



Report on One-Day Workshop Organized by the Mechatronics Department

Date: 06th March 2026

Organized by: Mechatronics Department

Participants: 35 students and 3 faculty members from Diploma Mechanical Engineering and Mechatronics Engineering, B & B Institute of Technology, V. V. Nagar.

Introduction

The Mechatronics Department successfully organized a one-day workshop for 4th and 6th-semester students of Diploma Mechanical Engineering and Mechatronics Engineering from B & B Institute of Technology, V. V. Nagar. The primary objective of the workshop was to provide participants with in-depth insights into various aspects of mechatronics, covering theoretical concepts and practical applications of Mechatronics in the Industry. Total 45 students and three faculty members, Prof. Harsh Tailor, Prof. Chaitanya Parmar and Prof. Bhavesh Patel attended this knowledge-enriching event.

Dr. Vinod N Patel, Head of Mechatronics Department, GCET introduced the facility available in the Mechatronics department of GCET and inspired the students to pursue degree in the Mechatronics Engineering.

Workshop Sessions and Activities:

Session on Hydraulics and Pneumatics Systems:

Prof. Sanjiv Rajput conducted an informative session on hydraulic and pneumatic systems. The theory session included discussions on principles, applications, and functionalities of these systems. Additionally, practical demonstrations provided participants with hands-on experience, enhancing their understanding of fluid power systems.

Session on Electro-Mechanical Measurement and Instruments:

Prof. Pathik Patel delivered a session on Electro-Mechanical Measurement and Instruments, covering essential concepts related to the measurement process and various measuring techniques. The discussion included instruments for measuring speed, force, torque, temperature, mass, and linear/rotary displacements. The session concluded with an interactive Q&A session.

Practical Demonstrations in Measurement and Metrology Labs:

Prof. Hemant Rathod and Prof. Umang Jani conducted practical demonstrations on various measurement techniques, including:

- **Temperature Measurement:** Using Optical Pyrometer
- **Torque Measurement:** Using Strain Gauge
- **Viscosity Measurement:** Using Redwood Viscometer
- **Force Measurement:** Using Load Cell
- **Metrology Lab Demonstrations:** Profile projector usage, flatness measurement using optical flats, and other advanced metrology tools.

Session on Robotics and Robotics Lab:

Dr. Ajay Patel introduced third-year Mechatronics students to robotics and the Robotics Lab. The session covered fundamental robot components such as actuators, sensors, controllers, and end effectors. A practical demonstration was conducted on program generation for the ARISTO XT 6-Axis robot. The session also discussed various applications of robotics, including industrial automation, medical robotics, and autonomous vehicles.

Session on Microprocessors, Microcontrollers, and PLCs

Prof. Bhavesh Hindocha led a session on microprocessor and microcontroller-based systems. Students learned about hardware interfacing and programming techniques for microcontrollers. Additionally, an introduction to PLC programming languages was provided to give students foundational knowledge of industrial automation.

Demonstration of Mechatronics Projects

Dr. Saurin Sheth showcased the working models of robots developed by students from GCET for various robotics competitions. This session provided students with insights into practical applications and innovations in the field of robotics.

Visit to GCET IDEA Lab

Prof. Bhavik Ardesana and Prof. Umang Jani guided students during their visit to the GCET IDEA Lab. The objective of this visit was to introduce students to industry-level instruments and tools, including:

- 3D Printers (FDM & SLA)
- 3D Scanners
- CO2 Laser Cutters
- CNC Wood Router
- Vinyl Cutting Plotter
- Metal Pipe Bending Machine
- CNC Turning Machine
- PLC Kits

The visit aimed to inspire students to engage in creative thinking, problem-solving, and collaboration while familiarizing them with advanced industry technologies. The workshop was a highly successful initiative, offering a well-rounded blend of theoretical knowledge and practical exposure. Faculty members actively engaged with students, answering queries and facilitating discussions on emerging trends and best practices in mechatronics. The event proved to be a valuable platform for skill development, networking, and knowledge exchange, empowering students to excel in their respective engineering fields.

PHOTOGRAPHS:



Department Introduction by Dr. Vinod N Patel



Session on Robotics By Dr. Ajay M Patel



Session on Hydraulics and Pneumatics Systems By Prof. Sanjiv Rajput



Session on IDEA Lab By Mr. Tushar Machhi



Session on Mechatronics Projects Dr. Saurin Sheth



Session on PLC Dr. Ravi Gandhi

G H Patel College of Engineering & Technology

(The Charutar Vidya Mandal (CVM) University)

Department of Mechatronics

Event Name: "One day workshop and expert talk for Diploma Sem IV and Sem VI Mechatronics and Mechanical students, B & B Institute of Technology, V. V. Nagar"

Date: 06th March 2026

Sr. No.	Enrollment No.	Name	Sem	Branch	Sign
1	236040319111	Kushal. A. Patil	6 th	Mech	Kushal
2	236040319076	Vedant V. Panchal	6 th	Mech	Vedant
3	236040319050	Luhar Amit Rameshbhai	6 th	Mech.	Luhar
4	236048319036	Talpada. Rajesh. S	6 th	mech	Rajesh
5	236040319178	Bhavya. PV	6 th	mech	Bhavya
6	236040319042	AKshesh. B. Panchal	6 th	Mech	AKshesh
7	236040320012	Mazank. D. Parmar	6 th	mechatronics	Mazank
8	226040320026	Patel purkam Hurdikbhai	6 th	mechatronics	P.H. Patel
9	236040320002	bhavya kansara.	6 th	MT	Bhavya
10	236040320009	Shlok Panchal.	6 th	MT	Shlok
11	236040320010	Krishna Pandya	6 th	MT	K.V.P.
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Sr. No.	Enrollment No.	Name	Sem	Branch	Sign
1	246040319037	Kajjar Vedant	4 th	Mechanical	
2	246040319033	Pranjapati Dhruvil	4 th	Mechanical	D. J. Pranjapati
3	246040319105	Parmanv Sural	4 th	Mechanical	S.K.P
4	246040319078	Dhairya Panchal	4 th	Mechanical	
5	2460403190755	Neel Machhi	4 th	Mechanical	
6	246040319198	Aditya Vishwa	4 th	Mechanical	
7	246040319007	Bhoi RUDRA-D.	4 th	Mechanical	
8	246040319029	Dooji Parth	4 th	Mechanical	
9	246040320007	Om Mistay	4 th	Mechatronics	
10	246040320000	Malav Mistay	4 th	Mechatronics	
11	246040320012	Kaatik Patel	4 th	Mechatronics	K.R. Patel
12	246040320003	Jay. Desai	4 th	Mechatronics	J.H. Desai
13	246040319171	Suthar Aditya	4 th	Mechanical	
14	246040319202	Zala Yomrajsinh	4 th	Mechanical	
15	256048319003	Bhoi Sujal	4 th	Mechanical	
16	246040320020	Raj R Yodav	4 th	Mechatronics	
17	246040319185	Trivedi shubh-b.	4 th	Mechanical	
18	246040319027	Mehul D. Dabhi	4 th	Mechanical	
19	246040319094	Hitesh R Parmar	4 th	Mechanical	
20	246040320082	meet. k paoekh	4 th	Mechanical	
21	246040319118	Tanush K Patel	4 th	Mechanical	
22	246040329117	Prab S Patel	4 th	Mechanical	
23	246040319149	Sayed. M. Raif	4 th	Mechanical	
24	246040319111	Patel Harsh M	4 th	Mechanical	H.M. Patel
25	246040319725	Pritesh m. Pranjapati	4 th	Mechanical	P.M.P.
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