





## **INSTITUTE GLIMPSES**

Government Engineering college Patan end searingly known as G.E.C.P is situated at the scenic village katpur Patan city. Started in 2004 with an aim of imparting quality higher education in various fields of engineering, it has seen unprecedented growth. It is affiliated with Gujarat Technological University & administrated by Directorate of Technical Education, Government of Gujarat.

## From the Desk of Principal

## **Principal**



Dr. H.S. Patel

The Government Engineering College Patan welcomes all and we are delighted to introduce our college having a rich tradition of soaring high with academic excellence and overall personal growth of the students. The purpose of education is to teach our students

to think and develop a capacity to reason out facts and this is achieved by providing them excellent academic environment. state-of-the-art infrastructure. state-of-the-art laboratories, and dedicated and highly qualified faculty members with decades of teaching and industrial experience creative and practical teaching-learning oriented practices along with other developmental activities.

We are having the goal is to transform the world through technical education. It may sound idealistic, but this is precisely our long-term goal. It is what motivates the work of everyone at the Government Engineering College, Patan from faculty and staff, to students and alumni. It inspires teaching and our research. It is this goal that fuels the faculty to excel.

## Institute Landmarks

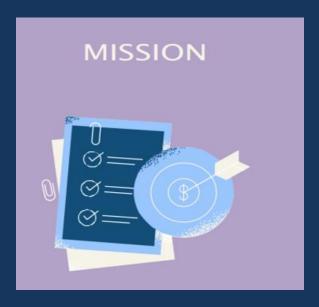


To impart the technical education as per the state and national policy which satisfy the current needs of the society, to interact with the industry and research organizations for the integrated growth, to make the liaison with statutory and professional Organizations and to provide the training and research opportunities to the student and faculties in best possible manner.

# Vision

To prepare Human Resource with value based competency for technical advancements and growth of society.





To deliver technical programs and services to cater the current needs of society and industry.

Helping industries in solving challenges by means of providing best technical human resources



## **Editor in chief:**

PROF.M. B. PATEL

### **Members:**

Prof. A.B.DHRUV

Prof. G.A.PATEL

Prof. S.D.JOSHI

Prof. H.B.JETHAVA

Prof. N.C.CHAVADA

Prof. D. J. VARIYA

Prof. V.D.PATEL





## **Contents**

- 1. Papers presented/published
- 2. Departmental activities
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- College Activity

#### NEWSLETTER DETAILS FOR GEC PATAN (JANUARY-MARCH 2022)

#### 1. PAPERS PRESENTED/PUBLISHED

#### **Mechanical Engineering Department**

- Kamal Kumar Ghosh, Chandrakant R. Sonawane, Anand Pandey, Hitesh Panchal, A.S. El-Shafay, Ahmed Mohamed Mahmoud Ibrahim, Mohammad S. Alsoufi, AmmarElsheikh, Experimental investigations on indirect contact type liquid desiccant cooling systems for high latent heat load application, Case Studies in Thermal Engineering, Volume 31, 2022, 101814,ISSN 2214-157X. (Impact factor: 4.7
- M.S. Gad, Hitesh Panchal, ÜmitAğbulut, Waste to Energy: An experimental comparison of burning the waste-derived bio-oils produced by transesterification and pyrolysis methods, Energy, Volume 242, 2022, 122945, ISSN 0360-5442. (Impact Factor: 7.147)

#### **Electrical Department**

 Pravinkumar Dhanjibhai Patel, S. N. Pandya "Comparative Analysis of Torque Ripple for Direct Torque Control based Induction Motor Drive with different strategies", Dec 23, 2021, Accepted, Australian Journal of Electrical and Electronics Engineering. Scopus indexed, Taylor and Francis,

#### **2. DEPARTMENTAL ACTIVITIES**

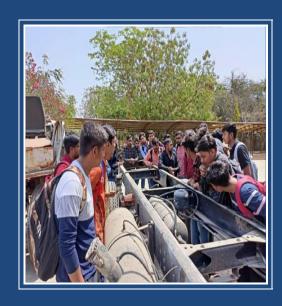
### **Mechanical Engineering Department**

• A technical visit was organized at Centre of Excellence-Automobile at ITI Rajpur for 6th Semester students on 24/3/2022. Almost 60 students and 3 faculties have visited the institute. During visit different automobile system were demonstrated by instructor.









