

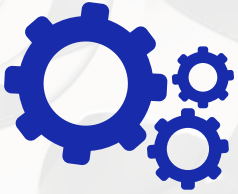


# V.V.P.

ENGINEERING COLLEGE

AICTE Approved & Affiliated to GTU, Ahmedabad

## MECHANICAL ENGINEERING DEPARTMENT



January - June  
**2021**

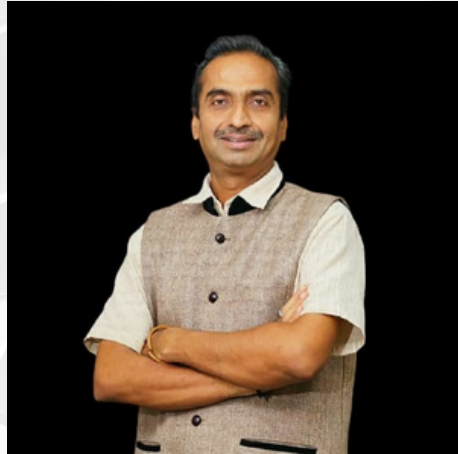
# MESSAGE FROM CHAIRMAN, GOVERNING BODY



**SHRI LALITBHAI MEHTA**

- Systematic scientific knowledge need to be utilized for holistic development of mankind, while keeping in view the traditions, culture, values of life and philosophy of the nation. In the world of emerging technologies, Vyavasayi Vidya Pratishthan is a major leap in the direction of contributing as an excellent technological institution to this country.
- Globalization, privatization and liberalization throw every day new challenges which can be solved by the highest degree of technical knowledge, skill, expertise and sharp intellect. We, at V.V.P Engineering College are committed to shape the aspirants into the world class professionals in the fields of engineering and architecture, who would not only be ready to take up the challenges of the material world but also commit to “Krinavanto Vishwam Aryam”.

# MESSAGE FROM PRINCIPAL



## DR. JAYESH DESHKAR

- Welcome to V.V.P. Engineering College, a world class center for excellence in technical education. We are a leading technological institute of India, a home to a wide range of academic departments, providing best education in the major areas of technology and services in the area of research and consultancy.
- We are proud and distinct through our global technical perspective, cosmopolitan character and being deeply rooted in the high Indian traditional culture, heritage and values.
- You would enjoy the challenges and opportunities we offer. We look forwards to welcoming the engineering aspirants to a place of genuine intellectual excellence for an unforgettable simulating experience in the world of existing and emerging technologies, Welcome back to Future....



# V.V.P ENGINEERING COLLEGE

## VISION

- To be an exemplary institute, transforming students into competent professionals with human values.

## MISSION

- To provide a conducive academic environment for strengthening technical capabilities of the students.
- To strengthen linkages with industries, alumni and professional bodies.
- To organize various co-curricular and extra-curricular activities for overall development of the students.
- To practice good governance and conduct value- based activities for making students responsible citizens.



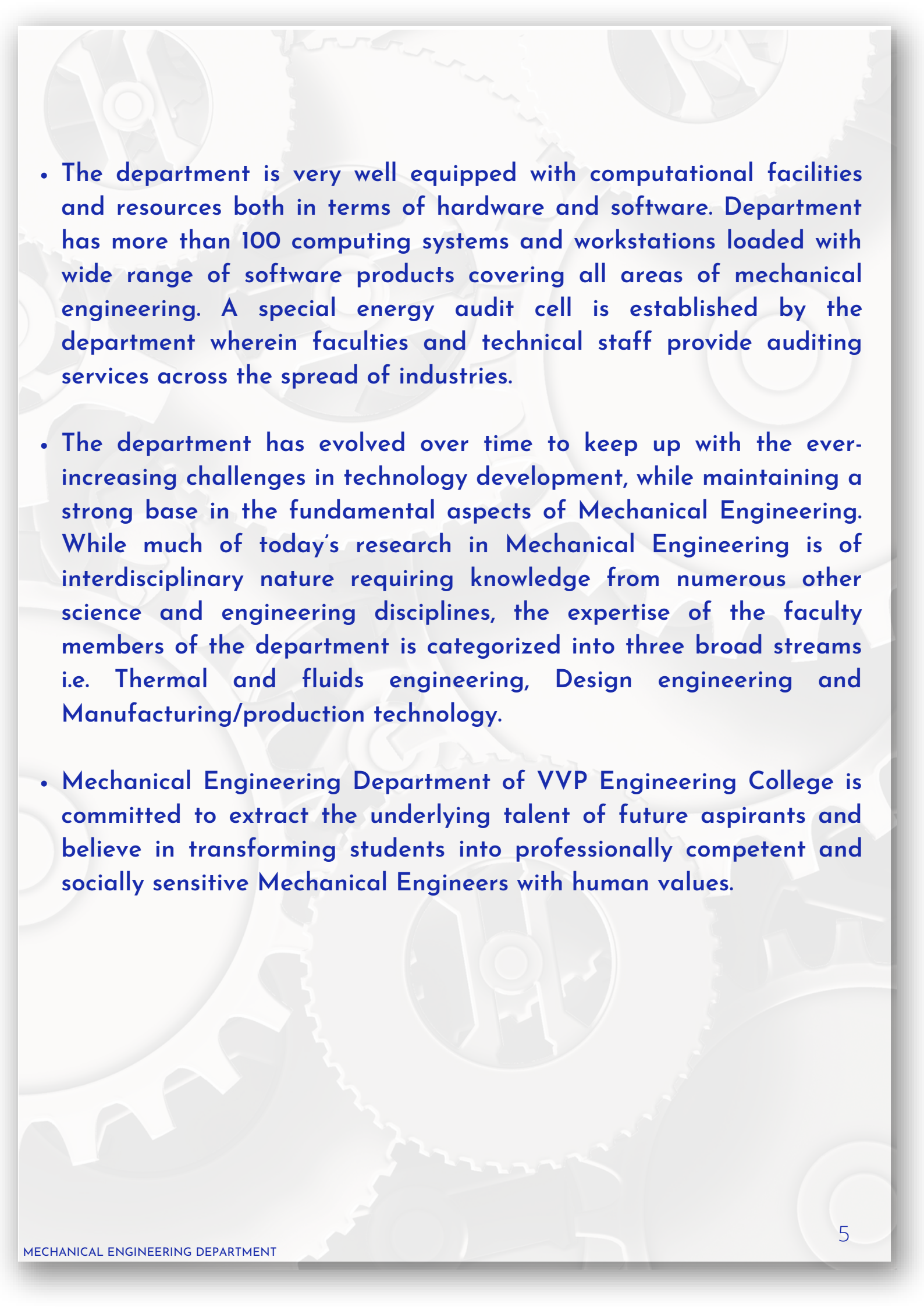


# MESSAGE FROM HEAD OF THE DEPARTMENT



**DR. JIGNASA MEHTA**

- Established in 1996 Mechanical Engineering Department is the oldest branch in VVP Engineering College. It is also one of the biggest departments of the institute with student strength of about 480. While managing this strength, department is committed to wellbeing and all round development of its students. Objective of the undergraduate programme is to prepare the manpower that is globally best. Most of the students, who graduate from the department, end up taking leading positions in industry, academia and government in both India and abroad.
- The department has faculty strength of 18 in which 6 faculties holds doctorate degree and 3 faculties are pursuing their doctorate from reputed universities. Needless to say every faculty hold masters degree. Department has a technical staff of 11 who are associated with 31 exclusive laboratories like fluid mechanics and fluid power, dynamics of machinery, material science, thermal, refrigeration and air-conditioning CIM and many more. Department also houses an institute central facility on Robotics, 3D printing and CNC Mill Trainer

- 
- The department is very well equipped with computational facilities and resources both in terms of hardware and software. Department has more than 100 computing systems and workstations loaded with wide range of software products covering all areas of mechanical engineering. A special energy audit cell is established by the department wherein faculties and technical staff provide auditing services across the spread of industries.
  - The department has evolved over time to keep up with the ever-increasing challenges in technology development, while maintaining a strong base in the fundamental aspects of Mechanical Engineering. While much of today's research in Mechanical Engineering is of interdisciplinary nature requiring knowledge from numerous other science and engineering disciplines, the expertise of the faculty members of the department is categorized into three broad streams i.e. Thermal and fluids engineering, Design engineering and Manufacturing/production technology.
  - Mechanical Engineering Department of VVP Engineering College is committed to extract the underlying talent of future aspirants and believe in transforming students into professionally competent and socially sensitive Mechanical Engineers with human values.



# MECHANICAL ENGINEERING DEPARTMENT

## VISION

- To transform students into professionally competent and socially sensitive Mechanical Engineers with human values.

## MISSION

- To provide an excellent academic environment to impart professional expertise in students.
- To organize curricular, co-curricular and extracurricular activities for students in collaboration with industry, alumni and professional bodies.
- To nurture and maintain conducive environment for ethics-based practice and imbibe human values.

## PROGRAM EDUCATIONAL OBJECTIVES

Mechanical Engineering graduates will be able to :

- Apply mechanical engineering concepts to work in professional fields.
- Acquire leadership position in different organization
- Provide sustainable solutions in multidisciplinary environment.

