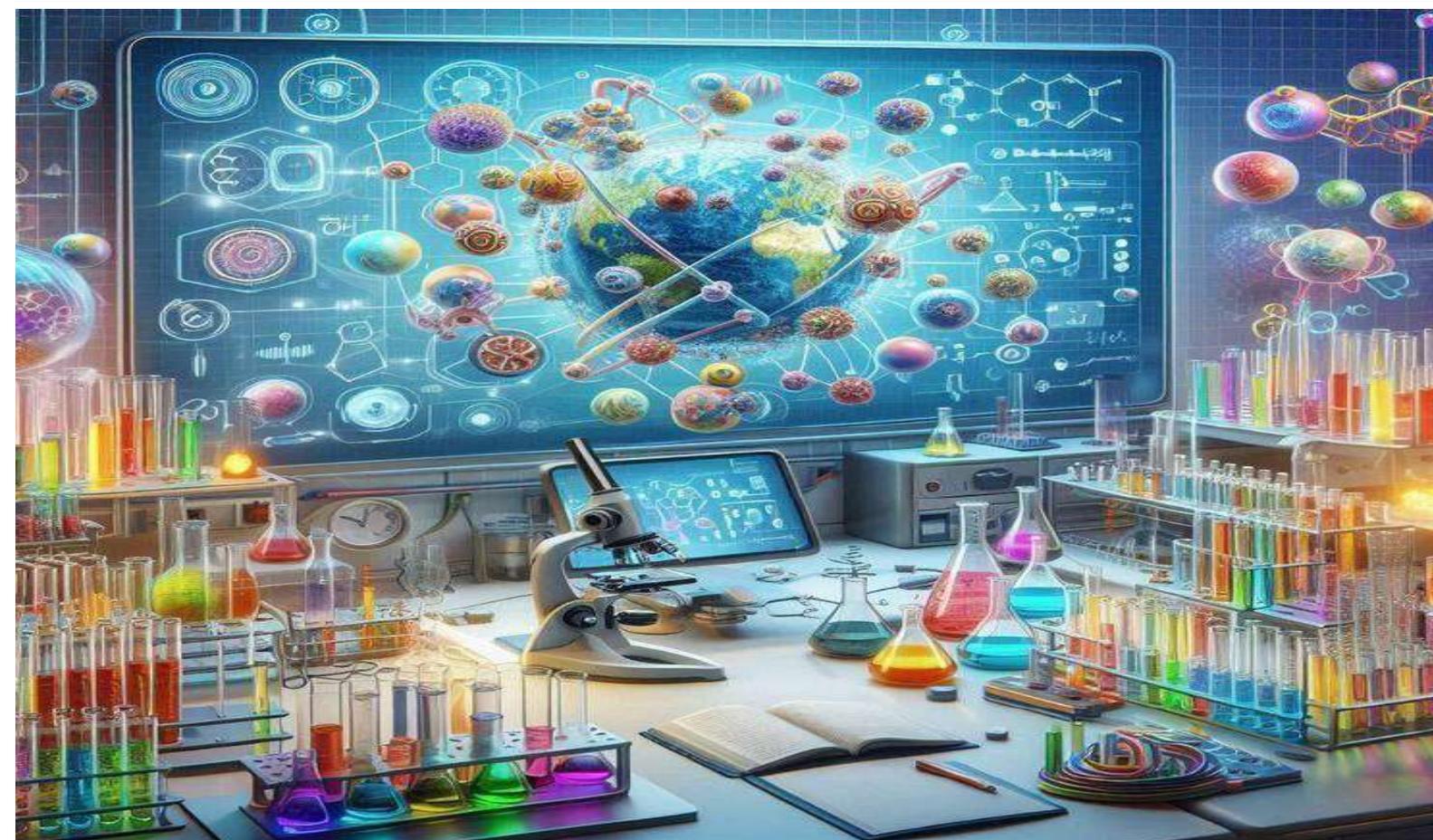




The Science Spin
An Annual newsletter (Volume-10)
2024-25

SCIENCE





Smt. Kamala Nehru (1899-1936)

Our vision

To blossom as one of the Leading and Most Preferred Institutes with Earnest endeavors to enhance its quality in imparting excellent education-vocational & competitive to the highest academic standards with full devotion and dedication.

