

GNDEC Ludhiana – Applied Sciences Newsletter

January – June 2025 Edition

Department of Applied Sciences, Guru Nanak Dev Engineering College, Ludhiana

 **From the HOD's Desk**



We are proud to present the achievements, events, and student engagements from January to June 2025. This semester was marked by dynamic participation in academic discussions, outreach workshops, student-led initiatives, and prestigious inter-school events. Our department continues to empower young minds with skills, exposure, and excellence.

– Dr. Harpreet Kaur, Head of Department

EVENT HIGHLIGHTS

GNE's APEX 2024

Date: October 25, 2024

Organized by the Causmic Club, this mega inter-school competition was a tribute to *Mr. Ratan N. Tata*, celebrating leadership and humanity.

30+ schools participated in events like Folk Dance, Rangoli, Reel Artistry, Web Wizards, G.K. Quiz, etc.

Chief Guests:

- **Mrs. Harmeet Kaur Waraich**
- **Dr. R.P. Singh**
- **Er. Manjit Singh Randhawa**

Winners:

-  **GNIPS, Model Town – ₹11,000**

- 🏆 BCM School – ₹7,000
- 🏆 Amrit Indo Canadian Academy – ₹5,000

Sponsors & Partners: Prabal TMT Rebars 550, Coca-Cola, Verka, MAAC, Kangaro, Hover Robotix.



🗣️ Panel Discussion: Diminishing Trend of STEM Courses

Date: January 28, 2025

Over 70 educators from regional schools discussed the drop in STEM enrollments.

Key Themes:

- **Lack of infrastructure & outdated curriculum**
- **The role of experiential learning and virtual labs**
- **Government policy & financial support**

Panelists Included:

- **Dr. Sandeep Kazal (IKGPTU)**

- Mrs. Jaswinder Sidhu (Ludhiana Sahodaya)
 - Prof. (Dr.) Akshay Girdhar (GNDEC)
 - Mr. Gurdeep Sidhu (Cremica)
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Ambit Youth Parliament 2025

Date: April 19–20, 2025

Participants: 200+ students

Committees: Lok Sabha, Punjab Vidhan Sabha, Photography, Cartooning, Media Writing

Chief Guest:

- *S. Jaswant Singh Zafar* – Noted Punjabi poet & GNDEC alumnus

Sponsors: GENCO Alumni Association (₹45,000 in prizes)

Guest Speakers:

- Er. Harinder Singh Dhillon (GENCO Alumni)
- Er. Arvinder Singh (Finance Sec., GENCO)
- Er. Arshdeep Singh (MD, Pioneer Cranes)

School Partners:

- DAV Public School, BRS Nagar
 - Amrit Indo Canadian Academy
 - Nankana Sahib Public School
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Skill Development Workshop for DAV School Students

Date: June 3–5, 2025

Participants: Class 12 Students from DAV Public School, BRS Nagar

A part of GNDEC's Summer Internship Program, this workshop exposed students to:

- Prompt Engineering (Er. Jaswant Singh)
- 3D Printing (Dr. Amrinder Singh Pannu)
- Augmented Reality (Dr. Amit Kamra)
- FORTRAN Programming (Dr. Randhir Singh)
- Instrumentation Techniques (Dr. Paramjit Singh, Dr. Amarjot Kaur, Ms. Komalpreet Kaur)



🎓 STUDENT CONTRIBUTIONS & FEEDBACK

- Students praised faculty engagement, exposure to real-world technologies, and interactive sessions.
 - Many highlighted improved confidence, networking skills, and motivation to pursue science careers.
 - Suggestions for more workshops on coding, entrepreneurship, and field visits were well-received and will be considered in future planning.
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🌟 EVENT HIGHLIGHTS & FACULTY INVOLVEMENT

🐼 GNE'S APEX 2024

Date: October 25, 2024

Coordinator: Dr. Randhir Singh | Co-Coordinator: Dr. Rajvir Kaur

Organized by the Causmic Club, this mega inter-school event celebrated Ratan N. Tata and saw participation from 30+ schools in competitions such as:

- Folk Dance

- Sufi Singing
- Rangoli Marvels
- Digital Identity
- Web Wizards
- G.K. Quiz

Special Guests:

- Mrs. Harmeet Kaur Waraich
- Dr. R.P. Singh
- Er. Manjit Singh Randhawa

Winners:

- 🏆 GNIPS, Model Town – ₹11,000
- 🏆 BCM School – ₹7,000
- 🏆 Amrit Indo Canadian Academy – ₹5,000

Sponsors: Prabal TMT Rebars 550, Verka, MAAC, HoverRobotix, Namdhari Steels

🏠 Ambit Youth Parliament 2025

Date: April 19–20, 2025

Organized by: Causmic Club (Dept. of Applied Sciences)

Coordinator: Dr. Randhir Singh | Co-Coordinator: Dr. Rajvir Kaur

A democratic simulation platform with 200+ participants across:

- Lok Sabha
- Punjab Vidhan Sabha
- Media Committees (Cartooning, Photography, Report Writing)

Faculty Leads Present:

- Dr. Harpreet Kaur Grewal (HOD, Dept. of Applied Sciences)
- Dr. Sehijpal Singh (Principal, GNDEC Ludhiana)
- S. Jaswant Singh Zafar (Chief Guest)
- Er. Harinder Singh Dhillon (GENCO Alumni)

Sponsored by: GENCO Alumni Association – ₹45,000 in cash prizes

Panel Discussion: Diminishing Trend of STEM Courses

Date: January 28, 2025

Faculty Coordinators: Dr. Rajvir Kaur & Dr. Randhir Singh

Key Panelists from Academia & Industry:

- **Dr. Sandeep Kazal (Deputy Registrar, IKGPTU)**
- **Mrs. Jaswinder Sidhu (Ludhiana Sahodaya)**
- **Mr. Gurdeep Sidhu (IT Head, Cremica)**
- **Prof. (Dr.) Akshay Girdhar (Dean Academics, GNDEC)**

Highlights:

- **Causes behind declining STEM enrollments**
- **Role of experiential learning, infrastructure, & faculty training**
- **Real-world models and solutions discussed**

Skill Development Workshop – DAV Public School

Date: June 3–5, 2025

Target Group: Class 12 students under Summer Internship Program

Coordinated by: Dr. Rajvir Kaur

Faculty Contributors:

- **Er. Jaswant Singh – Prompt Engineering**
- **Dr. Amrinder Singh Pannu – 3D Printing**
- **Dr. Amit Kamra – Augmented Reality**
- **Dr. Randhir Singh – FORTRAN Programming**
- **Dr. Paramjit Singh, Dr. Amarjot Kaur, Ms. Komalpreet Kaur – Instrumentation & Measurements**

Feedback:

Students appreciated the hands-on experience and expressed keen interest in deeper science-based explorations.

Faculty Academic Contributions

Research Publications:

- *Pf. Sukhminder Singh* has successfully completed his PhD coursework.
- Dr. Amarjot Kaur, Dr. Harpreet Kaur, Dr. Randhir Singh & Vijay Kant Singh (2025), JOM, Implications on Structural, Morphological, and Optical Properties and Photocatalytic Degradation Behavior of Zinc Oxide Nanoparticles: Effect of Calcination Temperature, April 10, 2025, DOI: 10.1007/s11837-025-07344-9, LINK: <https://link.springer.com/article/10.1007/s11837-025-07344-9>.
- *Pf. Jasmine Kaur* published a research paper on the topic "Student Economic Literacy: An Exploratory Assessment of Knowledge and Awareness" in Gateway International journal of Innovative Research Volume (4), Issue (1), March, 2025, pp 1-16, ISSN No: 2583-7842.
- *Pf. Neeraj Kumar* has made significant progress in his PhD journey. He is currently working under Dr. Neha Sharma (I.K. Gujral Punjab Technical University).

Events Attended:

- *Pf. Sukhminder Singh* participated in the FDP on Innovations in Mathematical Sciences, organized by DAV University, Jalandhar from 27 May to 1 June 2025.
- *Pf. Karan Bhalla* attended AICTE-NPTEL FDP on "Metallocene and Metal-carbene based Organometallic Compounds as Industrially Important Advanced Polyolefin Catalysts" during Jan-March 2025 organized by IIT Kharagpur funded by MoE, Govt. of India.
- *Pf. Karan Bhalla* attended AICTE-NPTEL Course on "Introductory Organic Chemistry I during Feb-April 2025 organized by IISER, Pune funded by MoE, Govt. of India.
- *Pf. Gagandeep Kaur Lotey* participated in 6 days FDP on Artificial intelligence in DAV College, Jalandhar from 16-12-2024 to 21-12-2024.
- *Pf. Gagandeep Kaur Lotey* participated in 7 days national workshop on INDIAN KNOWLEDGE SYSTEM, 7 DAYS, Department of Sanskrit, Deshabandhu Mahavidyalaya, Chittaranjan, West Bengal (16/04/2025 TO 22/04/2025)
- *Pf. Gagandeep kaur Lotey* participated in Five Day National Level online Faculty Development Programme on "Applied Mathematics in Real Time Problems", 5 DAYS, Department of Mathematics, Velammal College of Engineering and Technology from 05/05/2025 to 09/05/2025."
- *Dr. Amarjot Kaur* participated in Basic Training Programme on Indian Knowledge System, 6 Days, 03 March 2025 to 08 March 2025 at Guru Nanak Dev University, Amritsar by UGC.