## PROGRAM SPECIFIC OUTCOMES

Mechanical Engineering graduates will be able to :

- Apply mechanical engineering knowledge to analyze & solve the problems related to mechanical design, manufacturing & thermal engineering.
- Utilize technical & managerial skills in multidisciplinary environment to meet the needs of stakeholders.



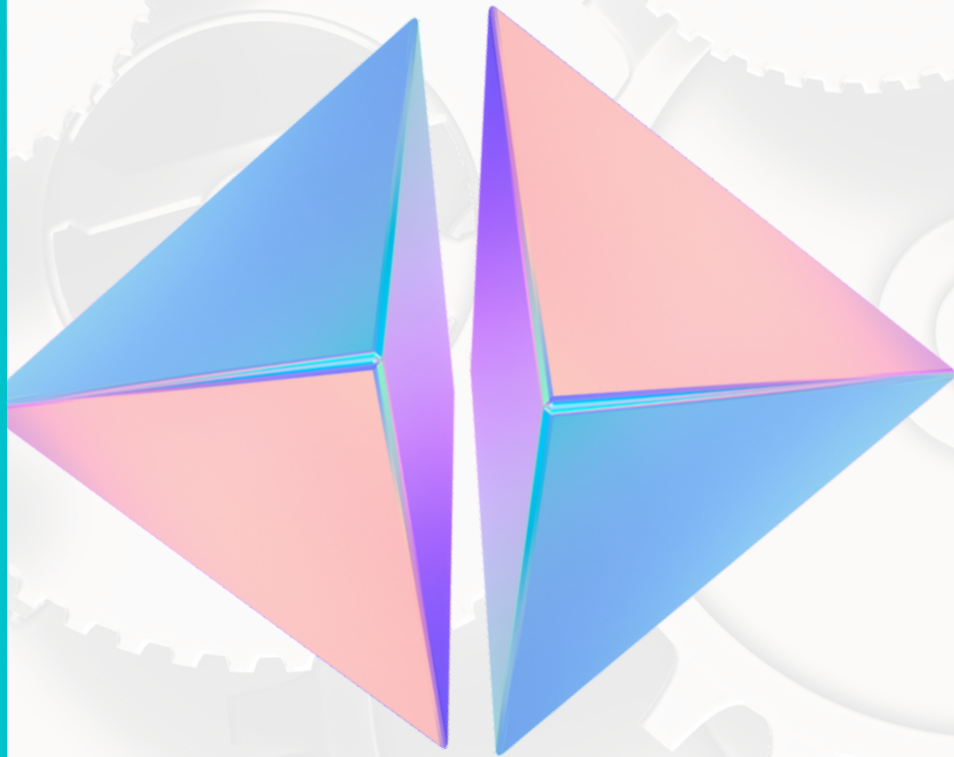
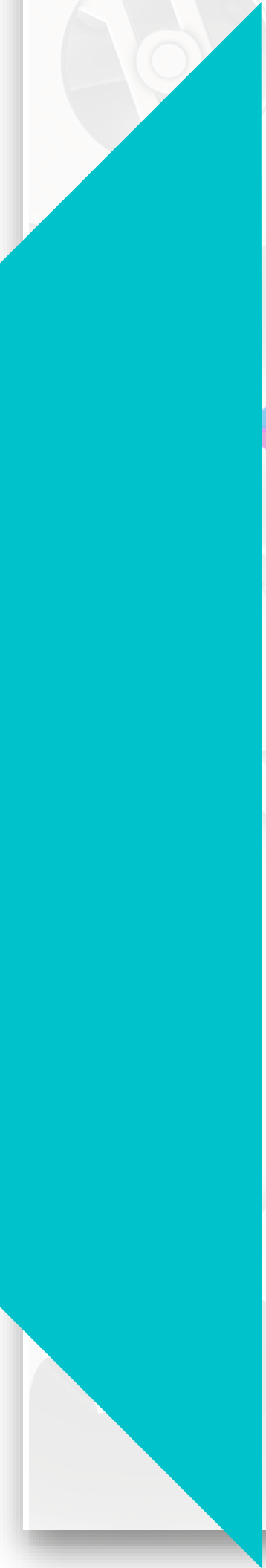
<b>Sr. No.</b>	<b>Content</b>	<b>Page No.</b>
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# GLIMPSES OF PLACEMENT

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**CONGRATULATIONS**

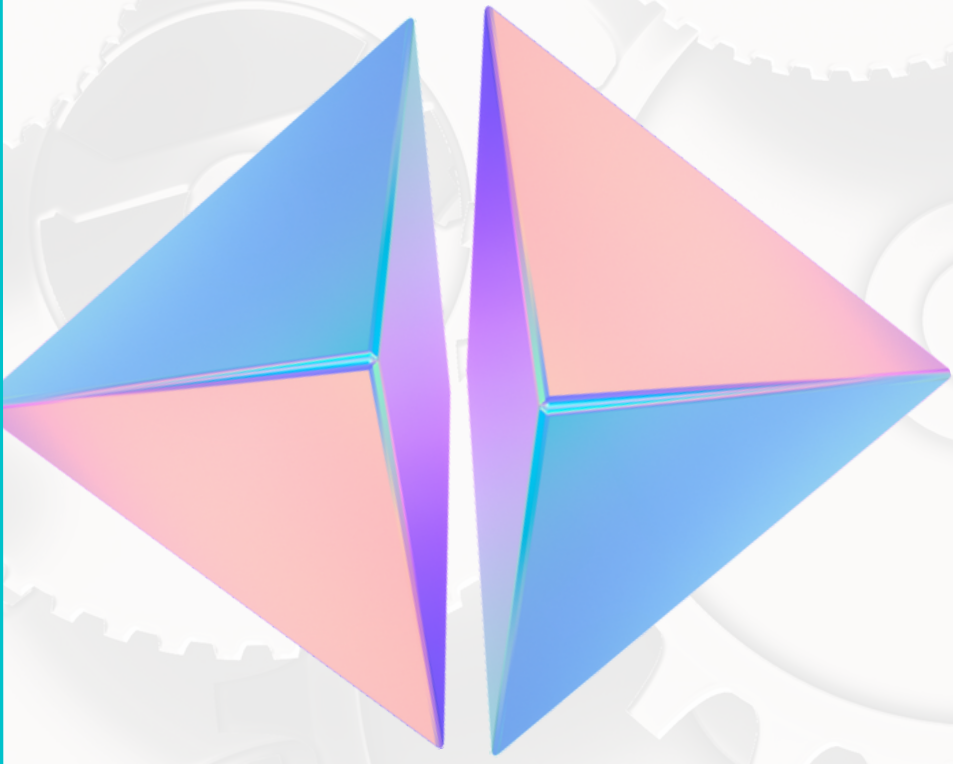


**MEET  
SANGHANI**



**OMNITECH  
ENGINEERS**





**3RD SEMESTER - GTU RESULT**  
**TOP 5 STUDENTS**



**KHERADIYA  
HARSH**

**9.43/10 SPI**



**MALAVIYA  
DHRAVIL**

**9.09/10 SPI**



**UNAGAR  
SAGAR**

**9.04/10 SPI**



**ZINZUVADIYA  
KALPESH**

**9.0/10 SPI**



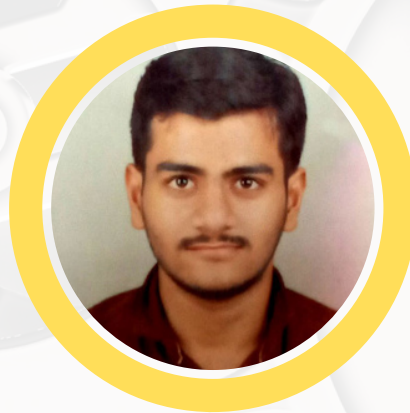
**TILALA  
OM**

**8.91/10 SPI**

**5TH SEMESTER - GTU RESULT**  
**TOP 5 STUDENTS**



**FATANIYA  
BHAUTIK**  
**9.0/10 SPI**



**VADGAMA  
ABHISHEK**  
**8.96/10 SPI**



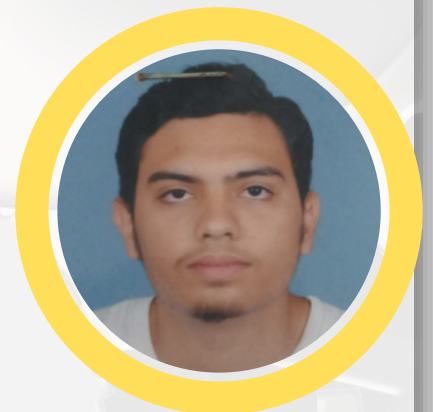
**GADHIYA  
JENISH**  
**8.87/10 SPI**



**DHRANSOTIA  
MAYANK**  
**8.78/10 SPI**



**GHORECHA  
MEET**  
**8.78/10 SPI**



**VYAS  
SHREY**  
**8.65/10 SPI**



**7TH SEMESTER - GTU RESULT**  
**TOP 5 STUDENTS**



**GARACH  
DARSH**

**9.5/10 SPI**



**BHIMANI  
SHIVAM**

**9.0/10 SPI**



**LIMBASIYA  
PRASHNAT**

**9.0/10 SPI**



**UNADKAT  
PURVAM**

**8.97/10 SPI**



**BHATT  
VISHAL**

**8.87/10 SPI**



**PATEL  
KUSHANG**

**8.83/10 SPI**

The background features a light gray field with several interlocking gears of various sizes. In the center, two 3D pyramids are positioned side-by-side. The left pyramid has a blue-to-purple gradient, and the right one has a red-to-blue gradient. A large teal triangle is on the left side of the page.

