

# Mech at a Glance

(E-NEWS LETTER)

HALF YEARLY MAGAZINE

JANUARY- JUNE 2021

MECHANICAL ENGINEERING DEPARTMENT  
GOVERNMENT ENGINEERING COLLEGE PALANPUR



Government of Gujarat

**GOVERNMENT ENGINEERING COLLEGE PALANPUR**

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### **Editorial Board**

Prof. A D Patel

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### **Contact us**

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## Vision and Mission of Institute

### VISION

“To be a leading technical institute facilitating transformation of human resources into socially responsible engineering professionals for sustainable development”

### MISSION

- (1) To achieve academic excellence by developing state-of-the-art laboratories and academic infrastructure.
- (2) To create ecosystems that promote value based technical education, innovation and entrepreneurship for sustainable development.
- (3) To contribute to industry and society by providing technical and consultancy services.
- (4) To enhance technical competencies of human resources by providing need base trainings and quality improvement programs.

## Vision and Mission of Department

### VISION

"To produce competent mechanical engineers to fulfil needs of society for sustainable development"

### MISSION

- (1) To impart quality technical education in Mechanical Engineering with professional skills.
- (2) To develop linkages with industry for exposure about real life problems and its feasible solution.
- (3) To promote lifelong learning, Innovation and entrepreneurship for sustainable development.
- (4) To assimilate social, cultural and ethical values for betterment of society.

## From the Desk of Head of the Department

The department has consistently maintained an exemplary academic and research record. It makes students to gain a comprehensive knowledge and understanding of subjects. This one aims to inculcate values of basic knowledge of Engineering, science, computer, mathematical, techniques of communication skill & management which will imbibe the ability to apply the basic problem solving techniques of the society. With great demand in industry and great placement opportunities, the department stands tall and proud. I believe that my team consisting of students, staff and faculty is capable of doing wonders.

I have witnessed the continuous encroachment of our department, particularly through these COVID 19 pandemic challenging periods. This fall, courses will be delivered in online platforms formats to maintain our nationally recognized hands-on student experience, while taking the necessary measures to create a safe environment for our students, faculty and staff. This newsletter is an attempt to highlight the achievements of the department, in this we have showcased the best and look forward to have more in the future on a quarterly editions.



**Prof. (Dr.) J. A. Vadher**

## Faculties of Department (As on June 2020)

Sr. No.	Name of Faculty	Designation	Area of Work	Teaching Experience (Years)
1	Prof. (Dr.) K. B. Judal	Principal & Professor	Computer aided Design and Manufacturing Unconventional Manufacturing Process	20.5
2	Prof. (Dr.) J. A. Vadher	Professor & Head	Production, Industrial, Automation	23
3	Prof. A. B Patel	Assistant Professor	Thermal Engineering	19.5
4	Prof. V. D. Patel	Assistant Professor	Thermal Science	19.5
5	Prof. S. K. Dabhi	Assistant Professor	Solar Energy, IC Engine, Auto.	13.5
6	Prof. N. A. Patel	Assistant Professor	CAD/CAM	16.5
7	Prof. A. D. Patel	Assistant Professor	Machine Design	17.5
8	Prof. V. K. Patel	Assistant Professor	Machine Design	16.5
9	Prof. A. R. Chaudhari	Assistant Professor	Machine Design	13.5
10	Prof. P. N. Boka	Assistant Professor	Design Engineering	15.5
11	Prof. A. K. Patel	Assistant Professor	Advance Manufacturing Techniques	13.5
12	Prof. N. T. Raval	Assistant Professor	CAD/CAM	7.5

## Innovative Practices in Teaching-learning/Assessment Process

Sr. No.	Methodology	Related Subject	Class	Name Of Staff
1	Course module wise NPTEL video lectures link is shared with student after completion of module for revision and in depth self learning.	Applied Thermodynamics	VI	Prof. S. K. Dabhi
2	Case Study for Automation	Computer Aided Manufacturing (3161917)	VI	Prof. N. A. Patel
3	Seminar topics were given to students and students have delivered via power point presentation	Automobile Engineering (2181915)	VIII	Prof. A. D. Patel
4	Seminar topics were given to students and students have delivered via power point presentation	Automobile Engineering (3161920)	VIII	Prof. A. D. Patel

## Result Analysis

Winter - 2017		Nos. of students appeared	Nos. of students passed	Pass %
FY	II Sem	25	24	96
SY	IV Sem	73	66	90.41
TY	VI Sem	51	46	90.2
LY	VIII Sem	60	60	100

## Topper of summer 2020 GTU Exam

### 2<sup>nd</sup> Semester

Sr.	Enrollment No	Name	SPI
1	200610119007	PATEL TIRTH JAYESHKUMAR	9.14
2	200610119012	PRAJAPATI VISHALKUMAR JAYANTIBHAI	9.14
3	200610119001	MODH UTSAV ASHISHBHAI	8.95

### 4<sup>th</sup> Semester

Sr.	Enrollment No	Name	SPI
1	190610119053	SHARMA PRIYANSHU NAGARMAL	9.22
2	190610119050	RAVAL KULDEEP NAILESHKUMAR	9.04
3	200610119509	KASHYAP RAJEEV RAJENDRABHAI	8.83

### 6<sup>th</sup> Semester

Sr.	Enrollment No	Name	SPI
1	180610119041	PATEL KISHANKUMAR VINODBHAI	9.04
2	180610119056	SINGH ROHANKUMAR AJAYKUMAR	9.04
3	180610119039	PATEL JANAKKUMAR GOVINDBHAI	8.87

