





AUTOMOBILE DEPARTMENT
L D College of Engineering



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## About Department

The department offers undergraduate course (B.E.) in Automobile Engineering. The various training/workshops are being organized for educational personnel and student on a regular basis. Students also undergo project work and training at various industries and service centers. The department aims to mold the graduates in a way that they are ready to work in a multidisciplinary field. Students from the various semester had been participating and won prizes in national and international competitions such as SAE BAJA, SAE SUPRA, FORMULA STUDENT INDIA. The department has qualified and experienced faculty member in addition to good infrastructure and state of the art laboratories with sophisticated equipment. The students are taking the benefits from Siemens Centre of Excellence to enhance and update their knowledge and skill. The department is sharing infrastructure and resources with the Mechanical Engineering department.



#### Mission

To impart quality education through state of art teaching-learning methods, facilitate research and innovation for making competent automobile professionals meet the needs and challenges of automotive and allied industries, society, nation, and nature.

#### Vision

- To provide quality education by well-qualified faculties using modern teaching-learning methods.
- To provide industry exposure and encourage the students to think innovatively and involve in resasearch based activities.
- To develop multidimensional ability through curricular, co-curricular, and extracurricular activities in an amicable environment.
- To equip students with problem-solving skills, moral and ethical values, and leadership qualities to solve the challenges of society, nation, and nature as a whole.



### Mcssage From Principal

**Dear Students and The Faculty Members,** 

LD College of Engineering has been at the forefront of research and innovation. All the remarkable talent and hard work brought great outcomes for Department of Automobile Engineering. I congratulate and appreciate the efforts of all involved in departmental activities



Automobile Department has been Spearheading the efforts from the research & innovation perspective. My congratulations to the students and faculty members for cultivating the culture of innovation through the use of two state of the art facilities at the Centre of Excellence. The department has lead the way in organising events and activities including inviting renowned speakers for training students and faculties and successfully conducted Webinars for students and faculties.

Simultaneously our students and faculties have been engaged very well in the social, cultural, and sports domain too. The induction program for first-year students has been done commendably by all departments and we hope it has made our new aspirants comfortable on campus.

With the beginning of the new semesters, I would like to encourage all the students and faculty members to be focused and determined to set and achieve goals so that we all can grow together as an institute.

> Dr. R.K. Gajjar Principal L.D. College of Engineering

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## Mcssage From HoD's Desh

"Upon the subject education ... I can only say that. I view it as the most important subject which we as a people may be engaged in.." - Abraham Lincoln

Dear Friends, Colleagues , Students & all Faculty members, I hope all of you are fine & also following the guidelines provided by the Government in this pandemic of Covid-19. This pandemic has created a golden opportunity for us to build up our knowledge and also to work on it.

It's a very heart-warming moment to present this

newsletter edition of Automobile Engineering department. Our Automobile Department is obliged by our Respected Principal Dr.R.K Gajjar Madam for providing this opportunity to summarize the achievements of our Students & Faculty Members.

Our Department has always been keen on the growth of the Indian Automobile Industry & thereby in National Development. Our certain students have got successful in this direction. I am very much delighted to inform you that our many projects are assisted by the SSIP (Student Start-up & Innovation Program), few of our projects are also patented. Also, SAE LDCE Club working under our department hosts' various events that are beneficial to our students and other Institutes of India by participating in events like EGVC, webinar and quiz competition, etc. Our LDMS team always use to partici-

ate in BAJA and ATVC. I am also pleased to inform you that our students use to perform their internship in companies like Tata Motors & IACE which is near PDPU. My intention is to inform you about the events and activities that take place in our department & are also going to be held in the future. This all becomes achievable due to the joint efforts & hard work of all our Students & Faculty Members

Students this is not the end, it's a continuous process of working & achieving. I always encourage every student's idea and provide them the right direction in it.