- A seminar was organized on career guidance for 6th Semester students on 31/03/2022.
- A workshop on AutoCAD was organized for 4th Semester students from 23/3/22 to 29/3/22 by SAICAD.



## **Electrical Department**

• ATAL AICTE FDP organised by Electrical Engg. Department (1 week)

Title: Recent Advancement in Power System with Renewable Energy Sources

Duration : 17 - 21 January 2022

Co ordinator: Prof. H.D.patel, Convener: Prof. G.A.Patel

Co coordinator Prof. A.N.patel & Prof. M.D.Patel

#### **Civil Engineering & Applied Mechanics Department**

• Training program on "**Finishing School**" with Batch-3 of 33students. This training program was conducted from 21/01/2022 to 14/02/2022 Total :80Hrs and completed successfully under leadership of Finishing School Co-Ordinator Prof. H.R. Trivedi.





#### **Consultancy & Testing Works**

• Material testing and Mix design is done by applied mechanics department.

#### **Computer Science & Engineering Department**

#### GUJCOST SPONSORED SHORT TERM TRAINING PROGRAMME ON MEAN Stack

Duration: 21st March 2022 to 25th March 2022

Venue: Seminar Hall CSE No of Participant: 54

Expert: Mr. Vijay Prajapati (CEO and Founder HN Techno)

#### • Introduction:

O This training programme is to empower students, faculty members and Industrialist can create cross platform web applications and mobile. In addition to that the personnel will learn how to create web applications that depend on the Model-View-Controller Architecture, cross-platform JavaScript run-time environment for executing JavaScript code server-side, Event-driven I/O server-side JavaScript environment for real time web application. In this STTP, attendee will see how to quickly get up and running with these technologies and will build a complete application from scratch over the duration of the STTP.





FLORAL WELCOME OF DIGNITORIES

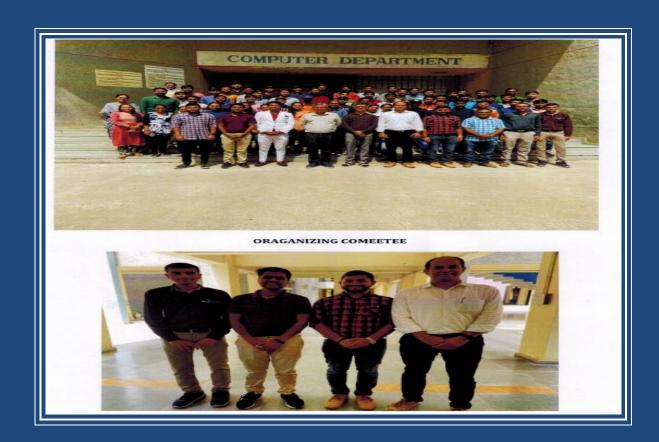


#### REGISTRATION AND BRAKEFAST



SESSIONS DELIVERED

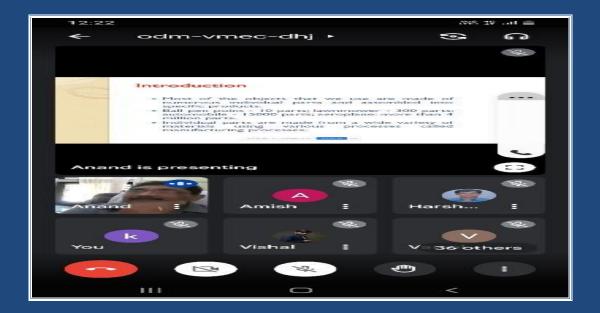




#### 3. FACULTY ACTIVITIES

#### **Mechanical Engineering Department**

• Prof. (Dr.) A B Dhruv Head, Mechanical Engineering department has delivered an expert talk on "Metal Working Processes" in STTP Metallurgy for All at GEC, Gandhinagar on 23rd February, 2022.