# ***DEPARTMENTAL ACTIVITIES***



# EXPERT LECTURE ON " JOURNEY FROM RESEARCH TO BUSINESS "

By : *Mr. Anand Savaliya*

Founder & CEO of Kavyam Energy Pvt. Ltd

Date: 6-01-2021

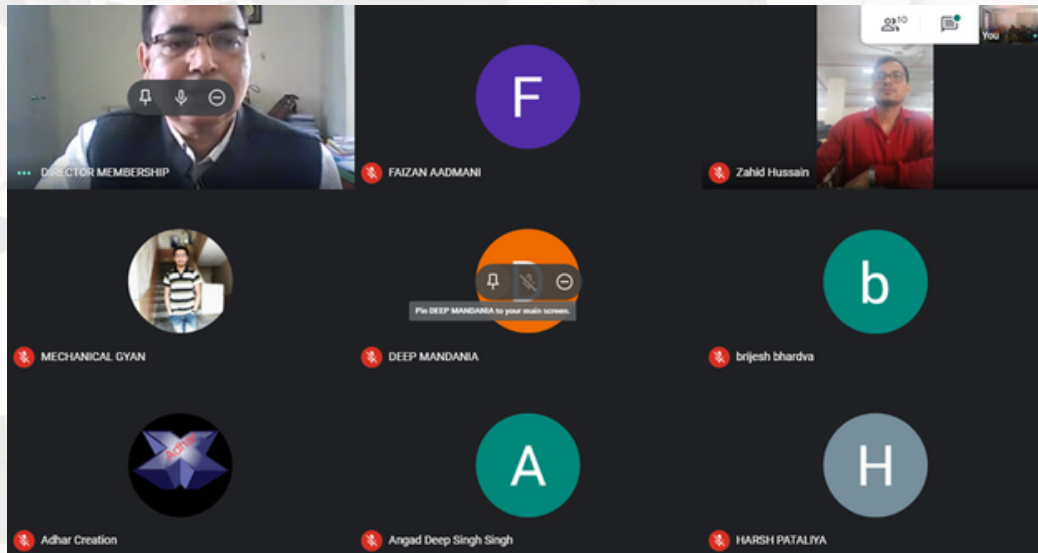
Sem: 1st ,4th and 7th



- On 6th of January 2021 Mechanical engineering department has organized an expert lecture on "Journey from Research to Business" at 10:15 to 11:45 a.m. in Team Microsoft. The Expert Lecture has been taken by Mr. Anand Savaliya, Founder & CEO of Kavyam Energy Pvt. Ltd and our first batch alumni. Final Year & First and fourth semester students participated in online expert lecture session.
- Mr. Anand has explained his journey of research along with difficulties he faced. He imposed more on to develop an angle of research attitude right from the beginning of engineering. He said that with the research approach one can be a very good entrepreneur and can earn handsome money. It is just like enjoyment and earning together. He offered all to contact him for any help for projects, research or in the field of entrepreneurship.



# EXPERT LECTURE ON " INAUGURATION OF IEI STUDENT CHAPTER "



By : **Dr.S.M.Ali**

Director of Institution of Engineers (India)

Date: 15-02-2021

Sem: 1st ,4th and 6th

- Mechanical Engineering Department has established student chapter of IEI (Institution of Engineers (India)) for all semester students on 15/02/21. This is the best channel through which it can lead to the overall development of students along with their academic aspects.
- Inauguration of IEI had organized in college premise in which director of IEI Dr.S.M.Ali had addressed students to make aware about recent trends in industry and gave brief review of industry 4.0. He also mentioned about different technical activities that can be organized under this IEI student chapter and gave more insights about other technical events. Due to pandemic situation this event was organized at online mode only.

# A WEBINAR ON "SCOPE & OPPORTUNITIES OF OVERSEAS EDUCATION FOR ENGINEERING DISCIPLINES "



Date: 24-02-2021  
Sem: 6th and 8th



- A webinar on "Scope & Opportunities of Overseas Education for Engineering Disciplines" was organized by Mechanical Engineering Department & Electrical Engineering Department in association with HIR Education on 24th February, 2021 for the 6th & 8th semester students of Mechanical & Electrical Engineering Department, V. V. P. Engineering College, Rajkot.
- Studying abroad helps students to learn new languages, appreciate other cultures, overcome challenges of living in another country and gain a greater understanding of the world. These are all things that modern businesses look for when hiring, and such traits will only become more important in the future



- This webinar was conducted with prime objective to give students insights of overseas education and jobs. It was arranged in association with HIR Education. As this field is attentive to very specific mass, 37 students registered for this webinar. Approx. 24 students attended this webinar through Google Meet online platform.
- Mr. Kiran discussed different areas in which students can pursue their post graduate and can get job in India as well as abroad. Also, he explained basic procedure for abroad study in different university. He discussed different criteria for eligibility in universities of US, Canada, Germany, etc.
- Q&A session was the most interesting session where students asked their queries and the discussion goes on for more than 45mins. Mr. Kiran answered to all the queries raised by students and guided them to think about their goal of overseas study. It was very interactive session.
- The webinar and interactive session helped students to have more clarity about studying abroad

**Admission Criteria for Master in INDIA & ABROAD**

**INDIA**

- The candidate must have completed a degree in the graduation in engineering or a similar level from a UOC or other recognised Institute.
- The candidate must have acquired a minimum aggregate of 85% in the qualifying exam with all the subjects put together.
- The candidate must have passed 10+2 level exam with Physics and Mathematics as the main subjects and one optional subjects among Chemistry/ Biology/ Biotechnology/ Computer Science.
- Some of the institutes may also conduct their own entrance test or PI to test the eligibility of students for admission.
- Some of the competitive entrance exams which are conducted at the college as well as national level for admission to Masters in Engineering course are given below:

<b>GATE</b> (Graduate Aptitude Test in Engineering)	<b>RITS</b> (Rita Institute of Technology and Science)	<b>SRMJEE PG</b> (SRM Institute of Engineering Science and Technology)	<b>SRM UGEE</b> (SRM Institute of Engineering Science and Technology)
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<https://hireducation.com>

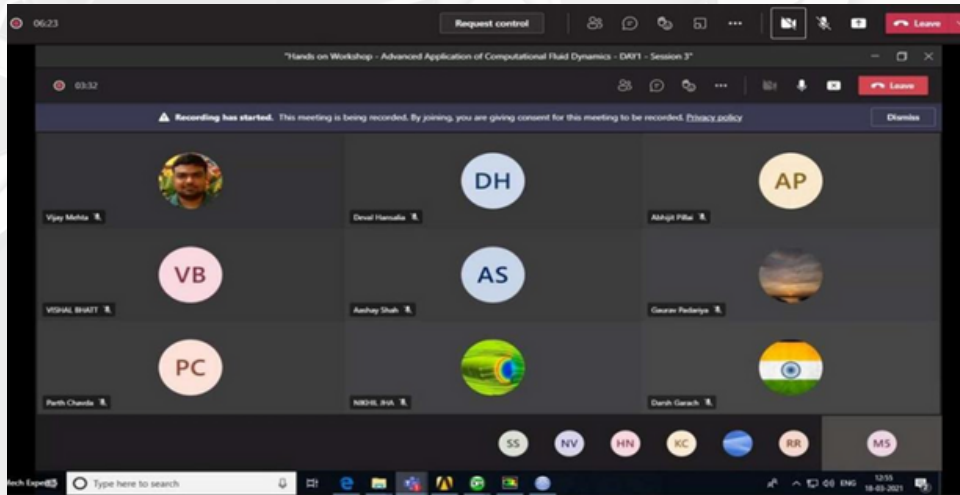
**Some Colleges for Master in INDIA & ABROAD**

ABROAD		
<b>CANADA</b>	<b>GERMANY</b>	<b>UK</b>
<ul style="list-style-type: none"> <li>University of Alberta</li> <li>University of Calgary</li> <li>Thompson Rivers University</li> <li>University of Regina</li> <li>University of Victoria</li> <li>University of Manitoba</li> <li>Brock University</li> </ul>	<ul style="list-style-type: none"> <li>Hamburg University</li> <li>University of Bayreuth</li> <li>University of Bayreuth</li> <li>WZL Bayreuth</li> <li>University of Duisburg</li> <li>University of Duisburg</li> <li>University of Duisburg</li> </ul>	<ul style="list-style-type: none"> <li>Oxford University</li> <li>Exeter University</li> <li>University of Manchester</li> <li>Bristol University</li> <li>University of Birmingham</li> <li>University of Birmingham</li> <li>Sheffield University</li> </ul>
<b>ITALY</b>	<b>USA</b>	<b>NEW ZEALAND</b>
<ul style="list-style-type: none"> <li>University of Padua</li> <li>University of Bologna</li> <li>University of Pavia</li> <li>University of Milan</li> <li>University of Turin</li> <li>University of Rome</li> </ul>	<ul style="list-style-type: none"> <li>University of Southern California</li> <li>New York University</li> <li>Columbia University</li> <li>University of California</li> <li>Northwestern University</li> <li>Harvard University</li> <li>Pennsylvania State University</li> </ul>	<ul style="list-style-type: none"> <li>University of Auckland</li> <li>University of Otago</li> <li>University of Canterbury</li> <li>University of Waikato</li> <li>University of Waikato</li> <li>AUT University</li> <li>Massey University</li> </ul>
	<b>AUSTRALIA</b>	
	<ul style="list-style-type: none"> <li>University of Sydney</li> <li>UNSW University</li> <li>Murdoch University</li> <li>University of Queensland</li> <li>University of Queensland</li> <li>University of Queensland</li> </ul>	