"Innovation is not about achieving but its all about the idea that strikes in your mind"

I believe that you all are going to bring your innovative ideas to share with all and discuss the same & I also hope that we are always going to work with great energy and enthusiasm in the Thank you with regards,

> Prof. R.J Jani **Head of the Department. Automobile Engineering Department,** L.D. College of Engineering



#### About Club



## **Learning By Doing**

A Collegiate club is a nursery of equalization in student members evaluating knowledge enrichment & networking with industry professionals. It provides continuity to engineering education and provides exposure to the industrial operating environment and working conditions.

SAE India Collegiate Club - L.D.C.E. is the college club under SAE India organization and is one of the largest clubs of its kind with members from Mechanical, Automobile, and many more engineering departments of our college.

The club organizes various seminars, workshops, industrial visits, and interactive programs as well as national level design event which are related to the automotive field and they enhance the concepts of engineering.

#### Members of SAE LDCE Club :-

Student Chairperson : Kripal Detroja.

Vice-Student Chairperson : Shyam Kalavadiya.

Student Secretary : Saumitra Jha.

Treasures : Mohitsingh Rajpurohit

Student Reception Chair : Nirmit Bhatt and Preyansh Patel.

Student Program Chair : Divesh Prajapati and Roshansingh Rajput.

Student Membership Chair: Yashesh Shah and Jay Sharma.

Supportive Members: Hemil Patel, and Nachiket Jani.

Senior Faculty Advisor : Prof. Mazar A. Shaikh.

Additional Faculty Advisor : Prof. Jayendra P. Vasani.

Contact us:- Kripal Detroja

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Email:- Idce.saeclub@gmail.com



#### Special Achievement.

Project "Smart Saline Bottle" won 1st award in i2i category and was awarded by GTU Innovation Council. This project is carried out by Automobile and Biomedical Students and guided by Prof J.P.Vasani. This project is supported by LDCE SSIP Cell and have published 2 patents.



#### PROCESS DESTGN TO PROTOTYPE DEVELOPMENT

Process Design is the transforming organization's an vision, goals, and available resources discernible. measureable achieving means of organization's vision. **Process** ••• design focuses on defining what the organization will do to achieve its financial and other goals

The expert session was taken by Experts Mr. Hardik Gohil, Mr. Aman Rupareliya, and Ms. Khevna Vasani.

They gave expert talks on how to execute our idea into reality.

The event was conducted offline as well as online, especially meant for first-year students.





#### SCOPE IN AUTOMOBILE SECTOR POST COVIDI9

In L.D. college of engineering, a webinar on scope in Automobile sector post COVID19 held by SAE LDCE Club for college students.

In this Webinar, the students, faculty, and industrial expert were joined.

Below Topics were covered in the webinar.

- 1 ) Effect of COVID19 on the Automobile sector
- 2 ) Future-scope of the Automobile sector
- 3 ) Job Opportunities for students in the Automobile sector
- 4 ) Skill development required in students to get effectively placed in the Automobile sector in the present scenario
- 5 ) Steps and preventive measures are taken by industries to cope up with the present COVID19 condition



This Event was conducted in the form of a webinar, the date selected to conduct this webinar was 5th june 2020 the run time of this event was 1 hour from 4 pm to 5 pm.

The event was conducted on the online meeting sofware called google meet. The number of participant for this event/webinar were 171 and the webinar was presented by Mr. Anil Chunch ( CEO - PEGASUS AUTO)





#### TAKING CONTROL OF YOUR LIFE.

Nowadays people mostly are too much worried about their life so they, for the most part, do not essentially have time to think about how to get satisfaction and take control of their life and especially for the ladies in a very major way. for the same Mrs Lata Variawa included all most of the aspects of day to day life which can mostly help to make better life subtly.

The event was conducted to make students understand how to make certain decisions which involves giving consideration to a matter, identifying the desired end result, determining the options to get to the end result, and then selecting the most suitable option to achieve the desired purpose, and also how to change their perspective towards thinking, contrary to popular belief.





organized event was webinar form on 19th SEP 2020. 12:30 to 1:30 mq conducting it offline would violate the safty norms for covid-19 pandemic. The event was live on VouTube and was also conducted on google meet. The number of participants in this specifically was 90 and it was presented bv Mrs. Variawa(India·Lead-Manufacturing **Engineering - Enterprise Technology** Engineering Centre · John Deere), which is quite significant.