- *Dr. Amarjot Kaur* participated in 28th Punjab Science Congress-2025, 3 days, 7 to 9 February, 2025 at Khalsa College, Amritsar (Award: Best Poster Award).
 - *Dr. Jaspreet Singh* participated in Six Days Basic Training Program in Indian knowledge System, at GNDU, Amritsar organised by UGC, New Delhi.
 - *Pf. Nisha* attended a 7-Day National Workshop on Indian Knowledge System, organized by MHRD, AICTE, and Punjab University from 3-9 May 2025.
 - *Pf. Nisha* attended a 3 day MDP on “Universal Human Values” organised by NITTTR Chandigarh, in Collaboration with PU Chandigarh, IKGPTU Kapurthala & HPTU Hamirpur at NITTTR, Chandigarh from 10-04-2025 to 12-04-2025.
 - *Pf. Jasmine Kaur* attended a 3 day MDP on “Universal Human Values” organised by NITTTR Chandigarh, in Collaboration with PU Chandigarh, IKGPTU Kapurthala & HPTU Hamirpur at NITTTR, Chandigarh from 10-04-2025 to 12-04-2025.
 - *Pf. Jasmine kaur* participated in the seven day virtual faculty development programme on “Digital Economy and Innovation: Transforming Global markets and Societies” organised by the Department of economics, School of Liberal and Creative arts, Hindustan institute of Technology and Science (Deemed to be University), Chennai, Tamil Nadu, India from 09th to 16th June 2025.
 - *Pf. Neeraj Kumar* attended a 3-day Management Development Program (MDP) on "Institution Building" held from 13-15 March 2025 at IIM Jammu.
 - *Pf. Neeraj Kumar* attended 3-Day Face-to-Face Faculty Development Program (FDP) on the topic “Inculcating Universal Human Values in Technical Education” Organized by: AICTE at Panjab University, Chandigarh from 19th–21st February 2025.
 - *Pf. Neeraj Kumar* attended online 1-Week Short Term Training Programme (STTP) on the topic “Additive Manufacturing and Material Characterization (AMMC-2025)” Organized by: Department of Mechanical Engineering, SLIET Longowal from 24th–28th February 2025.
 - *Pf. Neeraj Kumar* attended National SWAYAM–NPTEL Awareness Workshop on 17th April 2025
 - *Pf. Neeraj* attended a 3 day MDP on “Universal Human Values” organised by NITTTR Chandigarh, in Collaboration with PU Chandigarh, IKGPTU Kapurthala & HPTU Hamirpur at NITTTR, Chandigarh from 10-04-2025 to 12-04-2025.
 - *Pf. Komalpreet kaur* attended a 3 day MDP on “Universal Human Values” organised by NITTTR Chandigarh, in Collaboration with PU Chandigarh, IKGPTU Kapurthala & HPTU Hamirpur at NITTTR, Chandigarh from 10-04-2025 to 12-04-2025.
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Events Organized

Dr. Amanpreet Kaur Sodhi

Incharge- The Chemovate Society.

- Two workshops on IQmol software for BTech first year students on 14 and 18th feb 2025.
- MAD SCIENCE an event on 30th April, was held for all the students of college. Peer to peer learning for BTech chemistry group students in the subject of chemistry on 2nd May 2025.

Dr. Gagandeep kaur Lotey

- Activity on the Maths Fusion-I, Organised on GNDEC 69th Foundation day.

