our prestigious organization and become part of our family

Dr. Sweta Dave
Principal GECG

ABOUT MECHANICAL DEPARTMENT



WITH REFERENCE LETTER OF EDUCATION DEPARTMENT (શિ.વિ. ગાંધીનગર ના પત્ર ક્રમાંક પરચ/૧૦૨૦૨૨/ ૩૧૨/ સ, તા. ૨૦/૦૪/૨૦૨૨) AND DIRECTORATE OF TECHNICAL EDUCATION (વડી કચેરી, ગાંધીનગર ના શેરા ક્રમાંક: ડીટીઈ/ એકેડમિક/ ક (૪) / કોવિડ-૧૯/૨૦૨૧/ ૩૨૯૧, તા. ૨૦/૦૪/૨૦૨૨) MECHANICAL ENGINEERING DEPARTMENT WAS STARTED IN GOVERNMENT ENGINEERING COLLEGE, GANDHINAGAR WITH INTAKE CAPACITY OF 60 STUDENTS FROM ACADEMIC YEAR 2022-23. MECHANICAL ENGINEERING ENCOMPASSES AREAS SUCH AS ENERGY, FLUID MECHANICS, DYNAMICS, COMBUSTION, VIBRATION, DESIGN, MANUFACTURING PROCESSES, SYSTEMS MODELING AND SIMULATION, MECHATRONICS, ROBOTICS, MECHANICS OF MATERIAL, RAPID PROTOTYPING AND COMPOSITES. IT DEALS WITH ALL ASPECTS OF THE CONVERSION OF THERMAL ENERGY INTO USEFUL WORK AND THE MACHINES THAT MAKE THIS POSSIBLE. MECHANICAL ENGINEERING IS ALSO REFERRED TO AS THE ‘MOTHER’ OF ALL ENGINEERING BRANCHES.

DRAFT VISION AND MISSION

- **VISION**

Produce globally competitive, innovative mechanical engineers with core values for the benefit of society and environment.

- **MISSION**

- 1.To prepare competent mechanical engineers who can Imbibe core values.
- 2.To deliver information about current trends and innovations in the field of mechanical engineering to the students.
- 3.To encourage creative thinking at all levels in order to meet the technological and economic needs of the environment and society.

***This is the draft vision and mission of Mechanical Engineering as the branch has been started AY 2022-23.**

INTRODUCTION OF OUR MECHANICAL DEPARTMENT FACULTIES



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Mr. Jayeshkumar A. mistri
Instructor

Faculties Achievements and Publications



- Mr. Vijay N. Modi published journal paper titled “Optimization of Shaft Dimensions: A Comparative Study Using Computational Method and Finite Element Analysis” in International Journal of Intelligent System and Application in Engineering in July -2024.
- Mr. Vijay N. Modi has completed two week industrial training at Kalpataru Projects International Limited at Sector -28 Gandhinagar in July -2024.
- Mr. Vijay N. Modi has completed in workshop on “Industrial Auto-Cad, Solid works and GD & T” at Government Engineering College, Sector -28 Gandhinagar during 3d and 4th September 2024.



- Prof. K.P. Patel successfully completed an Industrial Training at ‘Vinitech Metal Private Limited’ during 17 July - 30 July 2024.



- Prof. Dixit Ashokkumar Patel attended an STTP on ‘Basics of Drone Design , Navigation , and Regulation’ during 18/11/2024 to 22/11/2024 at IITRAM.

Faculties Achievements and Publications



- Prof. R.H. Patel 's paper titled 'Experimental and numerical investigation of stress concentration factor for polygonal discontinuities in a finite plate ' has been published in the 'Reliability: Theory & Applications (ISSN 1932-2321)" a scopus indexed in December 2024.
- Prof. R.H. Patel paper titled "Enhancing Surface Integrity and Tribological Performance through Progressive Burnishing Techniques" has been published in the Nanotechnology Perceptions 20 No. S8 (2024) published in July 2024
- Prof. R.H. Patel reviewed paper the manuscript entitled "Investigation of Stress Concentration Factors in Countersunk Holes of Biaxially Loaded Isotropic Plates "for International Journal of Applied Mechanics and Engineering for Aerospace and Defence (ICFAMEAD 2024).
- Prof. R.H. Patel successfully completed an Industrial Training at 'Vinitech Metal Private Limited' during 17 July - 30 July 2024.



- Mr. Sanjay D. Mali published journal paper titled "A Review: Challenges Associated with advance material machinability using AWJM" was published in International Journal of Intelligent System and Application in Engineering in July -2024.