#### FROM AN TDEA TO AN INCORPORATED COMPANY.

SAE LDCE club & E-Cell from L.D College of Engineering organized a 2-day boot camp giving us an idea about how to convert an idea to a company.

The webinar was conducted on 21st and 22nd oct 2020, from 4pm to 6 pm. It was conducted on the online meeting software google meet. There were a total of 110 participants and the presenters for this webinar were Hardik Gohil and Malay Shah.

There were many topics discussed in the webinar some of them are given below.

- •SSIP LDCE Advance cheque & Bill submission process
- •IPR Patent Drafting.
- Offline and Online Patent Filing.
- Legal aspects and advantages for startups.
- Incorporating a company and differences.



#### Call of Duty Gaming Event

The gaming event was conducted for the exact purpose of fun and free of registration fees.

Call of Duty: Mobile is a free-to-play shooter video game developed by TiMi Studios and published by Activision for Android and iOS. Released on 10 ctober 2019, the game saw one of the largest mobile game launches in history.

Two matches were played which was divided into 94 persons in each. Then there was the final match between the top 3 squads from both the matches which were the solo Battle Royal. From this final solo match, the top 3 winners were selected.

All the winners were awarded awards and a participation certificate was also given to everyone.

The event was a great success and appreciated by everyone.





#### First Issue of Automobile Newsletter.

On the prestigious day of 5th September known as the teacher's day, our automobile department's first-ever newsletter was released with the help of the students of the automobile department. It had all the information of the events that took place before July and also had the various activities of students as well as the Baja and ATVC motorsport events.

This event was conducted in the form of a webinar the particular reason for the circumstance was pandemic. This webinar was carried out on google meet which is an online meeting software. The duration of the event was an hour and it was attended by almost all the student body of the automobile department. The speaker/presenter of this event was sir Jayendra.P.Vasani.



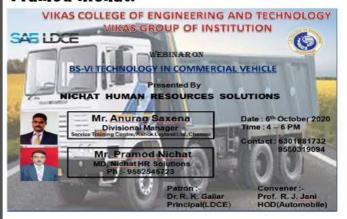
#### BS-VI TECHNOLDGY IN CDWWERCIAL VEHICLE.

The event was conducted by Industry experts on BS-VI Technology in Commercial Vehicle.

A Bharat Stage 6 ready engine has major modifications to its components to make it cleaner and adhere to the BS6 emission norm. Modifications like improved fuel quality composition and a DPF (Diesel Particulate Filter) and SCR (Selective Catalytic Reduction) in diesel cars are put to use to make the vehicle BS6 ready.

The webinar aims to prove the importance of BS-VI engines in Commercial vehicles as regulated by the government. The event aims to promote less pollution and leaning towards a sustainable environment through more sophisticated engines.

This webinar was conducted on 6th oct 2020 from 4 pm to 5 pm. The presentors were Mr. Anurag Saxena and Mr. Pramod Nichat.





#### Webinar on Servicing two wheeler vehicles at home

A webinar of two hours was arranged by Hardik Gohil, Aman Rupareliya, and Mukund Sondagar. This webinar covered the topic of two-wheeler vehicle service at home. The idea behind this webinar was that no one can go out of their houses because of the COVID-19 outbreak so the automobile department students can service their vehicle at home and gain experience through this webinar.



The first topic which was discussed in this webinar was about the electrical service of a two-wheeler. Hardik talked about various things that are included in battery service like, at what condition should the battery be replaced and when the rectifier should be replaced. He also added that when the horn sounds distorted it's better to check whether the voltage is supplied is sufficient or not and we may as well check if there is water coagulated in the horn diaphragm. Then taught us different ways to check the headlight bulb if it's working properly. When the topic of Electrical service was completed, Aman Rupareliya started the topic of engine service.



