GOVT. POLYTECHNIC, AMBALA CITY

NEWS LETTER

Volume 2 (January 2020-July 2020)



ELECTRONICS AND COMMUNICATIONS ENGINEERING

VISION -To become Centre of Excellence in Technical Education, recognized for excellence and the industrial-societal relevance and impact of its pursuits, by imparting Technical knowledge and skills to the aspiring young minds.

MISSION -

- 1. To create facilities and suitable environment for teaching learning process.
- 2. To impart quality education through time relevant curriculum in academic programs via active participation of stakeholders.
- 3. To facilitate Student development programs and services designed to help students identify educational and career goals, set realistic career paths, and develop skills necessary to achieve intellectual and personal growth
- 4. To develop activities and programs that complement, enhance, and contribute to the growth and enrichment of students and thus the community, both inside and outside of the classroom to produce responsible citizens.
- 5. To strengthen industry-institute interface and promote entrepreneur development activities.
- **6.** To design academic programs and services that provide supplemental support to both Teaching and Learning, and changing needs of the marketplace and promote economic growth.

COMPUTER ENGINEERING

VISION - To be the Centre of Excellence for imparting Technical skills and producing computer professionals having practical knowledge, entrepreneur skills that are ready to face global industry challenges and cater needs of the society at large.

MISSION - The ever-changing field of Computer Engineering has a great impact on human wellbeing. To meet the trust placed in our profession, students and faculty in the Department continually strive:

- 1. To merge knowledge with application in our professional identity.
- 2. To impart quality education to achieve excellence in teaching-learning.
- 3. To build a successful career of students on strong moral and ethical foundations.
- 4. To strengthen infrastructure capable to fulfill societal and industrial needs.
- 5. To prepare students for prevailing market conditions through industry institute interaction.

NCC AND NSS ACTIVITIES

- 27 cadets along with ANO participated in 3 Km. "RUN FOR YOUTH" in the memory of Swami Vivekanand. Cdt Monu, Cdt Bimlesh and Cdt Sanjay were a part of 5 km run and Cdt Manish participated in 10 km run.
- Republic Day Parade held in Police DAV ground; Ambala City gave an opportunity to the 'Institutes NCC contingent' to receive second best contingent award in State Level Republic Day parade on 26.01.2020. Under Officer Deepak Kumar took the runners up trophy.
- NCC cadets along with NSS volunteers together prepared the College ground for the Athletic Meet-2020 of the institution, under the guidance of NCC officer Capt. J S Narang in the month of February and thus created an example of self service.





• Cadet Rupali Sharma, Computer final year student of the Institute was shortlisted for Best Cadet in various competitions. She was adjudged second best cadet based on her contribution/activities in covid-19 lockdown period, with excellent participation of duties. She gave online campaign for protection against Corona pandemic.NCC Cadet Saloni was runner up of Tug of War at EBSB camp at Rohtak.

- Cadets actively participated in COVIDVEER project of Government of Haryana and made daily calls to family heads, students, migrant labors/workers and collected details of their wellbeing, receipt of ration, progress in studies of students and helped the migrant workers to get ticket to go back to their home town by filling their details in online forms.
- Uploading of motivational videos to spread awareness and safety measures for COVID-19 was done by NCC Cadets. They also distributed masks and food to needy people.
- The "International Yoga Day" was celebrated by cadets with full enthusiasm. They registered on DHE site and performed Yoga with their family members. They motivated students, cadets and family members to do Yoga with social distancing to increase their immunity. Sergeant Vishal and Cadet Raghav Prabhakar left no stone unturned in motivating others by doing and preparing Yoga Videos and posting on social media and Battalion site.



EXPERT LECTURES/SEMINARS/WORKSHOPS

Eight extension lectures for students have been organized in contact mode while online training and seminars from various experts were organized for them during lockdown using video conferencing. 40 hours of Employability enhancement training has been given to all final year students by Nandi Foundations. Four workshops were organized for final year students including Smart sensors, Robotics, Internet of Things and web designing and development using PHP for ECE and Computer Engineering students.