Our mission

To Nurture, Nourish and Chisel our girls into a host of Well-shaped Individuals- Self-reliant, Self-sufficient and Responsible Citizens, leading to the upliftment of the society.



*It is truly heartening to learn that the **Department of Sciences at Kamla Nehru College for Women, Phagwara** is unveiling its annual science newsletter, “**The Science Spin**”, for the academic session **2024–2025**.*

*This remarkable initiative not only reflects the academic excellence and dynamic spirit of the department but also serves as a powerful platform to celebrate the **creativity, innovation, and scientific inquiry** thriving within the institution. It stands as a testament to the college’s unwavering commitment to fostering a culture of exploration and critical thinking.*

*I extend my heartfelt congratulations to the **Principal**, the **faculty**, and the entire team involved in bringing this publication to life. With continued dedication and vision, I am confident that “**The Science Spin**” will grow into a cherished tradition and a symbol of intellectual inspiration for many years to come.*

Wishing the team great success in this and all future editions!

Mr. Dhiraj Sardana

President



It gives me immense pleasure to unveil the latest edition of our annual science bulletin, "The Science Spin", curated by the Department of Sciences. This publication stands as a testament to the energy, intellect, and relentless curiosity that defines our scientific community.

From groundbreaking student projects and faculty research to thought-provoking articles and success stories, this edition brings together the many threads of innovation and inquiry that run through our department. It's a reflection of how science comes alive in classrooms, labs, and minds across our campus.

"The Science Spin" celebrates not only achievements, but the journey of learning, questioning, and discovery. It captures the vibrant pulse of science — ever evolving, always inspiring.

I commend the entire team behind this year's edition for their dedication and creativity. Your hard work has resulted in a publication that is both informative and engaging. May this bulletin continue to be a source of inspiration, curiosity, and pride for our students, faculty, and readers alike.

Here's to continued exploration and discovery!

Dr. Savinder Pal

Principal



Girls' education is crucial for individual empowerment and overall societal development and I am happy to observe that in our region Kamla Nehru College for Women, Phagwara has been contributing utmost for this cause. The Department of Science deserves applause for bringing out a new issue of its newsletter 'The Science Spin'. Today it is the need of the hour to bridge the gap between science taught in class and science applied everywhere. The annual newsletter inspires good coordination among readers and the faculty of the Department of Science. Their constant efforts very well accomplish the target of all round development of the students of the college.

The spin word in 'The Science Spin' conveys to me another meaning that how systems with multiple particles interact. On viewing the presentation of the scholastic and extracurricular achievements of the department in the newsletter, the latent creative talent of the readers will surely be brought out. I hope that this newsletter serves many useful purposes. I wish all the very best to the department's future endeavours and I hope the students bring more laurels to the institution.

Dr. Geetanjali Kaushal

PG Department of Chemistry

Lyallpur Khalsa College, Jalandhar



I am delighted to share that the Department of Science at Kamla Nehru College for Women, Phagwara, is proudly presenting its annual bulletin, The Science Spin. This accomplishment would not have been possible without the unwavering support and encouragement of many individuals.

I extend my heartfelt gratitude to all the esteemed faculty members of the department for their invaluable contributions in shaping this remarkable publication. A special note of appreciation goes to our respected Principal, whose visionary leadership and guidance have been instrumental in steering this initiative in the right direction.

Thank you all for your continuous support in making The Science Spin a reality!

Ms. Priyanka Mankhand
Head, Department of Sciences



It brings me immense joy on the release of the 10th volume of our esteemed News Bulletin, "The Science Spin." I would like to express my sincere appreciation to our Principal, Mam, for her invaluable guidance and supervision throughout this journey. Her support has been instrumental in fostering an environment where creativity and scholarly pursuits thrive. I am also thankful to all the faculty members of the department for their sincere efforts. As we reflect on the achievements and advancements highlighted in this volume, let us continue to inspire one another and nurture our passion for science. Together, we can make a significant impact in our academic community and beyond.

Ms. Pinky
Assistant Professor
Department of Chemistry

DEPARTMENT OF SCIENCES

"The important thing is to never stop questioning."