<https://hireducation.com>



# EXPERT LECTURE ON “ADVANCED APPLICATION OF COMPUTATIONAL FLUID DYNAMICS”



Date: 18-03-2021 &19-03-2021

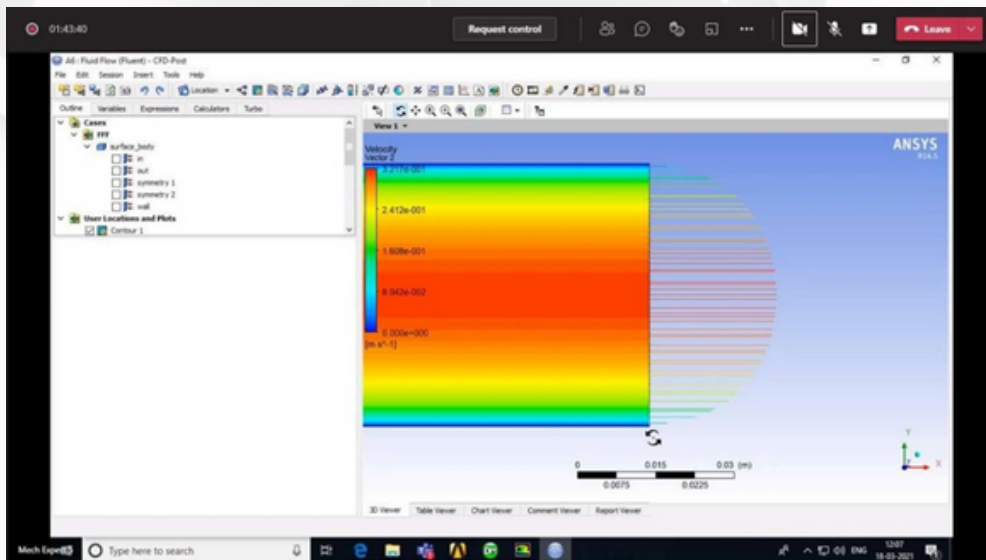
Sem: 6th and 8th

- The two days lecture was conducted on Date: 18th & 19th March, 2021 the of topic conducted as “Advanced Application of Computational Fluid Dynamics” giving an overview on the application of Computational Fluid Dynamics in research field and product development. The lecture was conducted by one of our Dignitary present at inaugural function: Mr. Vinal Virani (Head, Research and Development, Kavyam Energy Pvt. Ltd. Rajkot) and venue was through online platform- MS Team from Mechanical Engineering Department, V. V. P. Engineering College, Rajkot keeping the tough situation in mind. There were many participants attended online sessions curiously there are total 108 number of participants. Mr. Vinal sir gave great insights and hands on application of Ansys Work bench’s Fluent module on some real life applications using fluent module.

- CONTENTS OF SESSIONS:

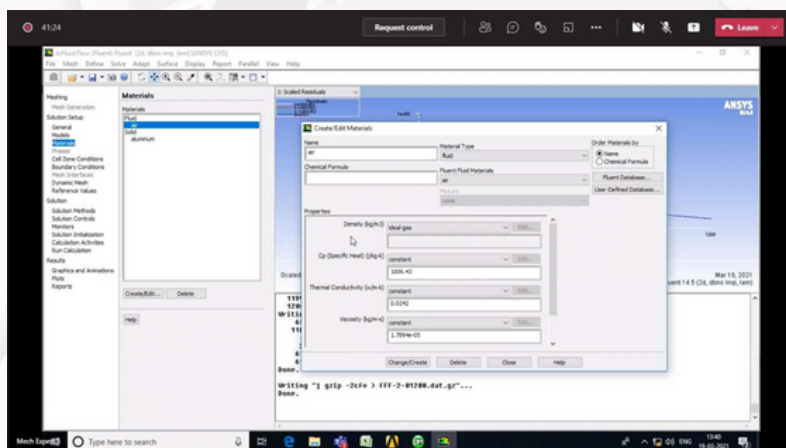
Two day sessions was full of contents including:

- 1) Introduction to CFD
- 2) General approach to CFD
- 3) Governing Equations of Fluid Flow and Heat Transfer
- 4) Virtual modelling in Ansys Design Modular
- 5) Mesh generation , Mesh control and its importance
- 6) Fluid Flow Analysis
- 7) Entrance length of pipe with different type of entrance
- 8) Boundary layer Separation and Turbulent flow analysis
- 9) HeatTransfer
- 10) Mixing of cold and Hot Stream of fluid
- 11) Mix Flow Through Turbo Machines





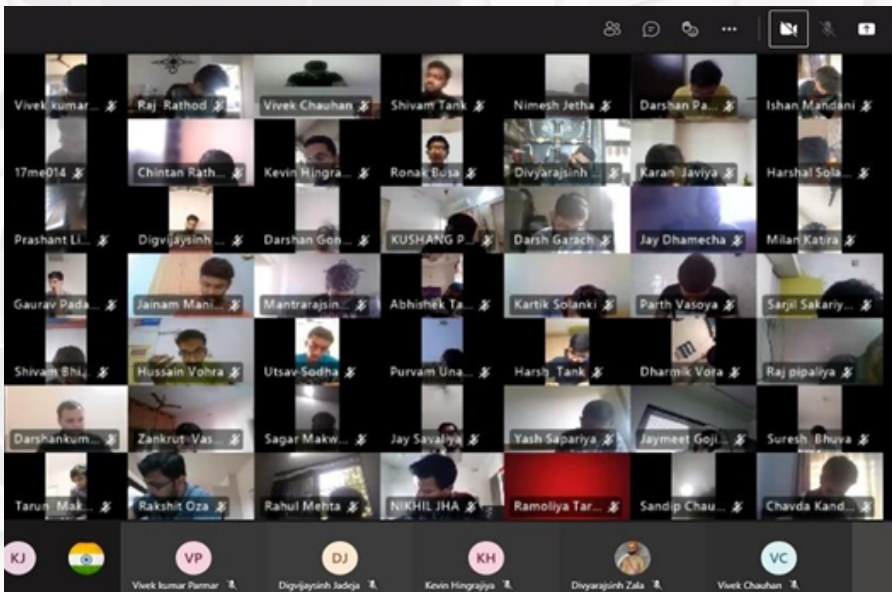
- In introduction we learnt many concepts and importance of different flow equations like Conservations of mass, Conservation of momentum, Conservation of Energy and Various Definitions. Then we got to learn the fluent module with various processes and steps to validate and justify the experiments performe during Ansys. We explored that Ansys FLUENT software contains the broad physical modeling capabilities needed to model flow, turbulence, heat transfer, and reactions for industrial applications ranging from air flow over an aircraft wing to combustion in a furnace, from bubble columns to oil platforms, from blood flow to semi conduct or manufacturing, and from clean room design to waste water treatment plants. Special models that give the software the ability to model in-cylinder combustion, aeroacoustics, turbo-machinery, and multiphase systems have served to broaden its reach. Ansys Fluent interactive solver set-up, solution, and post-processing make it easy to pause a calculation, examine results with integrated post-processing, change any setting, and then continue the calculation within a single application. Case and data files can also be read into Ansys CFD Post for further analysis with advanced post-processing tools and to compare results from different cases side-by-side. Mr. Vinal sir showed some of practical applications like flow of fluid in pipe as shown in figure below and some of the meshing tactics of the complex geometries for example shown in figure of wind turbine blade.



- We learned many things and this expert lecture were helpful to us, we got great insights about Ansys Workbench and its application. I thank to our faculties and Mr. Vinal sir forsharing the knowledge on Computational Fluid Dynamics and encouraging us to learn it.This will be really helpful for us in our final year projects.