Topics covered in Expert lectures are as follows:

- Electrical Energy Conservation & Management
- AI and Robotics
- Internet of Things
- Passport Awareness
- New IT Technologies emerging in the market
- Latest Trends & Innovation in Automobile sector:
- Entrepreneurial Aspects
- Architecture and Interior Designing
- AWT JAVA

FACULTY DEVELOPMENT PROGRAMS / STCs

During the year 2020 till date 57 Faculty members attended STC through online or offline mode, 86 faculty members attended different workshops, 13 faculty members attended various seminars and 2 staff members attended Industrial Training. A number of online programs for faculty development were organized by NITTTR and other institutes in which the faculty of Institute participated during the lockdown period.

- STC on "Cyber security" was conducted by NITTTR in the Institute campus which was attended by 21 staff members.
- STC on "Accreditation" was organized by NITTTR attended by the accreditation committee of the institute and senior faculty members.
- Online STC on "Quantum and Energy Materials: Potential and applications" was organized by NITTTR attended by Physics faculty of Institute.
- Online STC on "Low Power VLSI design" was organized by NITTTR attended by ECE faculty.
- Online STC by NITTTR were organized on Linux, applications in engineering education attended by Sri Ajay Singh.
- Online STC on Nano materials and devices attended by Smt Priti Srivastava and Dr Sunita Rani.
- Online STC on "Wellness and stress management during the pandemic" attended by Sri Dev Suman Verma.
- Online STC on "Microcontroller and its applications" was attended by Smt Monika Aggarwal.

NATIONAL SCIENCE DAY CELEBERATION





A poster making/painting competition was also organized on **National Science Day(28 February)** on the topic "**Science** – **The Father of Engineering**" in which students participated enthusiastically and made posters showing importance of Science.

Celebration of National Science day (NSD) in the institute included a seminar on "Automobile Industries - Technology Transfer from BS-IV to BS-VI". Main speaker Mr. Jagdeep Kumar, Assistant Professor CGC explained the upcoming changes about BS-VI to be implemented in India from 1st April-2020. The students were apprised about the DPF and SCR technology which will be a part of diesel vehicles. Methods of reduction of pollution to 70% were also explained.



CULTURAL ACTIVITIES

The lockdown period was full of cultural activities. The Institute organized online competitions for students for various cultural and educational activities like Singing, Painting, Poster Making, Solo Dance, Poetry Writing, Essay Writing, Technical Quiz, Declamation, Card Making, Fancy dress etc. The main purpose of organizing these events was to keep students busy during lockdown and improve their capabilities and mental health. These competitions help students improve their emotional ethics also which saved them from unnecessary depressions during lockdown. The institute awarded online certificates to winners and announced prizes that will be given to them on opening of the Institution. Students also participated in National level cultural competitions organized by various institutes in online mode during lockdown period. Many of them got prizes and e-certificates.

A poster making competition was organized on the occasion of Earth Day(22 April) and students made beautiful paintings/posters in given limited time and uploaded them on site to make the online competition a success. First prize was grabbed by Abhishek first year mechanical and second prize was given to Suraj, civil first year. Smt Priti Srivastava and Smt Surbhi were the judges of the event.





An **Online poetry writing competition** was organized on the topics Covid-19/Pandemic/ Lockdown/ Corona Warriors. Students participated in the activity with full enthusiasm and submitted their own poetries within given time. Both English and Hindi poets emerged among students and some very good poetry written by they were observed.

Smt Sonika Khurana, Proprietor, Sur Sangeet Academy and Smt Preetpal Kaur were Judges of the event. Rishiraj Nachiketa of Electronics and communication first year got first prize for his poem "Corona

Mahayoddha". Priya from Mechanical second year got second prize in Hindi Section. Noman from civil engineering won third prize. Manan got fourth prize. First prize in English section was awarded to Tishant from Computer second year and second prize was won by Manpreet Kaur of computer first year.