Established in **2004**, the **Department of Sciences** has been a dynamic center of learning, research, and innovation. Over the years, it has grown into one of the most prestigious departments, dedicated to academic excellence and scientific advancement. With a mission to nurture curiosity, critical thinking, and research-oriented learning, the department provides students with an intellectually stimulating environment.

Programs Offered

The department offers a variety of undergraduate programs and specialized courses as per NEP 2020 guidelines to equip students with in-depth scientific knowledge and practical skills:

Undergraduate Courses:

- **B.Sc. in Medical Sciences** – Focused on life sciences, human biology, and medical-related studies, preparing students for careers in healthcare, research, and related fields.
- **B.Sc. in Non-Medical Sciences** – Covers core scientific disciplines such as Physics, Chemistry, and Mathematics, providing a strong foundation for engineering, technology, and applied sciences.
- **B.Sc. in Computer Science** – A comprehensive program designed to develop expertise in programming, data science, artificial intelligence, and emerging technologies.

Add-On Course in Biotechnology:

In addition to traditional degree programs, the department offers **Certificate, Diploma, and Advanced Diploma courses in Biotechnology**, empowering students with specialized knowledge in genetic engineering, microbiology, and bioprocess technology.

“Star College Status” – A Mark of Excellence

The **Department of Sciences** holds the prestigious **“Star College Status”** awarded by the **Department of Biotechnology (DBT), New Delhi**. This recognition is granted to institutions that demonstrate excellence in scientific education and research, making it a rare and significant achievement.

With this support, the department has significantly enhanced its infrastructure, including:

- ✓ **State-of-the-Art Smart Classrooms**
- ✓ **Advanced Laboratory Equipment**
- ✓ **Expansion of the Botanical Garden with New Plant Species**
- ✓ **Establishment of a Vermiculture Unit**
- ✓ **Reconstruction of the Greenhouse for Research & Conservation**

With this honor, the department has received substantial funding to enhance its facilities and resources. Key advancements include:

- ✓ **State-of-the-Art Smart Classrooms** – Equipped with interactive digital boards, high-speed internet, and modern teaching aids for an immersive learning experience.
- ✓ **Upgraded Research Laboratories** – Advanced infrastructure with sophisticated instruments, enabling students to conduct high-quality experiments and research.

- ✓ **Botanical Garden Expansion** – Introduction of diverse plant species to support botanical studies, conservation efforts, and environmental sustainability projects.
- ✓ **Vermiculture Unit** – A dedicated facility to study organic waste decomposition, soil enrichment, and sustainable agricultural practices.
- ✓ **Greenhouse Reconstruction** – A modernized greenhouse for controlled plant growth experiments, research in horticulture, and environmental studies.

A Vision for the Future

The **Department of Sciences** is committed to shaping the future of education, innovation, and research. With a highly qualified faculty, industry collaborations, and continuous advancements, the department provides students with the skills and knowledge to encourage them to think critically, solve real-world problems, and contribute to scientific progress.

Join us in our journey of exploration, discovery, and excellence!



Left to right: - Ms. Heena, Dr. Swapnil, Ms. Tunish, Ms. Pinky, Dr. Savinder Pal (Principal), Ms. Priyanka, Ms. Khushi, Dr. Tavisha, Ms. Ashmeet.

FACULTY OF SCIENCE DEPARTMENT

MATHEMATICS

- **Name:** Ms. Priyanka
Designation: Assistant Professor & Head of the Department
Qualification: M.Phil., M.Sc. (Hons.), B.Ed.
Area of Specialization: Differential equation, Algebra
Publications: 01 (International), 02 (National)
Seminars/Webinars/Conferences/Workshops Attended: 18 (01-International)



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- **Name:** Ms. Heena Handa
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CHEMISTRY

- **Name:** Ms. Pinky
Designation: Assistant Professor
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Area of Specialization: Organic Chemistry
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Seminars/Webinars/Conferences/Workshops Attended: 11(National)



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BOTANY

- **Name:** Dr. Swapnil Singh
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Qualification: Ph.D, M.Sc. (Hons.)
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Email: swapnbrij@gmail.com



- **Name:** Dr. Tavisha Singh
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ZOOLOGY

- **Name:** Ms. Tunish
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Seminars/Webinars/Conferences/Workshops Attended: 04 (National)
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PHYSICS

- **Name:** Dr. Neha Sharma
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Qualification: Ph.D., M.Sc.
Area of Specialization: Material science and Condensed matter physics
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Seminars/Webinars/Conferences/Workshops Attended: 06 (04 International)
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- **Name:** Ms. Ashmeet Kaur
Designation: Assistant Professor
Qualification: M.Sc.
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- **Name:** Ms. Isha Bhardwaj
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Area of Specialization: Quantum mechanics, nanotechnology
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"The scientist is not a person who gives the right answers, but one who asks the right questions."