- Dr. Hitesh Panchal received "CIEMA Research Excellence Award 2022" for outstanding research work on Solar Desalination.
- Dr. Hitesh Panchal;s Australian Innovation patent entitled "Innovative central processing cooling system" granted on 23rd March 2022.

#### Civil Engineering & Applied Mechanics Department

• GTU nominated Jury member "National Environment youth Parliament 2022 (NEYP 2022) ON 12-01-2022 to Dr.V.M.Patel

#### **Electronics and Communication Department**

• Prof. Maulik B. Patel has successfully completed the FDP "Part 1 of the online UHV Refresher 1 FDP organized by All India Council for Technical Education(AICTE) from 21st February, 2022 to 25th February, 2022."

## • PROGRAMS PARTICIPATE BY FACULTIES

Sr. No	Title	Name of the faculty	Department	Place	Duration
1	Metallurgy For All	Prof. R.A.Oza	Mechanical Engineering	GEC Gandhinagar (Online)	21/02/22 to 25/02/22
2	Metallurgy For All	Prof. K.K.Pansal	Mechanical Engineering	GEC Gandhinagar (Online)	21/02/22 to 25/02/22
3	Impactful Pedagogical Skills and Restructuring of Collaborations	Prof. R.A.Oza	Mechanical Engineering	LDCE(Online)	17/01/22 to 22//01/22
4	Impactful Pedagogical Skills and Restructuring of Collaborations	Prof. K.H. Thakkar	Mechanical Engineering	LDCE(Online)	17/01/22 to 22//01/22

#### **4.STUDENTS' ACTIVITIES**

## **Mechanical Engineering Department**

• Meet Chaudhry of 8th Semester Mechanical Engineering has participated West Zone Inter University (AIU) "Basket ball Men Championship,2021-22" organized by Jiwaji University, Gwalior from 8.03.2022 to 14.03.2022.



• Thakor Prithviraj of 6th Semester Mechanical has participated in Republic Day Parade at New Delhi on 26th January 2022





#### 5. NATIONAL SERVICE SCHEME (NSS) ACTIVITY

## [1] "FREE VACCINATION CAMP" on 03<sup>RD</sup> JANUARY, 2022

A COVID-19 vaccination camp was organised at the Government Engineering College, Patan on Monday, 03 January 2022. The arrangement was done in front of C.O.E, Ground floor of the Campus. The Students of age group between 15 to 18 are take advantage of this camp. The medical Team of PHC Kungher and Sub-centre Katpur organized a vaccination Camp in our college. The camp was started at 10:30 AM. The teaching and non-teaching staffs of GEC Patan have taken corona vaccination. In this camp residents from nearby areas were also joined.

NSS volunteers help the students for the registration process. Volunteers are managing the guidelines of COVID-19. NSS Volunteers arranged a breakfast for all students which are Vaccinated. The Students from 1st year, of all the department of the college are vaccinated in this camp.

The medical team administered the vaccine to the student as well as others. Awareness was created among them on the rapid spread of the viral infection and the safety measures to be taken.

## • Major outcomes of the event

- Spreading Awareness among all the Students and the villagers about vaccination.
- The persuasion of the health team reduced the fear of vaccination among the youth.
- Health team explained about the benefits of the vaccination.













### [2] "CELEBRATION OF REPUBLIC DAY" on 26<sup>TH</sup> JANUARY, 2022

India became independent of the United Kingdom on 15th of August, 1947 and became a republic on 26th of January, 1950. The new constitution of free India came into force with effect from this day. It is a day of national rejoicing and a red letter day in our country. The day is celebrated with pomp and show, zeal and spirit, throughout the length and breadth of the country.

We are very pleased to announce that the event "Celebration of Republic day" was very successful. In this event, we organized two competitions as following. Song competition (Patriotic song). Creative hand art competition (Theme: Republic Day). In these competitions we allowed anybody who wanted to take part in it even out of our college also..