Faculties Achievements and Publications

- Mr. Sanjay D. Mali has completed two week industrial training at Sahajanand Laser Technology Limited at E-30, Electronic Estate GIDC- Sector -26 Gandhinagar, in June -2024.
- Mr. Sanjay D. Mali has completed two week industrial training Kalpataru Projects International Limited at Sector -28 Gandhinagar in July -2024.



- Prof. D.D.Mevada's paper titled 'Performance analysis of triple basin solar still with energy-exergy analysis approach' has been published in the 'Applied chemical engineering journal' a scopus indexed in October 2024.



- Mr. Vinod N. Patni published journal paper titled "Optimization of Shaft Dimensions: A Comparative Study Using Computational Method and Finite Element Analysis" in International Journal of Intelligent System and Application in Engineering in July -2024
- Mr. Vinod N. Patni published journal paper titled " A Review: Challenges Associated with advance material machinability using AWJM" was published in International Journal of Intelligent System and Application in Engineering in July -2024

Faculties Achievements and Publications

- Mr. Vinod N. Patni has completed two week industrial training at Sahajanand Laser Technology Limited at E-30, Electronic Estate GIDC- Sector -26 Gandhinagar, in June- July -2024.
- Mr. Vinod N. Patni has completed two week industrial training at Kalpataru Projects International Limited at Sector -28 Gandhinagar in July -2024.

Student's Achievements



Chaudhari Rahi Shaileshbhai(230130119005) from the Mechanical department participated in “Tree Plantation Drive” at Government Engineering College, Gandhinagar, on August 3,2024.



Bhasha Pareshkumar Shiyal (230130119056) from the Mechanical department participated in celebration of “Teacher’s Day” at Government Engineering College, Gandhinagar, on September 5,2024.

Student's Achievements



Rajveersinh Karansinh Zala (230130119051) from the Mechanical department participated in “World Sparrow Day” at Government Engineering College, Gandhinagar, on March 22, 2024.



Oza Ansh Hiteshkumar (230130119029) from the Mechanical department is awarded with the Certificate of achievement in “ECELL” at Government Engineering College, Gandhinagar.

Student's Achievements



- The 4th-semester students, AY 2022-23 batch of the Mechanical Department secured 2nd place in the GTU exams for the Summer 2024 session.



Patel Bhavy Alkeshbhai(230130119036)

Harsh Majethiya(230130119017) →



Patel Krishan Rajeshkumar(230130119039)

NEW PURCHASED INSTRUMENTS

- Lathe machine
(Manufacturing Process)



- Milling machine
(Manufacturing Process)



- Shaper machine
(Manufacturing Process)



- Kaplan turbine
(FMHM)



NEW INSTRUMENTS PURCHASED

- Impact of Jet (FMHM)

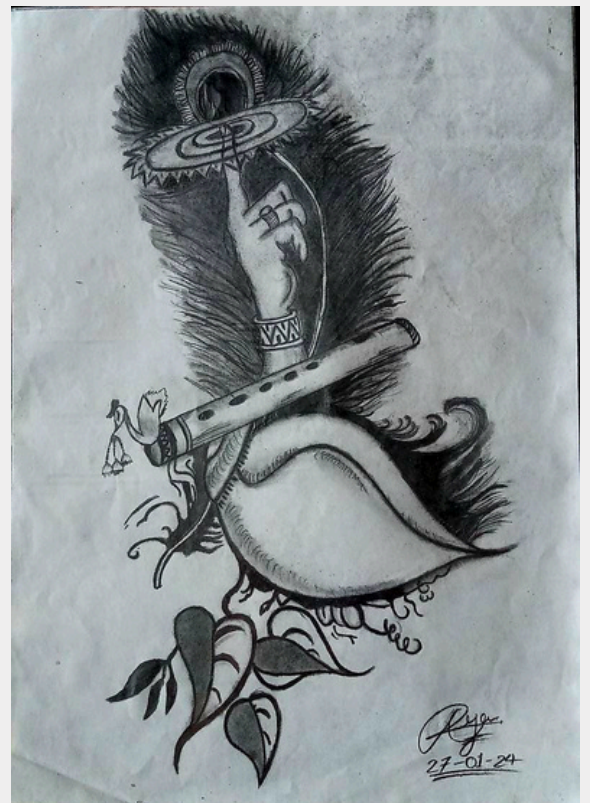


- Dead weight pressure gauge tester (MMM)

- Bomb Calorimeter (ET)



Student's Achievements



OZA ARYA HITESHKUMAR
(230130119030)

TEACHER'S AND STUDENT ACTIVITIES

1. Fit India Pledge

Date : 28/08/2024

Location : Room 6000, Mechanical Department

Students and Faculty of Mechanical Department have taken the Fit india Pledge to lead an active and a healthy lifestyle and will ensure to do his/her best in encouraging people to follow the same.