INFRASTRUCTURE

Enhancing Science Education Through Practical Exposure

Teaching science transcends the boundaries of traditional classroom instruction. It thrives on providing students with real-world exposure to practical applications and environments beyond the classroom. To this end, the department offers various facilities that enable students to gain hands-on experience and deepen their knowledge. These include:

- **Laboratories**
- **Smart Classrooms**
- **Botanical Garden**
- **Vermiculture Unit**
- **Greenhouse**

Laboratories

The department boasts well-established, fully equipped, and modernized laboratories catering to the disciplines of Botany, Biotechnology, Zoology, Chemistry, and Physics. These labs are designed to meet the diverse academic and research needs of students and faculty.

Key Facilities:

- **Botany:** Specialized resources for plant studies, including advanced microscopy and specimen preparation.
- **Biotechnology:**
 - Tissue Culture Lab
 - Instrumentation Lab
- **Zoology:** Facilities for animal studies and ecological research.
- **Chemistry:** Modern equipment for chemical analysis and synthesis.
- **Physics:** Precision instruments for experimental physics.

Sophisticated Equipment:

- **UV-VIS Spectrophotometer:** For analyzing the absorption and transmission of light in solutions.
- **Potentiometer:** For accurate measurement of electrical potential.
- **Laminar Airflow:** Ensuring a sterile environment for microbiological experiments.
- **BOD Incubator:** Used for biological oxygen demand tests to assess water quality.
- **Seed Germinator:** Providing controlled conditions for studying seed germination and plant growth.

These facilities empower students to make the best use of advanced tools and foster interdisciplinary collaboration, enriching their academic and professional trajectories.



CHEMISTRY LAB



PHYSICS LAB



BIOTECHNOLOGY LAB



BOTANY LAB



ZOOLOGY LAB



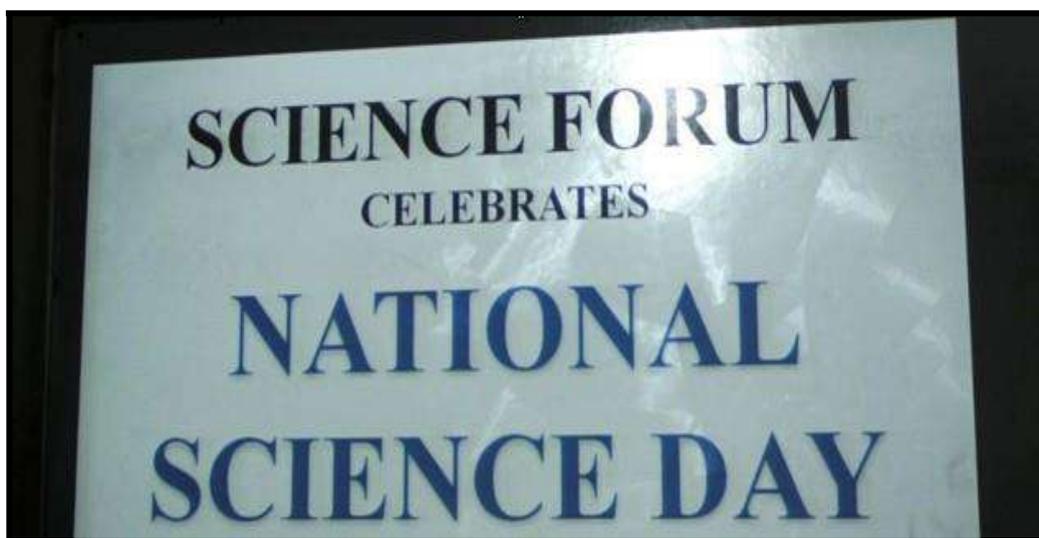
BOTANICAL GARDEN



MATHS LAB

SMART CLASSROOMS

The Department also owns one smart class room promoting digital education to students. The staff makes use of this platform and uses all interactive modules like videos and power point presentations for students. These modules are eye-catching, fast and effective. The students are also in return engrossed in digital training to harness their potential and build confidence.