On 26th January at 11:00 am, we all got together on MS Team platform in the presence of our two programme officer, all the NSS volunteers and other students of our college and also out of college. We started our programme after 'Saraswati Vandana'. Then Dr. A.K. Chaudhari gave wonderful speech about republic day. He adviced us to cultivate Unity and brotherhood towards each other's religion and what should our Contribution to country. After that the song competition started and patriotic songs were sung by all the participants and among them was one of NSS volunteer named Anika Rehan who gave a wonderful speech about republic day which was very inspiring. Then a video was shown showing why Republic Day is celebrated..

At the end of event, the winners of different competitions were announced by Dr. A. K. Chaudhari Sir. The event was ended by vote of thanks speech by Prof. N. K. Dabhi Sir.He sang his favourite patriotic song and encouraged all the students to participate in such type of competitions. The event was then concluded with the NSS song and the national anthem.

## Winners of different competition

## • Song competition

Rank	Name
1.	Het Chauhan
2.	Ganpat Parmar
3.	Anjali Thakkar & Manoj khanna

## • Creative hand art competition

Rank	Name
1.	Jyoti Jha
2.	Anjali Thakkar

## • Major outcomes of the event

- After the event we learned republic day commemorates the spirit of independent and individual India.
- We got inspired to maintain the Unity, Equality and pride of our nation. Our nation is the greatest nation in the world but, let us strive to make it even better.
- We got to know about history of constitution and the role of our freedom fighters to make our country independent.













## [3] "Celebration of Shaheed Diwas (Martyr's Day)" on 30th of January,2022

On January 30, 1948, the Father of the Nation' was assassinated at Gandhi Smriti in the Birla House during the evening prayers. January 30 is the day when Mahatma Gandhi was martyred and the Government of India announced the day as Shaheed Diwas or Martyrs' Day. January 30 and March 23, to honour the sacrifices made by Mahatma Gandhi, Bhagat Singh, Rajguru, Sukhdev, and countless other brave Indian freedom fighters who fought for the independence, glory, and welfare of India. India and 15 other countries in the world celebrate Martyr's Day to give respect to the courageous champions.

Event was organized by NSS GEC PATAN UNIT on the occasion of 'Martyrs Day'. The program was conducted on MS team. In this program the principal of the college Shri Dr. H.S.Patel and Dr. A.K.Chaudhary, Prof. N.K.Dabhi and all the faculty and volunteers of NSS and other students were present. A two-minute silence was observed at the beginning of the program to pay tribute to the martyrs. The program began with a prayer. Then the principal of the college Dr. H.S. Patel shared his thoughts about our martyrs. Vishal Patel inform about Bapu and why Martyr's Day is celebrated on 30th January by PPT. Then a "quiz competition' was organized. In which all the faculty and students were participated. That was competitive. Winners were announced after quiz competition.

The speech from Dr. A.K.Chaudhary explained the sacrifices of the martyrs behind our independence. At the end of the program, Prof. N K Dabhi encouraged the participants to participate in such competitions and thanked everyone. Then event was conclude with NSS song and National anthem

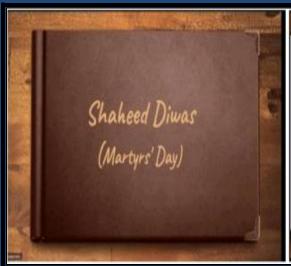
## • Quiz competition

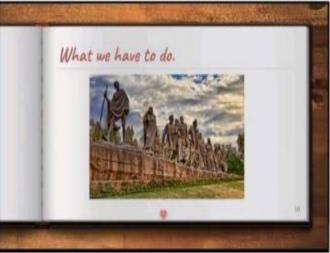
#### Winners

Rank	Name
1.	Aakash Purohit
2.	Varad Trivedi
3.	Meet Rami

#### • Major Outcomes of Event

In this event, students get to know about our heroes and the sacrifices made by them. This event keeps the students eager to know about and read more about our freedom struggle and freedom fighters. Quiz competition. This event shows why we should respect our martyrs.