# EXPERT LECTURE ON "CALCULATION OF COST AND REQUIRED COMPONENTS FOR THE HOME ROOF TOP PV SOLAR"

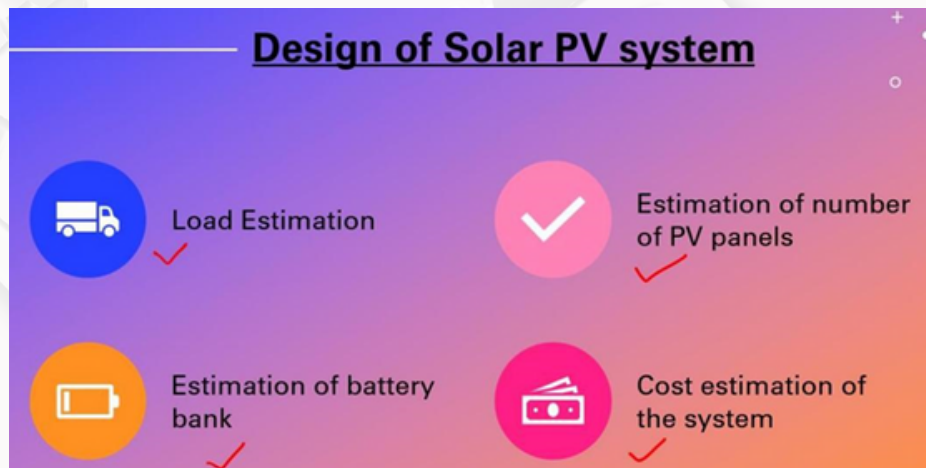


Date: 24-04-2021

Sem: 8th

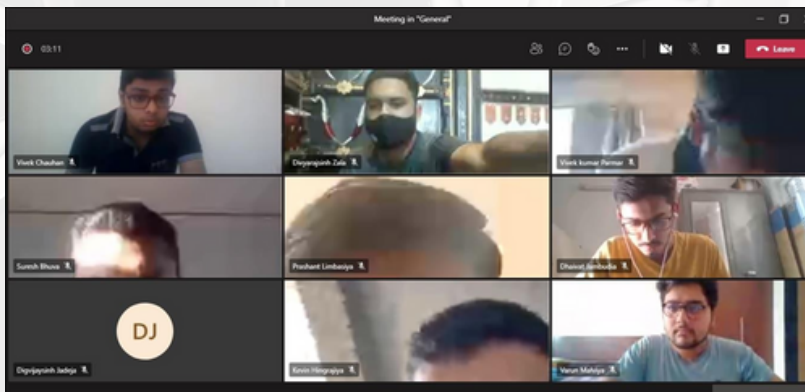
- Owing to continuous development in research and technology, it becomes evident to facilitate students with recent trend running in industries and latest technology in respective domain. To fulfill this gap, it is necessary for engineering in situations to impart content beyond the syllabus mentioned in university curriculum. Hence forth an expert session on above mentioned topic was conducted through which students got more insights in the said domain.
- Outcomes of the Expert session:
  1. Students of 8th semester Mechanical Engineering being the target audience, will enable them to excel in Renewable energy Engineering field precisely in the solar system installation.
  2. As current method is adopted for installation of solar roof top in industry, residential home. students became well aware about the practice adopted in field.

3. This expert lecture will be beneficial for students opting for higher studies and selection of the field of specialization.
  4. Students will get advantage in job interviews conducted by companies' experts.
  5. Bright chance of selection in MNC's like Adani Energy, Welspon energy etc.
- **Content of Expert session:**
    1. Load Estimation
    2. Estimation of number of PV panels
    3. Estimation of battery bank
    4. Cost estimation of the system





# EXPERT LECTURE ON "SOLAR ENERGY ENHANCEMENT IN SOLAR EVACUATED TUBE COLLECTOR WITH NANOTECHNOLOGY"



Date: 28-04-2021

Sem: 8th

- It is necessary for engineering institutions to impart content based on university curriculum. However, owing to never ceasing research and advancement in technological arena, it becomes absolutely necessary to facilitate students with latest knowledge in respective domains. Henceforth an expert session on above mentioned topic was conducted through which students got more insights in the said domain.
- **OUTCOMES OF THE EXPERT SESSION:**
  1. Students of 8th semester Mechanical Engineering being the target audience will enable them to excel in Thermal Engineering field precisely in the solar energy system incorporated with nanotechnology.
  2. As current method is adopted for solar enhancement in solar evacuated tube collector, students became well aware about the practice adopted in field.
  3. This expert lecture will be beneficial for students opting for higher studies and selection of the field of specialization.
  4. Students will get advantage in job interviews conducted by companies' experts.
  5. Good scope of opportunities in solar sector.



The background of the slide features a pattern of interlocking gears in various shades of gray, creating a mechanical and industrial aesthetic.

## • CONTENT OF EXPERT SESSION:

By considering energy scarcity in India the combination of non-conventional energy and nano technology is the best solution. Domestic solar water heating system has become an integral part of life and in this the combination of solar energy enhancement in domestic solar water heaters with the help of nano technology- Surface coating and nano fluid was presented.

## VIRTUAL INDUSTRIAL TOUR

- It is necessary for engineering institutions to impart content based on university curriculum. As a part of curriculum, engineering institutions are supposed to include Industrial visit in their syllabus which is one of the most important academic needs to display a real world of technology to students. However, owing to the current pandemic situation, it was not possible to make a physical industrial visit, so it becomes absolutely necessary to facilitate students with the latest knowledge in respective domains virtually. Henceforth a virtual industrial visit on different domains was conducted through which students get more insights in the said domain.
- **Outcomes of the Industrial visit:**
  - Students of 4th, 6th and 8th semester Mechanical Engineering being the target audience, will enable them to visualize the real working scenario in industries
  - Students will be motivated to select a project, based on their virtual visit for final year projects.
  - Students will be able to map the theoretical academic studies with real working in industries.
  - Students will be able to correlate the manufacturing processes and automation with real world applications.



# EXPERT LECTURE ON "INVENTORY CONTROL IN INDUSTRIES"

## Inventory

- Inventory can be referred as ideal resource of raw material kept to meet the regular or sudden demand of customer.

<u>Manufacturer</u> →	Semi-finished goods, finished unsold goods, spare parts, raw material, lubricants, etc.
<u>Hospital</u>	Number of beds, stock of medicines, specialized personnel, etc.
<u>Bank</u>	Cash reserves, tellers, etc.
<u>Airline company</u>	Seating capacity, spare parts, specialized maintenance crew, etc.

- For regular production of products, certain routine items are required to be kept as inventory in order to overcome the waiting time of raw material to bring from vendors.

Date: 06-05-2021

Sem: 6th

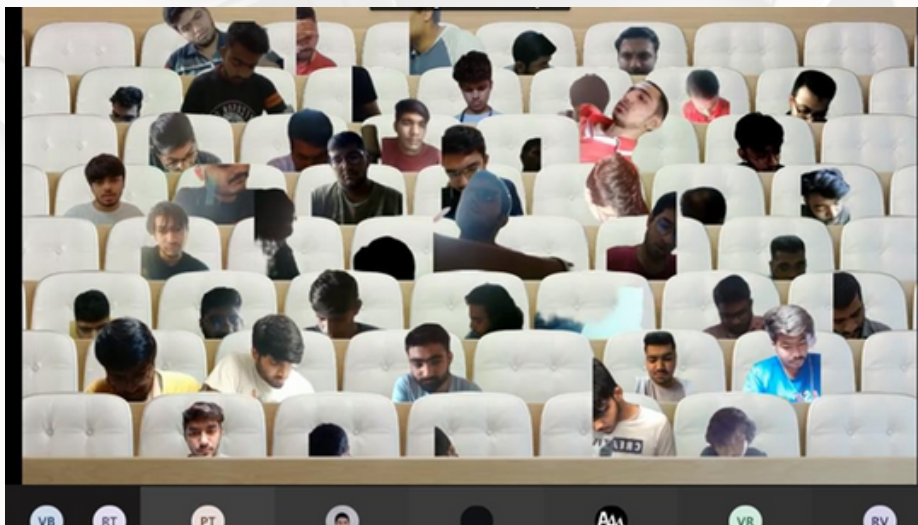
- It is necessary for engineering institutions to impart content based on university curriculum. However, owing to never ceasing research and advancement in technological arena, it becomes absolutely necessary to facilitate students with latest knowledge in respective domains. Henceforth an expert session on above mentioned topic was conducted through which students got more insights in the said domain.
- Outcomes of the Expert session:**
  - Students of 6th semester Mechanical Engineering being the target audience, will enable them to excel in controlling & managing inventories in industries.
  - Students will be motivated to select project based on Inventory management as their final year project curriculum.



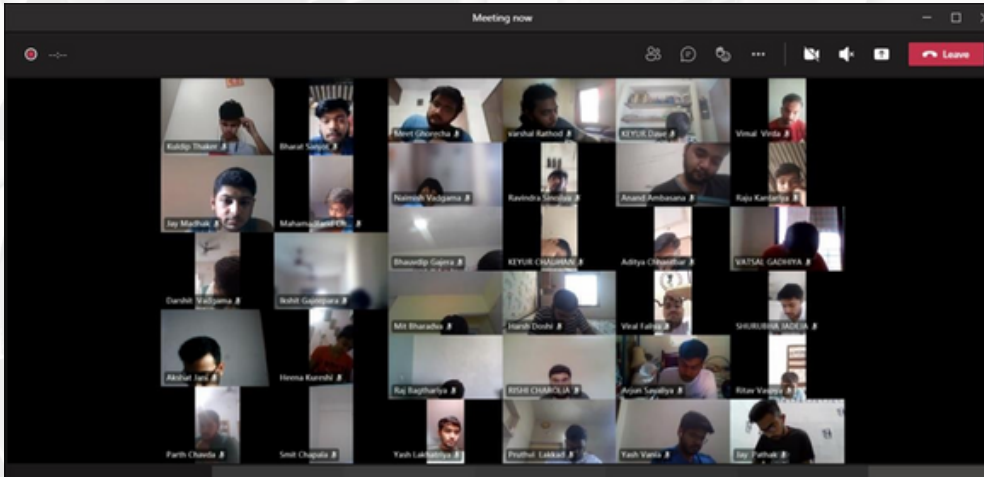
- As cost of inventory has major part in total cost, students became aware about importance of inventory management.
- This expert lecture will be beneficial for students opting for higher studies and selection of the field of specialization.
- Students will get advantage in job interviews conducted by companies' experts.