BOTANICAL GARDEN

The Botanical Garden and Greenhouse serve as a vital resource for imparting practical knowledge of flora and fauna to students.

The department's botanical garden features a wide variety of plants alongside select microorganisms. Its layout adheres to the Bentham and Hooker system of classification. The garden includes specialized sections, such as a rose garden showcasing diverse rose species and a cactus garden with various types of cacti. Additionally, it houses an aquatic pond dedicated to cultivating hydrophytes and microorganisms.



Several innovative projects are actively conducted within the botanical garden:

1. Vermicompost Pit:

Organic manure is produced using earthworms, cow dung, and plant litter. This manure is utilized in the garden and campus lawns, promoting organic farming practices.



2. **Horticultural Pit:** Horticultural pits are designed to decompose garden and kitchen waste, converting it into nutrient-rich compost that can be used to improve soil quality and promote healthier plant growth.



3. **Decomposing Dry Leaves Through Pit Composting:** Composting pit is monitored to ensure efficient decomposition, and the resulting compost is later used in campus gardening projects.



These initiatives reflect the department's commitment to sustainability and hands-on learning, providing students with a deeper understanding of ecological and environmental principles.

GREENHOUSE:

The department also has a green house where plants which require particular climatic conditions are grown. Students are assigned to work and clean the green house and utilize it for the academic curriculum.



Various activities carried out by the department

Co-Curricular activities of Department:

Taking into consideration the student's holistic development, the department also motivates the students to participate in inter-college as well as intra-college activities held from time to time. All these activities help the students to enhance their knowledge and creativity.

SESSION 2024-25

1. WORKSHOP ON APPLICATIONS OF MATHEMATICS USING COMPUTATIONAL TECHNIQUES:

The **Department of Science** organized a highly successful **workshop on the Applications of Mathematics using Computational Techniques** on **September 7, 2024**. The workshop, held under the esteemed guidance of **Dr. Savinder Pal**, Principal of the college, focused on equipping students with essential computational skills to solve mathematical problems using **SCILAB**, a powerful open-source software for numerical computations.

The event was graced by **Dr. Gagandeep**, Associate Professor and Head of the Mathematics Department at **HMV College**, who served as the **resource person** for the workshop. Dr. Gagandeep's engaging and insightful session captivated the attention of the **50 students** who participated. She expertly explained various commands and functions in **SCILAB** to help solve complex mathematical problems, providing the students with valuable tools to enhance their mathematical problem-solving abilities.

Throughout the workshop, Dr. Gagandeep delved into the practical applications of computational techniques in **real-life scenarios**, highlighting how these tools can be utilized in various fields such as engineering, science, and data analysis. Her thorough explanations and hands-on demonstrations not only enriched the students' understanding of mathematical computations but also sparked their interest in further exploring computational mathematics.

At the conclusion of the workshop, **Dr. Savinder Pal**, the Principal, congratulated both the students and the **faculty members of the Science Department** for their efforts in organizing such an **enlightening event**. She also encouraged the continuation of such initiatives in the future, emphasizing the importance of hands-on learning and the integration of technology in education to prepare students for the evolving demands of the modern world. The workshop was a great success, providing the students with practical knowledge and skills that will aid them in their academic and professional pursuits, especially in the field of mathematics and computational techniques.



2. WORKSHOP ON CALCULUS LABORATORY

The **Department of Science** successfully conducted a **workshop on Mathematics** on **March 4, 2025**, under the guidance of **Dr. Savinder Pal**, Principal of the college. The workshop focused on the topic '**Calculus Laboratory**', providing students with an opportunity to explore advanced mathematical concepts through practical applications.