This activity aims to engage, excite and enable citizens to motivate them towards fitness and raise awareness about fitness through an interactive learning process.



2. BHARAT VIKAS PLEDGE

DATE:- 07/10/2024

LOCATiON: Mechanical Department, Building no.6

Students and Faculty of Mechanical Department have taken the Bharat Vikas Pledge, expressing their commitment to the unity and integrity of india and working towards the vision of **‘Ek Bharat, Shreshth Bharat’**.



Educational visit

Vikas Saptah Visit- 2024

Date:- 14/10/2024

Location:-Mahatma Mandir, Gandhinagar

Vikas Saptah visit at Mahatma Mandir with Facul- ties and students. Students were accompanied by the Professor of Mechanical Department Prof. R.H Patel.



Departmental Activities

1. One day workshop

- Prof. K.P.Patel and Prof. R.H.Patel coordinated a one-day workshop on “Cost Estimation of Product and its Purchase Procedure” on date 21/9/2024. There are 29 students are participated in the event. Students of mechanical department have taken advantage of the one-day workshop.



Departmental Activites

2. Two-day workshop

- Prof. D.D.Mevada and Prof. S.D.Mali coordinated a two-day workshop on “Industrial AutoCAD, Solid Works” during 3/9/2024 to 4/9/2024.
- There are 43 students are participated in the event. SolidWorks training can help to learn how to create 3D models and drawings, and how to use SolidWorks software to design products.



Industrial Visits

- **Thermal Power Plant Gandhinagar**

1. Students of 5th semester Mechanical department GEC Gandhinagar had recently visited Gandhinagar Thermal Power station on date 11/09/2024 related to our curriculum of subject Heat and Mass Transfer with our mentors Prof. K.P.Patel and Prof. R.H.Patel.
2. In this visit as faculty guide of Gandhinagar Thermal Power station gave us a brief introduction about boiler, types, power generation and capacity of the plant. After presentation faculty guide gave us brief introduction about boiler and its parts, heat exchanger, capacity etc.