Here we were informed on how to clean a spark plug and spark plug cap, check the air gap in a spark plug. He taught how to change engine oil and that it should be replaced every 3000 KM to keep your engine healthy. He added that to check the quality of engine oil, the color, thickness, and smell of engine oil is useful. At the end of his session cleaning of the air filter and optimum condition for the carburetor was covered.



Then at the end, Mukund Sondagar starts to clean the vehicle from the outside, first, he cleaned the bike with a dry cloth then he used pressurized water. After that, he moved to foam cleaning because the foam will attract dust particles. Then in the end he again used water to clear out the foam. Now we can say that the two-wheeler is serviced altogether. The number of participants in the event were 1650 and the number of viewers were above 4000. Certificates were given to all



## Team LDCE Motorsports



## Dream it, Do it, Live it

Team LDCE Motorsports is a family of many members where each member invests their time, blood, and sweat to design, manufacture, test, and compete with their All-Terrain Vehicle (ATV). Each member is allotted a specific task with pre-decided deadlines. The Team has to work on all the aspects of the vehicle where safety is the foremost concern. As LDCE Motorsports is growing year by year it has learned a lot about component design, in-house manufacturing, and vigorous testing of ATV.

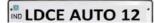
The history of LDMS is way long back. It has started the journey from 2012 where a team of 25 students saw a dream of constructing an ATV for the very first time on the premises of L. D. College of Engineering. In 2015 members of LDMS decided to give a name to our ATV as to get remembered in history. They got MARK as their first option.

Today LDMS is growing at a much faster rate where each member strives for the betterment of the team. The team goes beyond their limitations in optimizing designs, in finding a sustainable way of manufacturing, use of a various industrial technique to maintain the flow of work and implementation of innovative ideas on the vehicle. Apart from technical, members also hone their skills in marketing their vehicle, presenting, photography, and maintaining paperwork of vehicle.

**Contact us:- Nishit Patel** 

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## Faculty Achievements

Sr. No	Title	Name of staff	Place	Duration
1	"Creativity, Innovation & Entrepreneurship and its Relevance in Educational Practice"	Prof. V. & Trivedi	AICTE Training and Learning(ATAL) Academy's virtual GTU FDP Online	24/08/2020 - 28/08/2020
2	Intellectual Property Rights	Prof. R. J. Jani	iHub KCG Online	06/07/2020- 14/09/2020
3	Intellectual Property Rights	Prof. V. R. Patel	iHub KCG Online	06/07/2020- 14/09/2020
4	Intellectual Property Rights	Prof. M. A. Shaikh	iHub KCG Online	06/07/2020- 14/09/2020
5	Intellectual Property Rights	Prof. R. J. Choube	iHub KCG Online	06/07/2020- 14/09/2020
6	Intellectual Property Rights	Prof. P. D. Patel	iHub KCG Online	06/07/2020- 14/09/2020
7	Intellectual Property Rights	Prof. V. & Trivedi	iHub KCG Online	06/07/2020- 14/09/2020
8	Intellectual Property Rights	Prof. D. J. Parmar	iHub KCG Online	06/07/2020- 14/09/2020
9	Intellectual Property Rights	Prof. S. N. Patel	iHub KCG Online	06/07/2020- 14/09/2020
10	Intellectual Property Rights	Prof. J. P. Vasani	iHub KCG Online	06/07/2020- 14/09/2020



## Faculty Achievements

11	E Content Development Course (UDYAM)	Prof. R. J. Jani	KCG and HRDC	28/07/2020 - 18/08/2020
12	E Content Development Course (UDYAM)	Prof. V. R. Patel	KCG and HRDC	28/07/2020 - 18/08/2020
13	E Content Development Course (UDYAM)	Prof. M. A. Shaikh	KCG and HRDC	28/07/2020 - 18/08/2020
14	E Content Development Course (UDYAM)	Prof. R. J. Choube	KCG and HRDC	28/07/2020 - 18/08/2020
15	E Content Development Course (UDYAM)	Prof. P. D. Patel	KCG and HRDC	28/07/2020 - 18/08/2020
16	E Content Development Course (UDYAM)	Prof. V. & Trivedi	KCG and HRDC	28/07/2020 - 18/08/2020
17	E Content Development Course (UDYAM)	Prof. D. J. Parmar	KCG and HRDC	Lorer II 28/07/2020 - 18/08/2020
18	E Content Development Course (UDYAM)	Prof. S. N. Patel	KCG and HRDC	28/07/2020 - 18/08/2020
19	E Content Development Course (UDYAM)	Prof. J. P. Vasani	KCG and HRDC	28/07/2020 - 18/08/2020
20	Inculcating Council for Technical Education	Prof. B. H. Kadiya	AICTE	24/08/2020 - 28/08/2020