Renowned mathematician **Dr. Gagandeep**, Associate Professor and **Head of the Mathematics Department** at **Hans Raj Mahila Maha Vidyalaya, Jalandhar**, was invited as the **resource person** for the event. She delivered an insightful session, emphasizing the significance of **calculus in real-world applications**. Her lecture covered various fundamental and advanced mathematical concepts, including:

- **Plotting graphs** of elementary functions and polynomials
- **Visualization of 2D and 3D graphs** for a deeper understanding of mathematical models
- **Tracing conicoid** and their significance in geometry
- **Understanding derivatives** through **interactive software tools**, helping students grasp their applications in physics, engineering, and economics

The hands-on session allowed students to **experiment with mathematical models**, use specialized **graphing software**, and gain a practical understanding of abstract calculus concepts.

The event saw the participation of **around 50 students**, who actively engaged in discussions, problem-solving exercises, and interactive demonstrations. The session not only enhanced their computational skills but also instilled **a deeper appreciation for the power of mathematics** in scientific research and technological advancements.

Dr. Savinder Pal, Principal of the college, congratulated the **students and faculty members of the Science Department** for successfully organizing such an **informative and intellectually stimulating event**. She emphasized the importance of **mathematical literacy** in today's rapidly evolving scientific landscape and encouraged students to continue exploring the subject with curiosity and enthusiasm.

The workshop concluded on a high note, leaving the participants enriched with new knowledge and a strong foundation in **practical calculus applications**.



CELEBRATION OF DAYS

1. NATIONAL SPACE DAY

Under the leadership of **Dr. Savinder Pal**, the Principal of the college, the **Department of Science**, in collaboration with the **IQAC** and **Professor Puran Singh Society**, celebrated **National Space Day** on **23rd August 2024**. The event was centred around the theme **“Touching Lives While Touching the Moon: India’s Space Saga”**, which focused on India’s remarkable achievements in space exploration, particularly through **ISRO** (Indian Space Research Organisation).

The event featured a **presentation by Mrs. Neha Sharma**, Assistant Professor in Physics, KNCW. She delivered an insightful **PowerPoint presentation** on India’s journey in space, highlighting the pioneers behind **ISRO’s success** and the remarkable contributions of **Indian scientists** in space research. Mrs. Neha Sharma also elaborated on the **significant role of women** in the successful landing of **Chandrayaan-3** in the lunar southern region, celebrating the achievements of women scientists who played a key role in this mission.

In addition to the presentation, a **short movie** related to the **history of ISRO** was shown, providing students with a deeper understanding of the organization’s milestones. Following the movie, a **quiz competition** was conducted based on the film, which engaged students in testing their knowledge about India’s space missions and ISRO’s contributions to global space science.

The event also included a **Poster Presentation Competition**, where students from both **junior college (Class 12, Medical and Non-Medical)** and **senior college (B.Sc Non-Medical, Semester 3)** participated. The winners of the poster competition were recognized for their creativity and knowledge on space exploration.

At the conclusion of the event, **gifts** were distributed to the winners of the quiz and poster presentation competitions.

Dr. Savinder Pal, Principal of college, encouraged the students to keep exploring and pursuing their interests in science and space technology. She also congratulated the **Science Department** for organizing such a **successful event**, which not only celebrated India’s space achievements but also inspired students to take a keen interest in scientific advancements.

The event was well-attended, with **around 90 students and faculty** from the Science Department participating. It proved to be an enlightening experience, sparking curiosity and pride in India’s growing space prowess.



2. WORLD OZONE DAY

The **Science Department**, in collaboration with the **NSS Unit** and **ECO Club**, celebrated **World Ozone Day** on **16th September 2024**. The event aimed to raise awareness about the **depletion of the ozone layer** and to explore possible solutions to preserve it. The theme for this year's celebration was "**Ozone for Life**".

The celebration included several engaging activities, such as a **Rally**, **Planting for Sustainability**, **Home for Aves**, and a **Poster Making Competition**. The rally witnessed enthusiastic participation from students, who spread awareness about the importance of the ozone layer and its protection.

The **Planting for Sustainability** competition focused on encouraging students to plant trees as a way to contribute to environmental preservation. Meanwhile, the **Home for Aves** competition highlighted the need to protect bird habitats, and the **Poster Making Competition** allowed students to creatively express their thoughts on the significance of the ozone layer and ways to safeguard it.