## [4] "Inauguration Program of Special Camp" On 22nd March, 2022

NSS Unit GEC Patan organized a seven-day Special Camp from 22nd March to 28th March at Adiya, near Patan. Special Camping forms an integral part of the National Service Scheme. It has carried out various social activities by the volunteers related to literature, environmental safety, health and hygiene, and helping the victims during natural calamities. It has special appeal to the youth as it provides unique opportunities to the students for group living, collective experience sharing.

On that day, the NSS team reached Adiya village at 9 o'clock in the morning. The inauguration program was held on first day of the camp in which the chief guest Shri Dr. Rohitbhai Desai, College Principal, teachers, students and teachers of the primary school also joined the program. With all the guest firstly, they enlighten the candle. Then our student gave the introduction of Nss and our work that we do to all the presented member. After this the skill section is organized in afternoon and then rally is done by our volunteers for the night program in the whole village with some slogan. After that a street play was performed in the village at night. In which we aware villagers about the benefits of cleanliness and also the diseases which spread by the mosquito.

The program was conducted under the guidance of the principal of the college and beautifully done by nss volunteers

## • Major Outcomes of Event

- 1. We learn to complete our given task in allotted time with appropriate discipline.
- 2. Learn to take decisions by group discussions.









The second day of this special camp started with the melodious ram dhun and bhajans at 5 o'clock in morning. Then the coordinators of 2nd day, coach the volunteers for exercise and routine yoga. Then the NSS song is sung by volunteers to start a fresh day. The medical camp is organised in primary school of adiya at 10 o'clock. The door-to-door campaign was organised to aware the locals about free medical camp. The medical team from adiya PHC were there to attend the people of the village for general medical treatment. The program officers and other professors were there to welcome our guest. The medical team cure and do general check-ups of the villagers. They also provided free of cost medicines to the needed patients.

The team for vaccination was also there. The people who yet not got vaccines, got opportunity again to get vaccinated. After this medical campaign, volunteers and invited doctors took lunch together. In afternoon, skill session and group discussion were concluded. Then at 5 o'clock a village rally was arranged to inform villagers about the night drama. "Sheri natak" was on the emotional theme that conveys 'importance of family more than money'. It was performed in the village chawk. The day was ended with the group discussion and NSS song. Volunteers were asked for the review of day activities and coordination of the events.

#### • Major Outcomes of Event

We learn teamwork in medical campaign and discussions.

- 2. Ingest the habit of being fit with regular workout.
- 3. We learn to complete our given task in allotted time with appropriate discipline.
- 4. Learn to take decisions by group discussions















## [6] "3rd Day of Special Camp" on 25th March, 2022 of Plants, Pots, Nest distribution, and Drug Addiction Awareness Program

The day was started with ram dhun and bhajans at 5 o'clock in morning. Then the volunteers did yoga and exercise under the guidance of coordinators. Then the NSS song is sung by volunteers to start a fresh day. After this, NSS volunteers practiced for parade. Plants, pots and Nests Distribution was organized at chowk of village at 11o'clock. All volunteers have started distributing water pots free of cost to people and started appealing to them to put pots in their balconies or garden and replace the water every day for birds and we chanted slogan about Tree plantation and tacking care of birds.

After the distribution we took a lunch and after that we had a skill session. At 5:30 o'clock we sung Nss song. In the evening, A speech was given by expert Shree Nareshbhai Babalbhai Patel. Nareshbhai is pharmacist of Prathmik Aarogya Kendra at aedla. Nareshbhai started 'vyasanmukti' since 2010 and he met 5000 people on social media. He gave speech about drug addiction prevention.