### 8<sup>th</sup> Semester

Sr.	Enrollment No	Name	SPI
1	170610119014	HASHMI MOH HARIS RIYAZ ASLAM	10
2	170610119012	GIDWANI MAHESH HARESHBHAI	9.8
3	170610119013	GIDWANI SAGAR VASUBHAI	9.8

## Faculty/staff training/seminar/conferences attended

Sr. No	Name of Faculty	Training	Name of Institute/Organizer	Duration	
				From	To
1	A. D. Patel	Fundamental of Welding Science and Technology	IIT, Kharagpur NPTEL (MOOC)	Jan-2021	March-2021
2	V. D. Patel	Futuristic Innovations on Solar Energy Technologies	GEC, PATAN	8/2/2021	12/02/2021
3	N. A. Patel	Recent Trends in Advanced Manufacturing Processes	L E College of Engineering, Morbi	5/4/2021	9/4/2021
4	A. R. Chaudhari	Introduction to Abrasive Machining and Finishing Processes	IIT, Tirupati (MOOC)	Jan-2021	March-2021

## Research Publications

### National / International Publications (Conference /Journal and Patent):

Name of staff	Title of paper	Name of Conference /Journal and Patent	Month & Year of publication	Volume	Issue	Page no	ISSN /ISS P No.
A. D. Patel	Innovative Multicutter Groove Cutting Machine For Development of a Novel CruciTrap Joint	Science, Technology and Development	May-2021	10	5	515-527	0950-0707
A. D. Patel	Multicutter Groove Cutting Machine (MGCM)	Patent	March-2021	Application no. - 202121012147			
A. D. Patel	Two piece plus	Patent	June-2021	Application no.			

	type cruci-trap welded joint (CTWJ)			202121022448			
N. A. Patel	Cantilever Beam Analogy for the Performance Assessment of Cutting Tools	International Journal for Research in Engineering Application & Management (IJREAM)	April-2021	7	1	105-111	2454-9150
N. A. Patel	An Experimental Investigation On The Performance Of Cutting Tool Under Vibration Behavior With Variable System Parameters	International Journal Of Creative Research Thoughts (IJCRT)	May-2021	9	5	e814-e823	2320-2882
N. A. Patel	Implementation of Adaptive Control for Cutting Tool Vibration Minimization	International Journal for Research in Engineering Application & Management (IJREAM)	May-2021	7	2	398-403	2454-9150
A.R. Chaudhary & K.B. Judal	Experimental investigation of electro-chemical magnetic abrasive finishing of SS 304 workpiece	Materials Today Proceedings (Elsevier)	Mar-2021	<a href="https://doi.org/10.1016/j.matpr.2021.02.295">https://doi.org/10.1016/j.matpr.2021.02.295</a>			ISSN 2214-7853



## Department Activities

### Expert Lectures

1. An expert lecture was delivered by Dr. J. R. Patel , Mechanical Engineering Department, School of Technology, Pandit Deendayal Energy University (PDEU) on "**Research and Applications of Thermal Engineering**" topic. This expert lecture is arranged for the benefit of **VII Semester** Mechanical Engineering Students.
2. An expert lecture was delivered by Dr Prof. D. J. Parmar Expert from L D College of Engineering on "**Fundamentals of Gas Dynamics** " topic. This expert lecture is arranged for the benefit of **VI Semester** Mechanical Engineering Students.

## Student Projects

Sr. No.	Project Title	Name of Guide
1	Contactless electromagnetic braking system	Mr.Boka Pradeepkumar Narsinhbhai
2	Design , development and manufacturing of socket for easy mounting of ceiling fan	Mrs. Vaishali K Patel
3	Product development of groove cutting machine with multi cutting off wheels	Mr.Patel Ashvinkumar Dahyabhai
4	Development of drilling machine attachment for milling operation	Mr.Patel Narendrakumar Amrutlal
5	Solar Covid kiosk	Mr.Patel Alpeshkumar Bipinbhai
6	Hybrid electrical vehicle	Mr.Patel Ashvinkumar Dahyabhai
7	Experimentation of MAF to finish SS 420 using response surface methodology	Mr.Chaudhari Ashokkumar Ramjibhai
8	Multi-tool operational DCSG machine	Mr.Patel Narendrakumar Amrutlal
9	Design & analysis of bar banding machine	Mr.Patel Anandkumar Kanubhai
10	Levitating frictionless vertical windmill	Mr.Boka Pradeepkumar Narsinhbhai

11	Development of double passed solar dryer integrated with PCM bed for cotton seed drying	Mr.Patel Vijaykumar Dasharathbhai
12	Design and development of shell and tube type heat exchanger for solar energy storage using PCM	Mr.Patel Vijaykumar Dasharathbhai
13	Solar disinfection and sanitization tunnel with ultra violet ray	Mr.Raval Nileshkumar Titabhai
14	Design and fabrication of solar desalination	Mr. Shyam K Dabhi
15	Mathematical modeling of magnetic abrasives finishing process	Mr.Chaudhari Ashokkumar Ramjibhai

## Achievements

### Placement, Higher Studies and Entrepreneurship

No of Students placed in companies or Government Sector	14
No of Students admitted to Higher Studies	2
No of Students turned in Entrepreneur	6