## Faculty Achievements

21	Scientific Computing using MATLAB	Prof. D. J. Parmar	SWAYAM MOOC IIT Delhi	20/07/2020 - 09/10/2020
22	Universal Human Value on the theme "Inculcating Universal Human Values in Technical Education	Prof. J. P. Vasani	AICTE	24/08/2020 - 28/08/2020
23	Nurturing Innovation and Startup Ecosystem	Prof. Jayendra P. Vasani	i-HUb	08/09/2020 to 23/10/2020
24	Green Technology & Sustainability Engineering	Prof. Mazar A. Shaikh	AICTE Training And Learning (ATAL) Academy	15/12/2020 to 19/12/2020
25	Green Technology & Sustainability Engineering	Prof. Vimal R. Patel	AICTE Training And Learning (ATAL) Academy	15/12/2020 to 19/12/2020
26	Active and passive vehicular safety standards	Por. R J Jani	SIAM	27/11/2020 4/12/2020 11/12/2020
27	Indian auto industry's BS-VI milestone: Experience and learning	Por. R J Jani	SIAM	9/10/2020 16/10/2020 30/10/2020

## **Paper Published**

Dr. Vimal Patel	"Impact on Performance and Emission Analysis of Waste Cooking Derived Biodiesel Considering Compression Ratio, Blend Ratio, Injection Pressure and Load on Single Cylinder VCR Engine with Comparison of RSM and MLR Model" Journal: Journal of Science and Technology, Vol. 5, Issue-3, Pages 25-40.
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## Faculty Achievements

#### **Books Published**

Prof. Bhavik kadiya	Vehicle maintenance and garage practice, Year 2016, Books India Publication. Transport management & Laws, Year 2017, Books India Publication Automobile Engine, Year 2015, Books India Publication. Automobile Electrical System, Year
	2016 , Books India Publication

## **Expert Lecture Delivered**

Prof. Sulay Patel	Power train of Electric Vehicles" at Gandhinagar Institute of Technology on 26/11/2020.
Prof. P.D. Patel	ATAL FDP and GUJCOST Sponsored FDP.
Prof. Jayendra Vasani	"Two Wheel Service at home" at RCTI, Ahmedabad on 01/08/2020.

### **Special Achievement**

Recognition certificate by LDCE and SSIP Cell for filing patent on Smart Saline Bottle.



## Patent Details & Achievements

SR.NO	Patent Title	Status	Date	Team leader	Faculty Guide
1	Smart Saline Bottle	Published	09-07-2020	Hardik Gohil	Prof. J.P.Vasani.
2	10T tyre Pressure and Temperature Monitoring and Alert System	Published	08-10-2020	Hardik Gohil	Prof. J.P.Vasani.
3	Adjustable Stand With Flexible Height and Angle setting	Published	15-10-2020	Hardik Gohil	Prof. D.K.Patel.
4	Driptect	Published	26-10-2020	Hardik Gohil	Prof. J.P.Vasani.
5	Electric kit for Converting I.C Engine Scooter to EV	Published	05-11-2020	Kishan Gohil	Prof. J.P.Vasani.
6	Flow rate Based Flue Quantity Measurement and Advanced SMS System for Passenger and Commercial Vehicle	Published	13-07-2020	Hardik Gohil	Prof. D.K.Patel.
7	Test Cycle For Centrifugal Clutch	Published	29-12-2020	Dipesh Prajapati	Prof. D.U.Panchal &Prof. J.P.Vasani.