Essay writing competition in English and Hindi were organized in online mode on topic "Effect of social media on reading habit of books" on **World Book Day**(23 April). First prize was awarded to Sahil Yadav of Mechanical first year and second prize to Anita Devi of Computer second year. The event was judged by Smt Swaran Pahawa and Smt Preetpal Kaur.

















Arjun Lamsar Vikas Marwah

Vaibhav Mishra

Sahil Yadav Manpreet

Declamation Contest on Topics Social distancing, Effect of lockdown on Human mentality and Effect of Lockdown on Economics was organized in online mode. Students were allowed to speak on any one of the given topic for 3 to 5 minutes. Vaibhay Mishra from mechanical got first prize, second prize won by Vikas Marwah from Computer and third by Arjun. Smt Nisha and Sri Ashwani Kumar were the judges of the event.



Card making competition organized on the occasion of Mother's Day(10 May) helped Students to express love towards their mother. They uploaded pic of card on the link shared to them. Tishant, Tushar and Himanshi won first, second and third prize respectively. e-certificates were awarded to them by the institute. Smt Jyoti Sapra was the judge of event.



Himanshi

Consolation

- Online **Quiz competition** on Technology day was a great attraction for students. It was organized in two slots with different questions, due to huge number of entries, and it contained technical questions with brain storming puzzles. Arjun Lamsar won first prize while Ashish Kumar and Gurkirat shared second prize in first Quiz. In second slot Aasish from Electrical won first prize while second prize was shared by Sanjay Prakash and Aman, e-certficates were issued to all winners of the competition. Shri Surender Malik and Ms Sharmila were judges of the event.
- **Solo song competition** was organized in online mode in which students were told to record their activity and upload them on given drive in fixed time. Students were very enthusiastic for such activities and a good number of videos were uploaded by different participants. The singing competition was organized on topic "Desh Bhakti ke Geet" and first prize was grabbed by Mohit Prajapati for his song "Gurure Brahma....". Gulshan Saini won second position. Aarzoo and Sakshi Won third and fourth prize. Sri Sudhir Bhalla (Music Director) and Smt Sonika Khurana (Sur Sangeet Academy) judged the event.

















Aashish

Sanjay

Gurkirat

Tushar Khurana

Jyoti Bala

• The **Solo dance competition** was also organized in online mode with uploading of videos on given drive. In solo dance Bhargava from Architecture got first prize, Aashish Kumar from electrical won the second prize. Aarzoo and Arjun shared third prize. Fourth prize was won by Diksha from electronics second year. Shri Prince (Famous Dance Director) from Ambala and Ms Lisha were the judges of the event.



Besides these competitions some students participated in National level competitions organized by Goswami Ganesh Dutt Sanatan Dharam College Palwal (Haryana) and they performed well and won nine prizes in various competitions, adding pride for the Institute. Abhishek got consolation prize in Painting competition on topic "Salute to Corona Warriers", Ashish got second prize in Technical skill presentation, Rishiraj Nachiketa of electronics first year got second prize in Shlok Uchcharan. Manpreet Kaur from Computer engineering won third prize in Essay writing. Two consolation prizes were won by Jyoti Bala and Rishiraj Nachiketa in Poetry writing competition. Shrey Dixit of ECE first year won consolation prize in Article writing (Chemistry), Sanjay Prakash of Mechanical Engineering first year got consolation in Paper presentation (Chemistry) and Tushar Khurana, Computer first year, won third prize in paper presentation (Economics). Tushar Khurana from Computer engineering first year won first position in state level PCM competition and Paint and Pour Competition organized by CDL-SIET Sirsa.