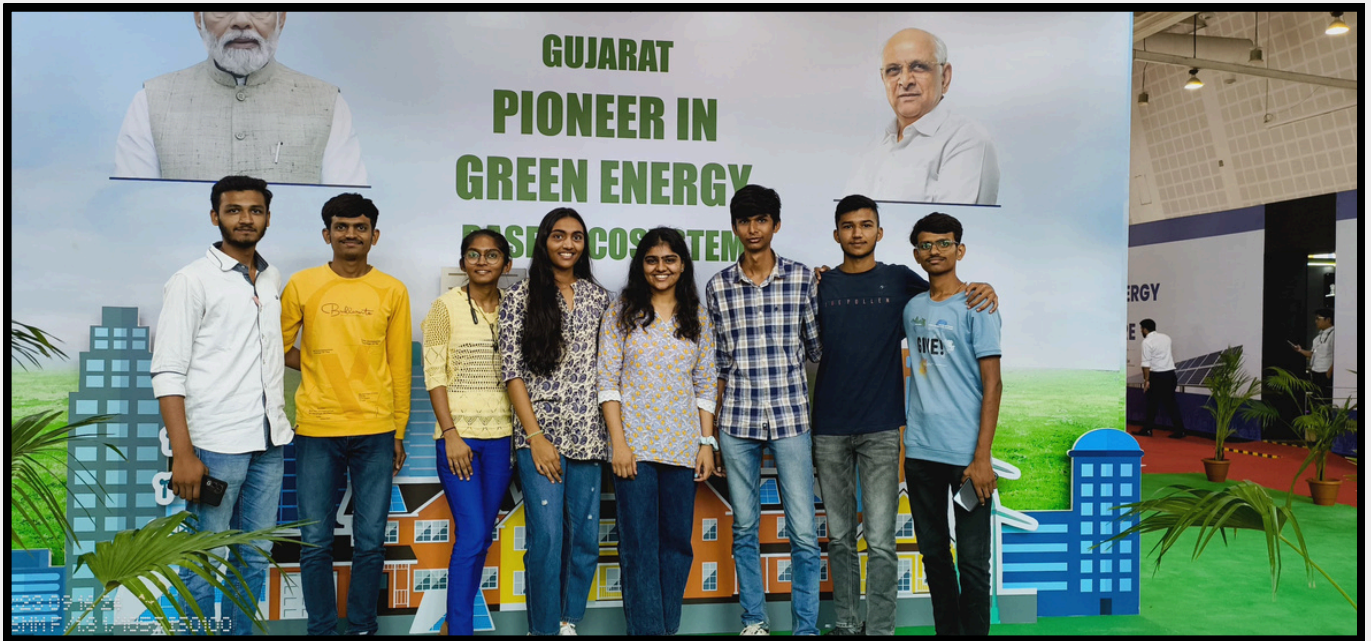


• Central ST Workshop

On 4th October 2024, the 5th & 3rd semester Mechanical Engineering students visited the Central ST Workshop in Naroda, Ahmedabad. The visit focused on the practical applications of machine parts used in engines of buses, cars, and other petrol and diesel vehicles. Students were given an in-depth explanation of various engine components, their functioning, and maintenance processes. The workshop provided valuable hands-on learning experiences, linking theoretical knowledge with real-world applications. Transportation to Naroda was smoothly arranged, with buses provided by the university, ensuring easy and convenient travel for all students. The visit was highly informative and enhanced the students' understanding of automotive engineering.



"Exploring Excellence: A Visit to the Heart of Learning"



4TH GLOBAL RE-INVEST 2024 RENEWABLE ENERGY INVESTORS' MEET

- A visit was made to the RE-invest Event, held from 16th to 18th September 2024, focusing on renewable energy investments and innovations. Faculties and students from our department attended the event, which featured insightful discussions on sustainable energy solutions and investment opportunities. The event was graced by the presence of esteemed dignitaries, including the Honourable Prime Minister, Chief Minister, and other political leaders. The exhibition showcased the latest technologies and advancements in the renewable energy sector. Over the course of three days, lunch facilities were provided to all guests and attendees, ensuring a comfortable and engaging experience for everyone present. The event proved to be an enriching experience, offering valuable insights into the future of renewable energy.

Media coverage

સે-૨૮ સરકારી ઇજનેરી કોલેજમાં વર્કશોપ



સરકારી ઇજનેરી કોલેજ સેક્ટર-૨૮ ખાતે ઇન્ડસ્ટ્રીયલ ઓડો CAD , સોલીડ વર્ક્સ, GD & T વિષય પર વર્કશોપનું આયોજન કરવામાં આવ્યું હતું. જેમાં મિકેનિકલ અને મેટલર્જી વિભાગના ત્રીજા વર્ષના વિદ્યાર્થીઓએ ભાગ લીધો હતો. વર્કશોપ માં તજજ્ઞ તરીકે મુકેશભાઈ યોગી- બ્રાન્ચ હેડ સાઈ કેડ, પાટણ દ્વારા અધ્યતન સોફ્ટવેર વિષે માહિતી આપી હતી. સાથે વિદ્યાર્થીઓને પ્રેક્ટીકલી પણ શીખવાડવામાં આવ્યું હતું. વર્કશોપનું આયોજન ડો. દિનેશ મેવાડા અને પ્રો. સંજય માળી દ્વારા વડા ડો. આઈ. બી. દવેના માર્ગદર્શન હેઠળ કરાયું હતું.

SANDESH NEWS GANDHINAGAR EDITION, 06/09/2024

NEWSLETTER TEAM INTRODUCTION

- **Head of the Department**

- Dr. Indravadan B. Dave
Professor

- **Newsletter coordinator**

- Prof. Ms. Rashmiben Hasmukhlal Patel
Assistant Professor
- Prof. Patel Kalpeshkumar Prahaladbhai
Assistant Professor

- **Newsletter contribution**

- Prof. Hemendra A. Miskin
Associate Professor
- Prof. Vijaykumar Natvarlal Modi
Assistant Professor
- Prof. Dixit A Patel
Assistant Professor
- Prof. Sanjaykumar Devabhai Mali
Assistant Professor
- Prof. Dineshkumar D Mevada
Assistant Professor
- Prof. Vinodkumar Natvarlal Patni
Assistant Professor

- **Newsletter Editors:**

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- Zala Rajveersinh (230130119051)

- **Team members:**

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- Oza Arya (230130119030)
- Patel Bhavy (230130119036)