- **Content of Expert session**

- Introduction
- Importance of inventory management
- Inventory Classification



# EXPERT LECTURE ON "DESIGN OF SHELL AND TUBE HEAT EXCHANGER USING BELL DELAWARE METHOD"



Date: 01-05-2021

Sem: 6th

- It is necessary for engineering institutions to impart content based on university curriculum. However, owing to never ceasing research and advancement in technological arena, it becomes absolutely necessary to facilitate students with latest knowledge in respective domains. Henceforth an expert session on above mentioned topic was conducted through which students got more insights in the said domain.

## • Outcomes of the Expert session:

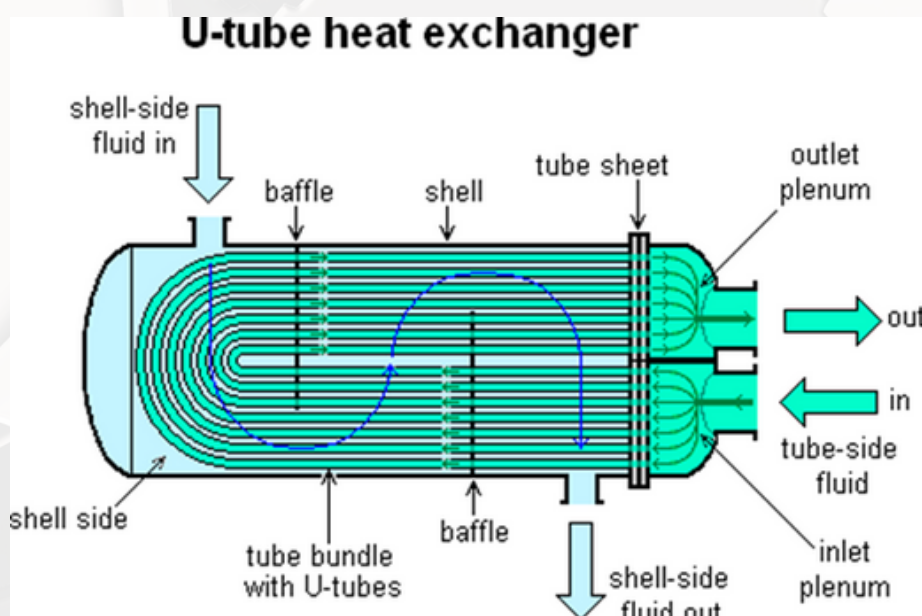
- Students of 6th semester Mechanical Engineering being the target audience, will enable them to excel in Thermal Engineering field precisely in the design of Heat exchangers.
- Students will be motivated to select project based on Heat exchanger design as their final year project curriculum.
- As current method is adopted for STHX design in industry, students became well aware about the practice adopted in field.



- This expert lecture will be beneficial for students opting for higher studies and selection of the field of specialization.
- Students will get advantage in job interviews conducted by companies' experts.
- Bright chance of selection in MNC's like Linde Engineering, Alstom Projects, L & T hydrocarbon, Reliance Industries, Flour Daniels etc, and PSU's like NTPC, Engineers India Ltd. Etc.
- Good scope of opportunities in oil and gas sector. Special opportunities in Middle east countries.

- **Content of Expert session:**

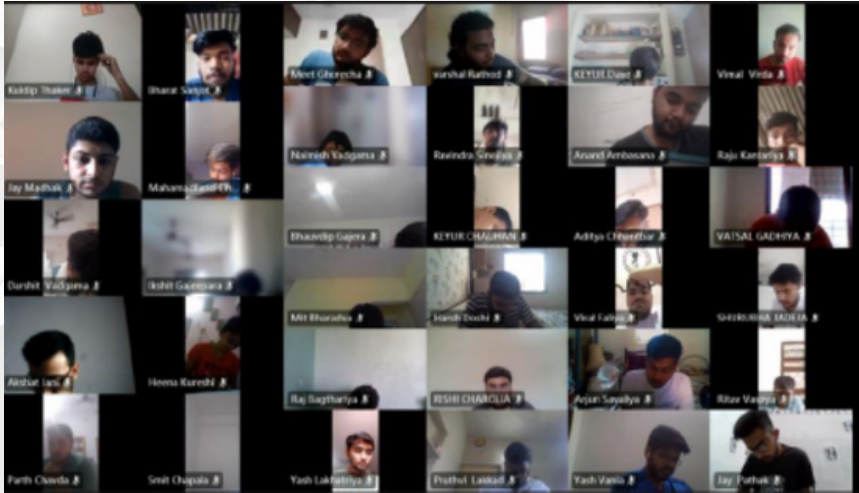
1. A shell and tube heat exchanger is a class of heat exchanger designs. It is the most common type of heat exchanger in oil refineries and other large chemical processes, and is suited for higher-pressure applications. As its name implies, this type of heat exchanger consists of a shell (a large pressure vessel) with a bundle of tubes inside it. One fluid runs through the tubes, and another fluid flows over the tubes (through the shell) to transfer heat between the two fluids. The set of tubes is called a tube bundle, and may be composed of several types of tubes: plain, longitudinally finned, etc. Moreover, Tubular Exchanger manufacturers association (TEMA) has given various geometries (one such geometry is shown in figure below) and nomenclature of STHX based on application.





2. Design of Shell and Tube heat exchanger by Bell Delaware method is adopted in industries for various capacities and heat duty of STHX. Shell and Tube heat exchangers are most versatile and widely used in process plants and Thermal Power stations. Traditional heat exchanger design methods like NTU-Effectiveness and logarithmic mean temperature difference does not involve intricacies associated with STHX design. In Bell Delaware method, the fluid flow in the shell is divided into a number of individual streams. Each of these streams introduces a correction factor which is used to correct heat transfer coefficient and pressure drop across the shell. Consideration of STHX design using Bell Delaware method optimizes the design output in terms of geometrical design parameters of the heat exchanger, Thus providing economic savings.

# EXPERT LECTURE ON "INTEGER PROGRAMMING AND GOAL PROGRAMMING"



Date: 01-05-2021

Sem: 8th

- Due to industrial growth and advancement in technology there is need to bring awareness among students of engineering college. University curriculum is not sufficient to bridge this gap of recent trend so it becomes necessary for engineering institutions to impart content beyond the university curriculum. Henceforth an expert session on above mentioned topic was conducted through which students got more insights in the said domain.
- Goal programming is a branch of multiobjective optimization, which in turn is a branch of multi-criteria decision analysis (MCDA). It can be thought of as an extension or generalization of linear programming to handle multiple, normally conflicting objective measures. Each of these measures is given a goal or target value to be achieved. Deviations are measured from these goals both above and below the target. Unwanted deviations from this set of target values are then minimized in an achievement function. An integer programming problem is a mathematical optimization or feasibility program in which some or all of the variables are restricted to be integers.

- Outcomes of the Expert session:

- Students of 8th semester Mechanical Engineering being the target audience, will enable them to excel in Operation Research area precisely in the Integer Programming and Goal Programming.
- As current method is adopted for the solution of real-life problem in industry, students became well aware about the practice adopted in field.
- This expert lecture will be beneficial for students opting for higher studies and selection of the field of specialization, specially in the MBA with Operation Research.
- Bright chance of selection in the area of Supply chain and Logistics.

OR - DP

Stages $S_1$	Decision $d_1$	$f_1(s_1, d_1) = D_{1j}, d_1$			Minimum distance $f_1^*(s_1)$	Optimal decision $d_1$
		8	7	9		
Stages $S_1$	8	7		7	10	
	9	9		9	10	

Stages $S_2$	Decision $d_1$	$f_1(s_1, d_1) = D_{1j}, d_1$			Minimum distance $f_1^*(s_1)$	Optimal decision $d_1$
		8	9			
Stages $S_2$	5	11	17	11	8	
	6	10	16	10	8	
	7	15	13	13	9	

Stages $S_3$	Decision $d_1$	$f_1(s_1, d_1) = D_{1j}, d_1$			Minimum distance $f_1^*(s_1)$	Optimal decision $d_1$
		5	6	7		
Stages $S_3$	2	18	20	18	18	5 or 7
	3	14	18	17	14	5
	4	17	20	18	17	5

Stages $S_4$	Decision $d_1$	$f_1(s_1, d_1) = D_{1j}, d_1$			Minimum distance $f_1^*(s_1)$	Optimal decision $d_1$
		2	3	4		
Stages $S_4$	1	22	20	20	20	3 or 4