#### • Major Outcomes of Event

- To fight against environmental pollution, we distributed the plant saplings to the public in the village and explained to them the importance of plants in our lives.
- We have distributed 250 plant saplings in the village.
- During summer, the birds get dehydrated due to excess heat, so we distributed 175 nests and 200 pots among villagers.
- Also explained to them to keep them clean, so that the birds get good hygiene.
- The people enjoyed the drama show at evening. There was a drama show followed by a speech by experts about drug addiction prevention. The message was also conveyed











### [7] "4th DAY OF SPECIAL CAMP" on 25th March, 2022 At Adiya.

The day was started with ram dhun and bhajans at 5 o'clock in morning. Then the volunteers did yoga and exercise under the guidance of coordinators. Then the NSS song is sung by volunteers to start a fresh day. After this, NSS volunteers practiced for parade. The Fire safety program was organized in primary school of Adiya at 10 o' clock. The fire brigade reached at the school with their team and share their knowledge, how to save our life in natural disasters and also taught us how to use the safety equipment in different types of disasters. They also answered all the questions which were asked by the NSS volunteer and school students. After this, man-made fire was set and fire safety team shown us how to extinguish it. After fire safety program, volunteers and fire extinguisher team took lunch together.

In afternoon, skill session and team leadership were concluded. Faculties of GEC, Patan also came in skill session and gave some points on team leadership. Then at 5 o'clock announcement was made in village from panchayat to inform villagers about superstition program. After this, NSS volunteers hung pots and nests in primary school. It was performed in the village chawk. Shree Vanveerbhai Chaudhary and Shree J.K Suhtar sir were called to perform the program. The program was started at 21:00 and ended at 22:30. The day was ended with the group discussion and NSS song. Volunteers were asked for the review of day activities and coordination of the events

#### • Major Outcomes of Event

- 1. We learn how to save our and other's life during natural calamities.
- 2. Ingest the habit of being fit with regular workout.
- 3. We learn how to prevent superstition.













### [8] "5th DAY OF SPECIAL CAMP" on 26th of March, 2022 At Adiya.

The fifth day of this special camp started with the melodious ram Dhun and bhajans at 4 o'clock in morning. Then the coordinators of 5nd day, coach the volunteers for exercise and routine yoga. Then the NSS song is sung by volunteers to start a fresh day. Our honourable principal Dr. H.S Patel sir and his wife Dr. Usha Patel is come to guide NSS volunteers at 11 o'clock. They also plant tree at Primary School, Adiya. In afternoon, skill session and group discussion were concluded. The Cleanliness Drive is organised in Adiya at 5 o'clock. Then at 10 o'clock Rally was organised to aware the locals about Cleanliness Drive.

We dived two teams among us and go to clean various places like primary school, streets and chowk. The people were also participate in the event of cleanliness. After this cleanliness drive, volunteers thanked all the people who took part in this cleanliness event. "Sheri natak" was on the digital awareness theme that conveys 'We have to aware about the online digital system'. It was performed in the village Chowk. The day was ended with the group discussion and NSS song. Volunteers were asked for the review of day activities and coordination of the events.

#### • Major Outcomes of Event

- 1. We learn teamwork in medical cleanliness drive and digital awareness.
- 2. Ingest the habit of being fit with regular workout.
- 3. We learn to complete our given task in allotted time with appropriate discipline.
- 4. Learn to take decisions by group discussions







# [9] "6th DAY OF SPECIAL CAMP" on 26th March, 2022 of "Mega Blood Donation Camp"

Blood donations in India are conducted by organizations and hospitals through blood donation camps. Human blood is an essential element of human life with no substitute. Voluntary blood donors are the cornerstone of a safe and adequate supply of blood and blood products. The purpose of the blood donation camp is to select a suitable donor whose blood is safe to the recipients and who himself shall not in any way be harmed by blood donation. The number of voluntary blood donors increased from 54.4% in 2006–2007 to 83.1% in 2011–2012, with the number of blood units increasing from 4.4 million units in 2006–2007 to 9.3 million units in 2012–2013. 12.7 million units were donated in 2020, lower than projected due to the COVID-19 pandemic.