PLACEMENTS

Placements are the major achievement of any technical Institute. In this sequence, even after lockdown, almost forty percent students got placed in various companies. The students of plastic engineering got hundred percent placements with conditions of immediate joining. Placement drive for rest of the students is still on. Some companies visited the Institute for Campus Interviews before lockdown. Some of them arranged online interviews and issued online offer letters to students and most of the students have already joined their place of posting even after lockdown. SKH, Sheet Metals Components, Pvt. Ltd., Gurugram appointed fifty students of Mechanical, Electrical and Automobile alone after organizing an online interview. Other companies that organized campus interviews(Online/Offline) include:

- HPCL- Mittal Energy Ltd. Bhatinda, Punjab.
- ISGEC Heavy Engg. Ltd., Yamuna Nagar.
- Uncease Automation Pvt. Ltd., Ghaziabad, U.P.
- Avit Infotech, Mohali
- Bajaj Auto Ltd., Pune
- Central Park, Gurugram
- Arise Gabon Special Economic Zone, West Africa
- IND Sphinx Precision Ltd., Parwanoo.
- Hero motor Corporation
- Godrej Mohali
- Sonalika Internatiol Tractors
- Big Ben Ludhiana
- Jindal Stainless Hissar
- Rama Hitek, Derabassi



Campus placement by Indo Spinx Parwanoo



Campus placement at Big Ben Ludhiana

ACTIVITIES DURING LOCKDOWN

The entire world was under lockdown. Even the Sun was said to be entering in lockdown (Solar Minimum), but Government Polytechnic Ambala City was always there with open arms to help students to grow. Teachers and Instructors started developing **Tunnels**, **Chambers**, **UV briefcases and Special Foot Mats** for protection against the pandemic. Students were also guided to do creative work during lockdown and thus keeping themselves busy with good reasons. These activities kept students continuously busy and helped them to avoid depressions due to lockdown. Some activities that were performed by faculty for students during lockdown included the following:

- Online classes through zoom VC / webinar were arranged for all students.
- E-contents were provided to students in text and video formats to cover their syllabus and improve their learning skills.



Blood donation by Principal



Mask and food distribution



Cheque in Corona relief fund



Online Classes

- The Principal of the Institute Dr Rajiv Sapra and some staff members donated blood when there was a shortage of blood in the blood bank of Civil Hospital, Ambala.
- The cheque of donated amount by all staff members was handed over to MLA Sri Aseem Goel in Corona Relief Fund.

• A team from the Institute under guidance of Principal distributed masks and food items to migrant labors during their stay in Saini Bhawan, Ambala City. The masks were prepared by CEGO training center of the Institute under the guidance of Shri Bharat Bhushan (Officer Incharge CEGO). The team also made the labors/ workers aware of precautions against Covid-19.

All staff members and NCC Cadets worked under State Government's Covidveer project.

- They called 50 numbers per day to collect data of BPL families regarding PDS supply and Health data.
- The students of Technical Institutes were called and were asked about progress in studies and availability of e-contents.
- Migrant workers were called per day and feedback forms were filled for sending them back to their Home station.

SPORTS ACTIVITIES

A number of sports activities were performed by students before lockdown. Hockey, Badminton, Basket ball, Kho-Kho, Volley ball and annual athletic meet were the main sports which were organized between Januarys to March this year. Institute teams of various sports participated in Inter Polytechnic Sports Tournaments like Badminton (Girls), Kho-Kho (Girls), Hockey (Boys), Hand ball (Boys), Basket ball(Boys) and Volley ball (Boys). The Hockey team (Boys) won **Bronze medal** and the Basket ball team (Boys) won **Silver medal** in inter polytechnic tournaments.





Institute Hockey Team

Institute Basketball Tteam

Annual Athletic Meet was a three days activity in the starting days of March. It included different types of races, high jump, long jump, triple jump, discuss throw, javelin throw, hammer throw, Cricket match etc. Students enthusiastically participated in various events. The March past performed by athletes at start and end of sports was an attraction this year.