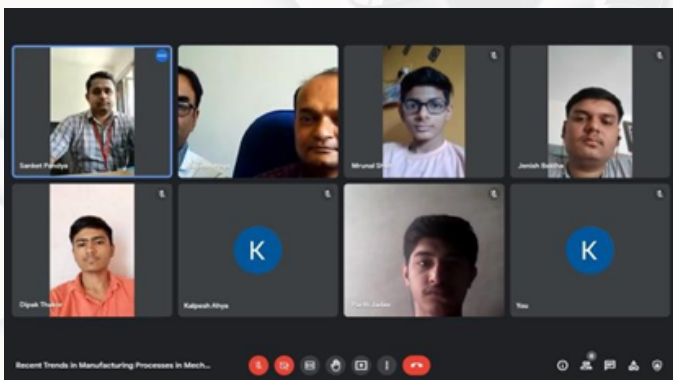
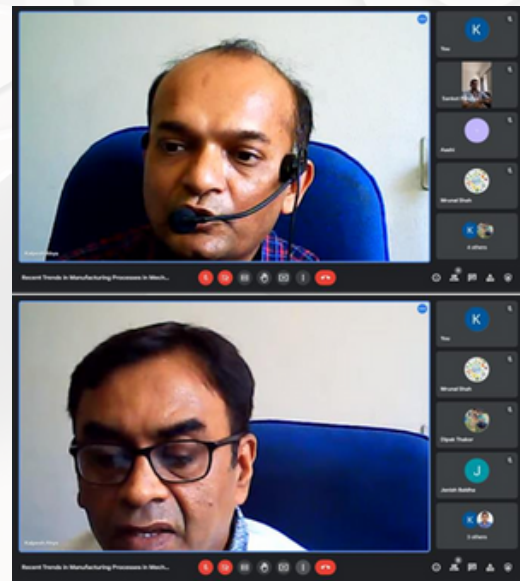
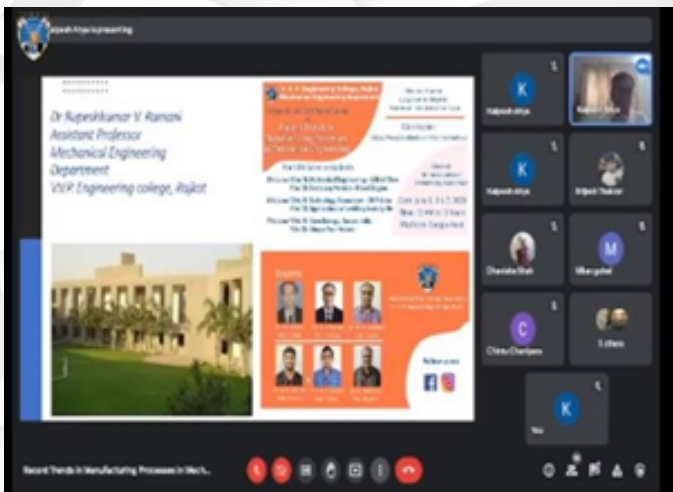
  

**Optimum Sequence 10-8-5-3-1**  $7 + 4 + 3 + 6 = 20$

**Optimum Sequence 10-8-5-4-1**  $7 + 4 + 6 + 3 = 20$



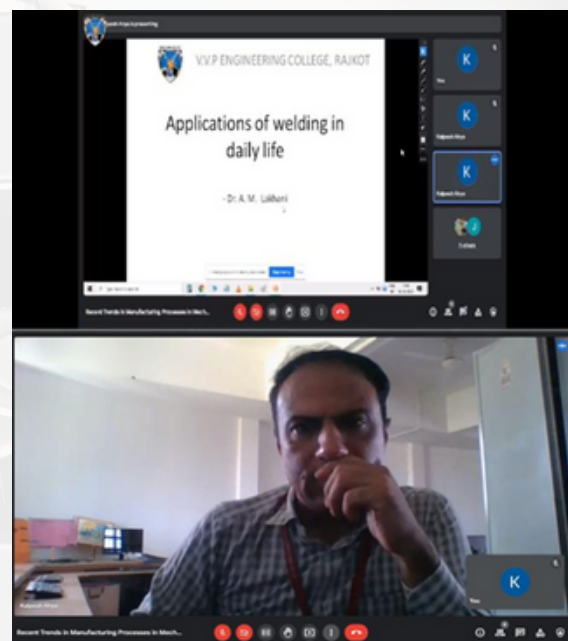
# 3 DAYS ONLINE CERTIFICATE COURSE “RECENT TRENDS IN MANUFACTURING PROCESSES IN MECHANICAL ENGINEERING” IN ASSOCIATION WITH THE INSTITUTION OF ENGINEERS (INDIA)



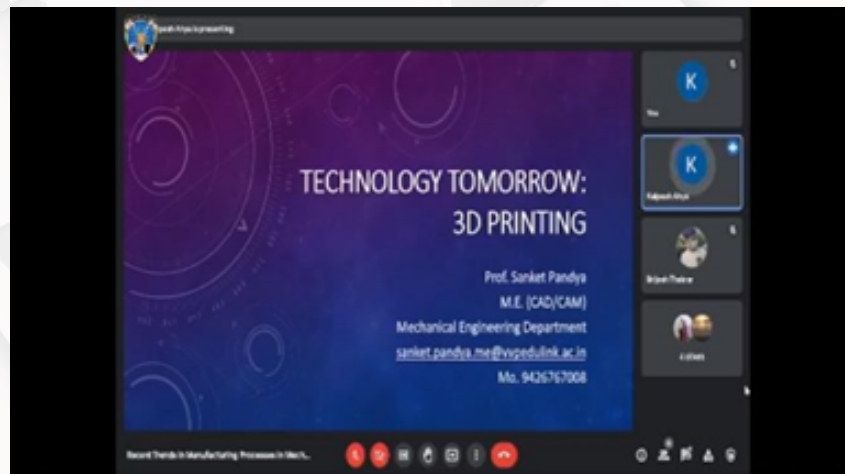
- Mechanical Engineering Department have arranged 3 Days Online Certificate Course on “Recent Trends in Manufacturing Processes in Mechanical Engineering” for 5th to 7th June, 2021 from 10 am to 12 noon each day for 12th science students to enhance their knowledge of mechanical engineering.

• DAY-WISE SCHEDULE IS AS FOLLOWS:

Date	Time	Topic	Speakestr
05/06/2021	10 to 11	Mechanical Engineering - A Bird View	Dr. Nirav Maniar Dr. Rupesh Ramani
05/06/2021	11 to 12	Every day Vehicle - Diesel Engine	Dr. Jiten Makadiya
06/06/2021	10 to 11	Technology Tomorrow - 3D Printer	Prof. Sanket Pandya
06/06/2021	11 to 12	Applications of welding in daily life	Dr. Arick Lakhani
07/06/2021	10 to 11	Save Energy, Secure India	Dr. Dipesh Kundaliya
07/06/2021	11 to 12	Shape Your Future	Dr. Nirav Maniar Dr. Rupesh Ramani

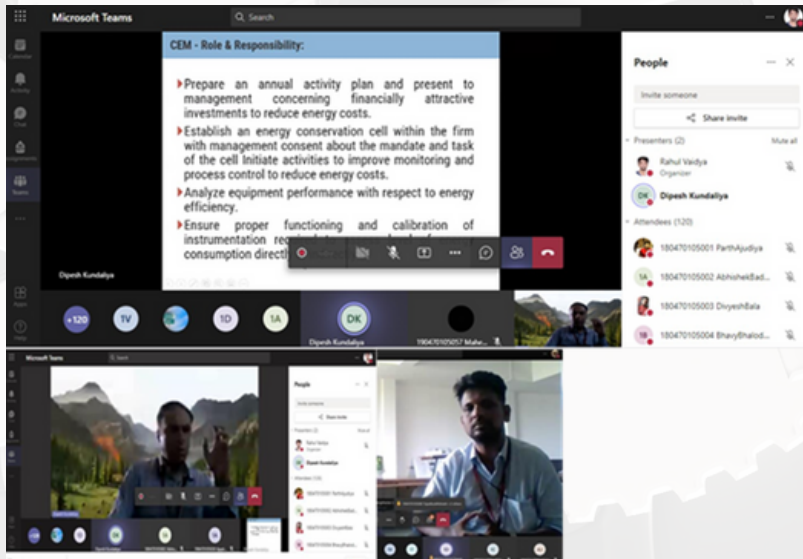


- All the sessions were interactive, and students participated actively in each session. New technologies and trends were discussed with ppt and video presentation. Application of technologies with our routine life were discussed by speakers. Participants were presented certificate of participation for successfully attending all sessions.
- This online course was arranged to aware about developments in mechanical engineering for those students who are about to enter in engineering course.





# SKILL DEVELOPMENT PROGRAMME " ENERGY AUDIT"



- Many countries are now focusing on energy, not only enhancing the tenable power generation sources but also on utilizing the power more proficiently for economic utilization. The energy audit is an significant parameter for all the developing and developed countries and they focus on energy efficiency, energy quality, and energy intensity. In the industrial, residential, and commercial sectors the top operating expense is found to be are material, machine, manpower, and energy. Identification of the energy-consuming sector is the prior attention to look for the energy-saving potential and quality improvement. Implementation of an energy audit can enhance the efficiency, quality of power, reduce the tariff of bills, and reduces the wastage of energy.