- 1) A project on "Three wheeler for COVID-19" by Parmar Mayur and his team under Prof. R.J.Jani received grant of Rs. 18,800 under SSIP-Cell LDCE.
- 2) A project on "Electric Vehicle with CVT" by Hasit Suthar and his team under Prof. S.N.Patel received grant of Rs. 1,08,800 under SSIP-Cell LDCE.



## Placements(Off Campus)

Student name	Student Current Details
Roshan Dilipbhai Sangada	Government Engineering college, Valsad
Savsani Mihir Mansukhbhai	Rostock University, Rostock, Germany
Arjun Nandaniya	Coventry University / United Kingdom
Arun Tarsing Vasava	Design Engineering,Indian Institute of Technology, Bombay
Divyang Jayntilal Panchal	Gurukrupa Solar And Agro Industries
Siddhapura Chintan Kumar Mahesh Bhai	JTEKT INDIA LTD , Sanand
Manan Rakeshbhai Gajjar	Tata steel downstream products Itd
Varia Jaykumar A	Maruti Suzuki (Kataria Automobiles)
Thoriya Siddharth Pareshbhai	TEXSPIN BEARING LIMITED
Goswami Malharbharthi Arunbharthi	Hyundai Motors
Digvijaysinh Chauhan	Byju's think and learn
Kishan Gohil	Tata Motors Ltd
Meet Prajapati	Enterprenure



# Placements(On Campus)

Student name	Student Current Details
Lakhara Gopal Shravankumar	Accenture
Jaynesh Nileshkumar Oza	Accenture
Sheth Harsh Pinakin	Accenture
Vadalia Dhruv Dineshkumar	Accenture
Jaynesh Nileshkumar Oza	TCS
Sheth Harsh Pinakin	TCS



### Facts.

- 1)60 million cars are produced every year.
- 2) It would take less than a month to get to the moon by car.
- 3) The largest speeding fine ever produced was €1,000,000.
- 4) The man who invented cruise control was blind
- 5) The highest total mileage clocked by a single car is 2,850,000 million miles That's equivalent to driving around the Earth 100 times
- 6) That a horse possesses one horsepower is a myth. Horsepower is a basic unit of mechanical power that measures the power of your car.
- 7) The Honda Prelude was the first mass-production car to have four-wheel steering
- 8) Only 18% of Americans know how to drive a stick shift
- 9) Black was the best-selling car color in 2018
- 10) In 1938, the Mercedes-Benz W125 reached a top speed of 268.8 miles per hour, a record for the fastest land-speed vehicle on a public road that stood for 80 years until it was broken by the Koenigsegg Agera RS in 2018.
- 11) The 2011 Ford Crown Victoria was the last car to offer a cassette player as an option.
- 12) The Toyota Corolla is the world's best-selling car. It's sold in over 150 countries and regions and is sold once every 15 seconds. The car debuted in 1966 and arrived in the United States in 1968. The Corolla is now in its 12th generation.
- 13 Norway is among the more environmentally conscious nations in the world, and that is reflected in that country's choice of transportation. In Norway more than 73% of car are electric.

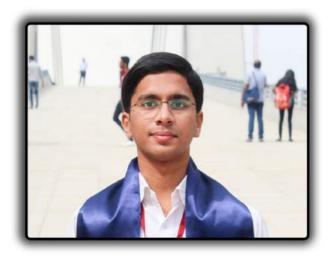


#### Newsletter Team

#### **Student Team**



Mohit G. Rajpurohit Designer, Co-Editor



Hardik Gohil Advisor

### **Faculty Team:-**

Advisor- Prof. Rajendra J. Jani

-Prof. Sulay N. Patel

-Prof. Jayendra P. Vasani

-Prof. Mazar A. Shaikh



Parmeetsingh Panesar Content Writer, Editor



Chintan Patel Proof Reader

"Increase Your Efficiency,
Gear Up Your Thoughts,
Accelerate Your Life
With Passion,
Boost Your Legs
With Turbo-Charger &
Cross Every Dream Of Your Life"



Automobile Engineering
Department
L D College of Engineering