The Event "Mega Blood Donation Camp" is organized on 27th March, at Primary School of Adiya by N.S.S GEC Patan Unit. This event was Organized in the Special Camp of Adiya Village. We arranged the rally with the slogans in the Adiya village to aware the people about the donation of blood. Then after the rally in the event, we invited the team of the Red Cross Society to collect the blood from the donor and save that blood for a future emergency. First of all, the volunteers prepared a room for blood donation Then Our program officer Miss. Payal Prajapati Ma'am starts the donation of blood. The first-time blood donor is very excited about the donation of blood. After in the event, our volunteers as well as the villagers and our college students donate their blood. Those people who donated blood were given gifts by the Red Cross Society. After the blood donation, We gave the blood donor tea, biscuits, and glucose and we informed them to take 2-3 days of rest and inform them to hydrate themselves. In this event, we completed a total of 24 units of blood bottles a big achievement for us.

After the successful blood camp, we clicked a group photo with the red cross society's team, and we acknowledged them for their work. Then in the event further the coordinator of the event arrange the skills session for the volunteers. In the skill session topic was personality development. Then after the skills session our program officer Mr. N K Dabhi sir appreciate our work and then we end our day with Lakhya geet.

## • Major Outcomes of Event

- Donating blood has benefits for your emotional and physical health.
- Giving blood can reveal potential health problems.  $\Box$  Giving blood may lower your risk of suffering a heart attack.
- Giving blood can help your liver stay healthy.







#### [10] "Celebration of Valedictory Function" 28th of March, 2022

Valedictory function of the 7-day Special camp was organised by NSS wing of the GEC, Patan at primary school of Adiya Patan. At the last day of our special camp we visit the adiya village's home to home people and take review of our events, street drama and our special camp. In the review of the adiya's people they said that our team work is very good. They also said we will miss you.

After the door to door campaign our valedictory event started. In our valedictory function our chief guest are Primary school principal Sunil bhai patel, secondary school principal Harsh bhai patel, Suresh bhai patel, Chatur bhai patel. Our anchor welcome the chief guests. Then in event Saraswati Vandana sang by the our NSS Volunteers. The faculties of G.E.C. Patan honoured the chief guest by giving the shawl and motivated the volunteers through his motivational speech.

One of the Teacher of the school said you are doing great work never leave this work after you are in job. Then after our NSS Volunteers gave their experience of seven day's special camp. At the end of the event anchor thanks to all presenters and then we sang the Nation anthem and we leaved for the lunch with guest with guest. After the lunch we meat the student of the school and they are very sad because we leaving the adiya village.

#### Major Outcomes of Event

- Very good response of the villagers and student s of the school
- We learn how to stay in rural area.
- We learn new skills during the special camp like Time Management, Etc.





#### 6. M.E / Ph.D. DISSERTATION

#### > Civil Engineering & Applied Mechanics Department

- Prof. Pareshkumar N. Nimodiya has completed PhD Program on 03/01/2022 from GTU, Ahmedabad.
- Dr.D.J.Varia Guide 1 Ph.D. student
- Dr.V.M.Patel Guide 4 Ph.D. students
- Dr.M.I.Balya Guide 1 Ph.D. students

#### **7.COLLEGE ACTIVITY**

#### **RUSA** activities - Dr.D.J.Varia

RashtriyaUchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme (CSS), launched in 2013 aims at providing strategic funding to eligible state higher educational institutions. Government Engineering College Patan (GECP) is one of the selected institute from RUSA 1.0.

Total Rs 14,80,657.32/Grant for diverse components have been given to GECPatan. GEC Patan received Grant In Component: 9 Equity Initiative Total Rs. 3,93,700.80/ and In Component: 12Vocationalization of higher Education Rs . 10,86,956.52/

Following programs under RUSA component 9 (Equity initiative) have been arranged at GECPatan with support of Principal Dr. H. S. Patel and under Leadership of Coordinator Dr. D. J. Varia and Co-coordinator Mr. S. A. Pankhaniya and Co-coordinator Dr.J.M.Patel and Team RUSA.

#### Component: 9

• A Self-defence program was conducted during 23rd March, 2022 to 1st April, 2022 (8 working days) by Mr. Deepak Chavda(Professional expert) make a girl student and Ladies Faculties of GEC Patan for physical fitness and self defence.