- The need for energy audits, different types of energy audits, the energy audit report structure were very well explained by Dr. Dipesh Kundaliya on the first day. He has also explained about the details of Energy Audit Exam and scope of it as an engineer. Along with that he has make student understood about the roles and responsibilities of Energy Manager as well as Energy Auditor. He has shared his experience as Energy Auditor in the V.V.P Engineering College, Rajkot. The second session was conducted by Mr. Rahul G.Vaidya as he explained the performance evaluation of different electrical and thermal utilities like Boiler, Furnace, Pumps Lighting, Cooling Tower etc. along with the energy conservation opportunities. Then the session followed by Queries asking Session.
- On the second day, Dr. Dipesh Kundaliya and Mr. Rahul Vaidya explained about how the energy audit instruments operates and works in detail. The instruments such as Luxmeter, Flowmeter, Infrared Gun, Thermal Imager, Power Data Logger were explained by both of them. Then the session was followed by Queries asking Session. Students participated actively in the session and asked their doubts from the Experts.



**CULTURAL**  
**EVENTS**





# ONLINE FAREWELL CEREMONY

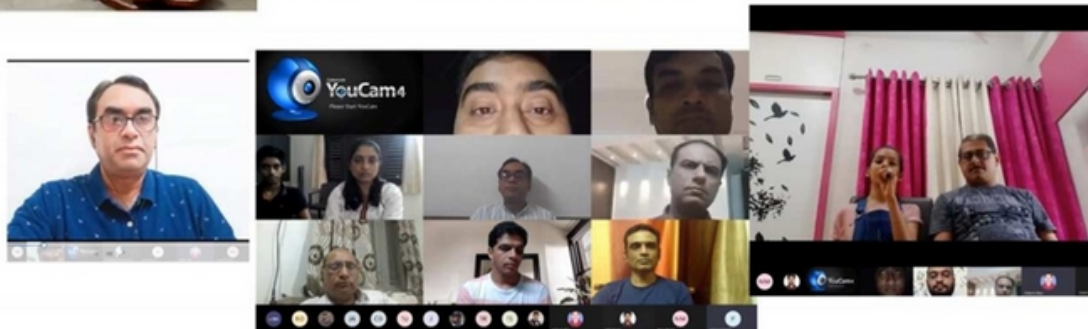
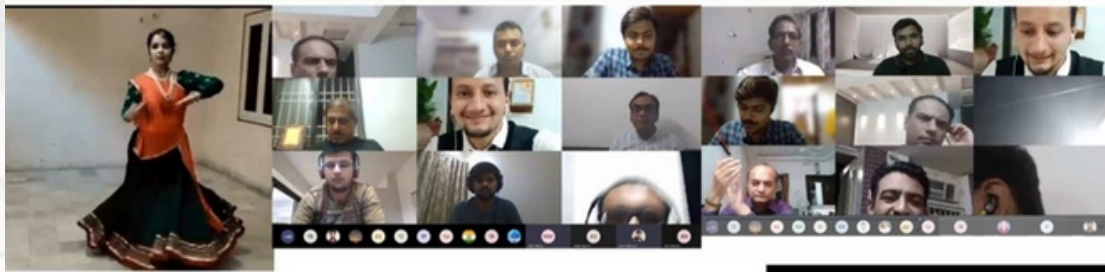
## "SANGATH-2021"

- A grand online farewell ceremony "Sangath-2021" was held for the final year students by the Mechanical Department.
- In Corona time there is lot of opportunities for innovation. The country and the world have always come out of such a situation." - Principal Shri Dr. Jayesh Deshkar
- VVP at Rajkot, the first self-financed engineering college in the country. The first ever Online Farewell (Virtual Farewell) "Sangath-201" was grandly organized by the Mechanical Engineering Department of the Engineering College to give the final year students "Vidyaman".
- During the current Corona epidemic, when there is a lockdown situation, VVPs can be found "face to face". The "Team Mechanical" of the Engineering College came up with the idea of saying goodbye to our final year students. Nothing is impossible in this age of technology. What can a black-headed man not do? In the name of characterizing that technique, the staff of the entire Mechanical Engineering Department took the initiative and started the preparation of the program by deciding to do this program. In a very short span of time, by making a continuous effort, by launching an online (virtual farewell) by "Team Mechanical", "Sangath-201" was successfully completed and at this stage it became perhaps the first unforgettable event in the history of all colleges in Gujarat.
- In this virtual farewell "Sangath-201" all the students and alumni studying in the mechanical department and alumni and staff group joined. As well as Mr. Trishar Patel from America also presented his work
- The program started with three Omkars in the tradition of "VVP", with Ganesh Vandana performed by student Zill Ravel through a full Indian style Kathak dance.

- On this occasion V. V. P. Addressing the students, Dr. Jayesh Deshakar, Principal, College of Engineering, gave an example of Corona and Free Vaccine, saying that any battle can be won if the intention is right, good, the team is good, the motive is good and the society cooperates.
- He thanked all the students and parents for their cooperation during this difficult time. They said that this college is not working to earn any money. The trustees of this college are directly involved with the society and have helped the society a lot during Corona's time. Happily, there are trustees who never take a single rupee from the college in any form. There is no business for them. There is only service for them. They have realized the mantra "Rashtraya Swaha Idam Na Mum" in life. He further added that there are many opportunities for innovation in Corona's time. There are so many possibilities and possibilities to innovate. Grab the Opportunity Take this as an opportunity. Think of something new that can be done. Don't get frustrated anywhere.
- The country and the world have always come out of such a situation. This is always a turning point. Always be positive for the future. He assured the students of all kinds of cooperation from the college in future also. Describing his vast experience of 3 years, he gave valuable guidance to the students for a bright career.
- One colorful program after another was presented. As per the order of the students, the staff of Mechanical Prof. Dr. Ramani Shri Kalpeshbhai Ahaya and his daughter, Prof. Pooja Ghodasara and Prof. His work was also presented by Sahil Yagnik. Pro for the success of the program. Pujaben Ghodasara, Prof. Sahil Yagnik, Shri Kalpeshbhai Ahya, Prof. JP Bhimani, Prof. Sanket Pandya, Prof. Vijay Mehta, Prof. Dr. Jiten Mankadia and all the staff worked hard
- The entire program was managed by Prof. Pooja Ghodasara and Prof. Sahil Yagnik and Mechanical student Raj Khamboliya. At the end of the program, Senior Most Faculty Prof. of Mechanical Department. Dr. R.V. Ramani addressed the students and the head of mechanical department Shri Prof. Dr. N.P. Maniyar highly commended each of the students and the entire "Team Mechanical" for making the program a success and wished the students success in their "professional life".



- V. V. P. Managing Trustee Mr. Lalitbhai Mehta and Trustees Mr. Kaushikbhai Shukla, Dr. Sanjeevbhai Ojha, Mr. Harshalbhai Maniyar, Dr. Narendrabhai Dave and Principal Mr. Dr. Jayesh Deshkar have sent their best wishes to the final year students for a bright future. Has applauded.
- The program concluded with Bharatmata Ki Jai and Vande Mataram with Buland Jhosh. All present and former students and others in attendance praised the hard work and program of the Mechanical Department with one voice.





The background features a light gray field of interlocking gears. Two large, colorful, 3D-style triangles are positioned in the upper center. The left triangle has a blue top face and a red bottom face. The right triangle has a red top face and a blue bottom face. A large teal triangle is on the left side of the page. A red rectangular border frames the word 'ACHIEVEMENT'.

# ACHIEVEMENT





*We appreciate a kind gesture of*  
**MR. PRIYANSHU JETHVA**

VVP Mech. Alumni 2020 Batch  
Donated more than 20 books to Library

"A book is a gift you can open again and again." - Garrison Keillor



**V. V. P. ENGINEERING COLLEGE**  
**MECHANICAL ENGINEERING DEPARTMENT**



## PRIDE OF VVP MECHANICAL

### **Alok Bhatt**

2003 Batch

**Promoted as Director,  
Hardware Engineering,  
Amazon-California, U. S. A.**



- More than 10 years with Amazon.
- His team designs, manufactures-launches Amazon devices like, Fire TV, kindle e-readers & Fire tablets.
- Leads a multi-disciplinary team of 125+ engineers across Mechanical Design, Electrical Design & Technical Program Management.



**V. V. P. Engineering College  
Mechanical Engineering Department**



## પ્રતિજ્ઞા

અમે,  
વી.વી.પી.

એન્જનીયરીંગ કોલેજના  
વિદ્યાર્થીઓ, સંકલ્પ કરીએ છીએ કે,  
અમે શ્રદ્ધા, સંયમ, શિસ્ત,  
એકાગ્રતા અને પુરુષાર્થથી, જ્ઞાન પ્રાપ્ત કરી,  
સ્વનાત્મક અને હકારાત્મક અભિગમ કેળવી,  
સામર્થ્યવાન ઇજનેર બની,  
વિશ્વના મંગલ વિકાસ માટે,  
ભારતમાતાને, પ્રથમકક્ષાની,  
મહાસત્તા બનાવવા,  
અવિરત  
પુરુષાર્થ  
કરતા રહીશું.

**ભારત  
માતા કી  
જય**

राष्ट्राय स्वाहा इवं न मम ।



## V.V.P. ENGINEERING COLLEGE

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