Around **100 students** participated in the various competitions, displaying their creativity and commitment to environmental causes.

Dr. Savinder Pal, the Principal of the college, and **Dr. Ruminder Kaur**, the Vice Principal, appreciated the efforts put in by the students and congratulated the winners. Medals were awarded to the top performers in each competition:

- **Home for Aves Competition:**
1st Prize: **Tanya**,
2nd Prize: **Vinny**,
3rd Prize: **Rattan**
- **Poster Making Competition:**
1st Prize: **Vinny** and **Manraj**,
2nd Prize: **Neha** and **Loveleen**,
3rd Prize: **Nisha** and **Kashish**,
Consolation Prizes: Dapinder Kaur and **Diksha**
- **Planting for Sustainability Competition:**
1st Prize: **Sukirti** and **Diljinder Kaur**,
2nd Prize: **Vinny** and **Deepshika**,
3rd Prize: **Muskan** and **Simran**,
Consolation Prizes: Komal, Amanpreet, and Mannat

In her address, **Dr. Savinder Pal** congratulated the students and faculty members of the **Science Department** for their efforts in organizing such an enlightening and impactful event. She also motivated students to continue engaging in activities that promote environmental awareness and sustainability.

The event was a great success, leaving a lasting impression on the students and emphasizing the crucial need for protecting the ozone layer to ensure a healthier planet for future generations.



3. WORLD SCIENCE DAY

The Science Department marked World Science Day with vibrant enthusiasm and thought-provoking discussions centered around this year's theme, "The Role of Science in Society." The event served as a platform for young minds to explore and reflect on how scientific progress continues to shape the world we live in.

The celebration featured a series of engaging and intellectually stimulating activities, including a group discussion and an interactive quiz competition. Approximately 40 enthusiastic students actively participated in the day's events, demonstrating keen interest and a commendable spirit of inquiry.

The group discussion session was particularly enriching, as students delved into a wide range of topics illustrating the profound influence of scientific advancements on various aspects of life—from healthcare and technology to environmental sustainability and education. Participants exchanged perspectives on how science not only solves practical problems but also raises important ethical and social questions.

Adding to the excitement, the quiz segment tested the participants' scientific acumen across multiple domains, fostering a healthy competitive atmosphere. The quiz encouraged teamwork, critical thinking, and quick recall, keeping the audience engaged and energized throughout.

The highlight of the event was an inspiring address by Dr. Savinder Pal, Principal of the college, who commended the students and faculty for their active involvement. In her speech, she emphasized the indispensable role of science in addressing contemporary global challenges such as climate change, public health crises, and sustainable development. She underlined the importance of nurturing scientific temper and curiosity among students, as these qualities are key to building a progressive and informed society.

Dr. Savinder Pal, college Principal also extended her heartfelt congratulations to the Science Department for organizing a well-conceived and impactful event. She praised their efforts in creating an environment that not only celebrates science but also ignites a deeper understanding of its relevance in daily life and its potential to transform the future.

Overall, the World Science Day celebration was a resounding success. It left a lasting impression on all attendees by fostering meaningful dialogue, encouraging scientific thinking, and reinforcing the pivotal role science plays in societal development and global well-being.



4. NATIONAL WILDLIFE WEEK

Under the able guidance of **Principal Dr. Savinder Pal**, the **Science Department**, in collaboration with the **ECO Club**, celebrated **National Wildlife Week** from **14th to 19th October 2024**. The week-long celebration aimed to raise awareness about the importance of wildlife conservation and the protection of our natural heritage.

One of the highlights of the event was an **Essay Writing Competition**, which saw enthusiastic participation from students. The essays, centered around the theme "**Safeguarding Our Natural Heritage**," provided students with an opportunity to express their innovative thoughts on how to protect the environment and preserve biodiversity.

In addition to the essay writing competition, a **Poster Making Presentation** was also held, showcasing creative and impactful visuals that depicted the beauty of wildlife and the urgent need for conservation. The posters convey powerful messages, urging viewers to take action in preserving nature.

A **Presentation on Wildlife Conservation** was also showcased, offering students an insightful glimpse into the challenges faced by various species and the steps needed to ensure their survival. The presentation highlighted the importance of sustainable practices and the role of each individual in protecting the planet's wildlife.