Opening Ceremoney 800 meter race Best Athlete(Boys) Best Athlete(Girls)

Sahil of Mechanical final year was declared best athlete boys and Priya from Architecture first year was declared best athlete girls. Both of them were awarded a cash prize of Rs 5100/- each. Saurabh Sharma and Aryan were declared second and third best athlete boys with cash prize of Rs. 3100/- and 2100/-. Madhubala and Chetna devi were second and third best athlete girls. They also received cash prize of Rs 3100/- and 2100/- respectively. **International Hockey player** Mr Ranjit Singh was the Chief Guest of the ceremony.



Sports President Shri Pankaj Garg, Sports secretary Shri Sanjeev Kumar and trainer Shri Puran Singh did their best to encourage and involve students in various sports activities throughout the semester.

PROJECTS BY STUDENTS

Students of different trades made very good projects as their major activities. Some of the important projects include:

 A Mould was designed and prepared by final year students of Plastic engineering under the guidance of Sh. Pankaj Garg and Sh. Virender Nehra. The mould can be used to produce glasses on Injection Moulding machine.





The Mould Chainless Bicycle

• A final year student Ritik Dhiman and his group mates from Plastic Engineering department designed a Chainless drive for Bicycle under the guidance of Sh. Pankaj Garg and Sh. Virender Nehra. This bicycle works on the principle of Nubike but is very economic in comparison to that ie. Fifteen to twenty thousand as compared to 1.5 to 2 lakh. This cycle can also be used for fitness exercises and it reduces the possibilities of accidents and jamming due to absence of chain. It uses one way clutch bearing and shaft for transmission.

The "Ready mix Concrete Plant", a working model has been made by the final year Civil Engineering students under guidance of Shri Shish Pal Bamnia, which uploads raw material through automatic buckets and its conveyer belt transports material to the rotating mixing drum. It is fully computerized.





Ready Mix Concrete Plant

Green Building Project

• The concept of conservation of energy resources, water resources and Reduction in the Byproducts with its effective disposal is used in "Green Building" project guided by Shri Shish Pal
Bamnia and prepared by Civil engineering students. It uses solar energy panel, thermal insulating
glass, roof gardening, sewerage treatment plant, rain water harvesting technique and perforated
concrete floor.

COLLEGE TOPPERS



Kunal Arch. Asstt. (76.84%)



Manas Kumar Auto Engg. (85.63%)



SAUMYA KAUSHIK
Civil Engineering (83.4%)



Gaurav Nagpal Comp. Engg. (90.00%)



Arjun Singh Elect. Engg. (85.00%)



Devender Kumar ECE (87.25%)



Abhishek Mech. Engg. (86.10%)



Harman Singh Plast. Tech. (80.71%)

SPECIAL ACHIEVEMENTS OF INSTITUTE

The faculty and instructors worked hard and developed a number of things to help people for sanitization from Covid-19 conditions during lockdown period. Students and alumni members also helped in developing such things and thus providing their services for good social causes. It specially includes following:

A Sanitization Tunnel was designed and fabricated for protection from COVID -19. The tunnel was designed in association with Mechanical and Electronics Communication Engineering Department. Engineering The Plastic Department contributed by providing FRP Sheets and other construction materials for the tunnel. It used thin pipeline to spray the sanitizer on the person entering the tunnel. An ECE Alumni Mr Davinder connected it to a sensor that beeps when the person in tunnel comes out of it.





• Special foot mats are designed for protection against COVID-19. It was designed and fabricated by Thermoforming process in PPT-Lab (Plastic Engineering Department) using HIPS sheets. The Mat holds disinfectant liquid so that the shoes get disinfected when someone enters the room by walking over the mat. It was presented to DGTE Haryana Office, Panchkula and is under use there. It is also kept at residence/office of Honourable **Technical Education Minister** Haryana.

• The outbreak of Covid19 has been spreading day by day and it has started infecting employees and officers through official files. In order to break the chain of infection from official files, this institute has developed a novel **Ultraviolet Decontamination Briefcase**. On turning the switch on, it kills the Bacteria, Germs and Viruses present in the files only in 3 minutes by exposing to UV radiations. It was presented to Worthy Commissioner, Technical Education Department, Haryana.