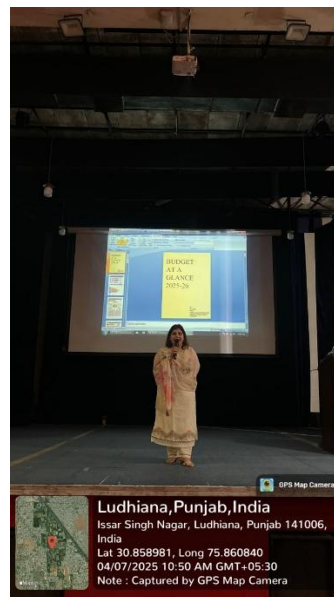
Pf. Nisha

- Public speaking event titled "**Speak'sphere**" on 11 February 2025, aiming to enhance students' communication skills.
- 'Story Dunk' held on 03 March, 2025 .
- ' Extempore ' held on 7 May, 2025.

Pf. Jasmine kaur

- 'Story Dunk' held on 03 March, 2025 .
- ' Extempore ' held on 7 May, 2025.
- Extension Lecture on the topic 'Budget 2025'.

Glimpses of Extension Lecture



Pf. Aastik Sharma

- Coordinated as a member of Inspire Award (under Manak Scheme) District Level Exhibition and Project Competition 2025 on 22nd May, 2025.

Departmental Engagement

- Hitika Dhawan* and *Neeraj Kumar* represented the department in the **Maths Fusion Competition** as guest participants and coordinators for class visits.

Awards & Milestones

- *Pf. Sukhminder Singh* proudly completed his PhD coursework during this period.
- Dr. Rajvir kaur was honored with the **Best Teacher Award** and earned a **Bronze medal** in the Women Faculty Relay Race during the 64th Annual Athletic Meet held at GNDEC, Ludhiana (20–21 February 2025).

Student & Faculty Achievements

Student PhD Completions:

- Three students completed their PhDs under faculty supervision. [Details can be added when available.]

Guidance & Internships:

Dr. Amanpreet Kaur Sodhi

- During vigyan mahotsav in Khalsa college for women, Ludhiana on 11th March 2025, our students participated in chemistry experiments category- Lab of Wonders. (Gurasis kaur, Btech 1st year CSE, 2434975 and Gagandeep Kaur Btech 1st year CSE, 2434967.

Student Recognition

Dr. Amarjot kaur

1. 1st year, Sahibdeep Singh, 2415252, CSE, got 1st position in Hackathon at GNA University during 29-30 March, 2025 and 2nd position in Group Discussion at Khalsa College of Engineering & Technology during 20-21 February 2025
2. 1st Year, Ravinder Singh, 2415241 CSE1, got 2nd Position in Esports, at khalsa engineering college Amritsar during 21 February 2025.
3. 1st year, Nishta Dhand, 2435608, ITC got 2nd position in Skit in Anand utsav 2025 at GNDEC
4. 1st year, SAHIL, 2415253, CSE got 1st position in Basketball match during ptu inter college athletic meet at GNDEC on 17 oct 2024.
5. 2nd year, Palak, 2302792/2316054, EEB1 [D2], 1st position in discuss throw in GNDEC athletic meet during 20-21 February 2025, 1st position in discuss throw in ptu inter college athletic meet at GNDEC on 17 oct 2024 and 3rd position in light vocals singing in Anand utsav 2025 at GNDEC
6. 2nd year, Manjot Kaur, 2302787, EEB, Sports meet, 20-21 February 2025 at GNDEC got 2nd prize in tug of war and 3rd in 100*4 Relay

7. Ist year, Shivansh Pushkarna, 2415268, CSE, 1st position in Hackathon at GNA University during 29-30 March, 2025
8. Ist year, Shubhjot singh, 2415270, CSE, got 2nd Position in Esports, at khalsa engineering college Amritsar during 21 February 2025.
9. Ist Year, Prabhjot kaur, 2421131, ITC 2nd position in Skit in Anand utsav 2025 at GNDEC
10. 1st year, Yashika Jain, 2435218, CSF, Participated in Skit in Anand utsav 2025 at GNDEC.

Judgement

- Judge at Inspire award District Level Exhibition and Project Competition by DST on 22-05-2025 held at GNDEC.

Expert Talk

Dr. Amarjot Kaur

- Expert talk on physics experiments under skill development program, during 3 to 5 June 2025.

Community Outreach an initiative by Dr. Amanpreet Kaur Sodhi

- EDUCARE- an initiative to teach free of cost to the students facing social economic barriers.



Community Outreach by Pf. Neeraj Kumar

- Participated in the program organized on the occasion of Dr. B.R Ambedkar Jayanti on 14th April 2025.