• In the present times of Corona Pandemic, the Corona Warriors (Doctors and other health workers) are doing a yeoman service to the mankind by working selflessly with the threat perception of infection. In order to make its own bit of contribution to the community, a team of faculty members of

Plastic Engineering Department led by Sh. Pankaj Garg, embarked upon a project which was supervised by the Principal Sh. Rajiv Sapra and thoroughly supported by the DGTE Shri Ajit Balaji Joshi and Director, Technical Education, Haryana, Sh. K.K. Kataria. The team coordinated with Sh. Sheel Kant Pajni, SMO Civil Hospital, Ambala Cantt, in order to understand his requirement and has been able to design a special chamber for the doctors that prevents direct contact between doctor and patients, so as to protect the doctors as well as patients in this critical situation. To start OPD facilities, a special frame and door of aluminum has been conceived in which acrylic sheet is mounted with safety gloves for protection of doctors, thus solving the problem for protection of doctors and starting OPD for Public.



• Some of the staff members Shri J S Narang, Sandeep Goel, Sunil Kumar and Surender Malik participated in different National Level Competitions (Online) during lockdown.

EDUCATIONAL / INDUSTRIAL VISITS

Students were taken to different industries to enhance their understanding of the subject and make them aware of actual industrial working. A tour for all first year students was arranged to Digital Library to make them aware of online reading using online library platforms looking into fast growth of technology.



In this sequence following Industrial/Educational tours were arranged for second year and final year students to make them aware of working in Industries and thus to enhance their working capabilities as per market needs.

- Tour to AutoExpo 2020, Noida for Automobile Engineering students.
- Tour to Kandhari Beverages, Saha for mechanical and electrical engineering students.
- Tour to Kasauli for Architecture engineering students.
- Tour to Godrej and Boyce, Mohali for Plastic engineering students.
- Tour to Tajewala headquarters, Yamunanagar for civil engineering students.
- Tour to Doordarshan Kendra, Kasauli for computer engineering students.
- Tour to Rama Hiteck engineering private limited, Derabassi for plastic engineering students.



Visit to AUTOEXPO 2020, Delhi

Visit to Kandhari Beverages Pvt Ltd., SAHA

MISCELLANEOUS ACTIVITIES

Institution by Sri J S Saini, Retired Professor NITTTR, Chandigarh, specially appointed by SBTE Haryana, for improvement of curriculum looking into current market needs and capabilities of students. Separate questionnaire forms designed for students, parents, faculty, HOD's, TPO, Alumni, Industrialists and Principal were filled by them separately and the analysis was done on collected data. One of the major concerns for this analysis was to improve the curriculum in order to succeed on different standards of NBA.



SWOT Analysis





• One of the **Oldest Alumni** from the first batch of Mechanical engineering visited the institute with his family members. He is from batch 1956-1959, the first batch. He went to different labs and workshop and also operated different machines to freshen up his memories. He shared his memories with students and faculty. Currently he is settled in USA.

The Institute is on the way to establish a **Centre of Excellence** in Electrical Engineering Department, in collaboration to Power Grid Corporation, Gurugram. A meeting with HOD Electrical, faculty, team from Power Grid Corporation and DGTE members held for its establishment. The center will start soon to impart quality education to Electrical engineering students as per market needs.



TREE PLANTATION

Tree plantation by students, staff and NCC cadets was done at various occasions for saving Mother Earth. Students were asked to plant trees near their homes during lockdown and take care of plants. It was one of the most refreshing jobs for all during the tensions of lockdown. The students planted trees near their homes and plants in flower pots at their home. The New Year was even welcomed by planting trees by staff in campus of the Institute.



Tree Plantation by Students

RETIREMENTS

Two of the members of the Institute family namely Shri H S Sindhu (T.P.O.) and Shri S K Gupta (Senior Lecturer Automobile Engineering) attained superannuation after successful completion of their services. Their absence will always be felt by Institute.



WHAT DOES NEWS PAPERS SAY ABOUT THE INSTITUTE



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