Principal Dr. Savinder Pal also extended her heartfelt congratulations to the **teachers of the Science Department** and the **members of the ECO Club** for organizing such a successful and meaningful event. Her appreciation underscored the importance of nurturing environmental awareness and fostering a sense of responsibility toward wildlife conservation among students.

The event was a great success, leaving a lasting impact on the students and reinforcing the message of the vital role that each of us plays in protecting the earth's wildlife and natural heritage.



5. Dheeyan Di Lohri Celebration

Under the **able guidance** of the esteemed **Principal, Dr. Savinder Pal**, the **Departments of Science and Commerce** came together to celebrate the **vibrant and culturally significant festival of Lohri**. This special event, titled "**Dheeyan Di Lohri**", was organized with great **enthusiasm** and aimed at highlighting the **importance of the festival in honoring daughters and promoting gender equality**.

The celebrations commenced with a **traditional Lohri Pooja**, where the revered **bonfire was lit** by the **Principal, Dr. Savinder Pal**, marking the official beginning of the event. Students and faculty members gathered around the sacred fire, offering **groundnuts, rewri, and popcorn** as traditional **offerings to Agni, the God of Fire**, while chanting **folk songs** and seeking blessings for prosperity and happiness.

The event was **further enriched with cultural performances**, where students showcased their **talent in singing, dancing, and poetry recitals**, all emphasizing the **significance of girls and their invaluable role in society**. The vibrant atmosphere was filled with the **rhythm of dhol beats and folk music**, making the occasion truly festive.

Dr. **Savinder Pal**, College Principal, addressed the gathering and spoke eloquently about the **cultural and historical importance of Lohri**. She particularly **highlighted the significance of celebrating "Dheeyan Di Lohri"**, stressing how such initiatives help in **promoting awareness about gender equality, women empowerment, and breaking societal stereotypes**. She also **appreciated the efforts of the organizing departments** for arranging such an enlightening and joyous event.

The event concluded with a **vote of thanks**, followed by **distribution of sweets and traditional Lohri delicacies** among students and faculty members. The **Dheeyan Di Lohri celebration** was not just a **festive occasion** but also a **meaningful step** towards fostering a **progressive mindset and honoring the contributions of women in all spheres of life**.

Date of Celebration: 13th January 2025



6. Basant Panchami Celebration

Under the **able guidance** of the **Principal, Dr. Savinder Pal**, the **Science, Home Science, and Music Departments** came together to celebrate the **vibrant festival of Basant Panchami** with **great fervor and enthusiasm**. This auspicious occasion, dedicated to **Goddess Saraswati**, the deity of wisdom, knowledge, and arts, was marked with **cultural performances, competitions, and traditional rituals**, making it a truly memorable event.

The celebrations commenced with a **reverent Saraswati Pooja**, where students and faculty members **invoked the blessings** of the Goddess of Knowledge for wisdom and academic success. The sacred rituals were followed by a **soulful rendition of the Shabad "Mauli Dharti Mauliya Akash"**, performed beautifully by the **principal, faculty members, and students**, creating a spiritually enriching atmosphere.

The event featured a variety of **engaging activities**, capturing the essence of Basant Panchami:

- A **kite-flying competition**, symbolizing **joy, freedom, and the onset of spring**, saw students showcasing their skills in maneuvering colorful kites across the sky.
- A **Miss Basant competition** was held, drawing considerable excitement and participation from students. **Bismandeep Kaur** was crowned "**Miss Basant 2025**", while **Sukriti Sharma and Muskan Verma** secured the titles of **first and second runners-up**, respectively.

- A **decorative umbrella competition**, where students displayed their creativity by designing vibrant and artistic umbrellas, added another dimension of festivity to the event.

The college campus was adorned with **yellow decorations**, reflecting the color associated with Basant Panchami, signifying **energy, prosperity, and happiness**. Students and faculty members dressed in **shades of yellow**, further enhancing the festive spirit.

Speaking at the event, **Principal, Dr. Savinder Pal**, emphasized the **cultural and educational significance of Basant Panchami**. She highlighted how such celebrations play a **vital role in instilling values, fostering creativity, and providing a platform for students to showcase their talents**. She also commended the **organizing departments** for their efforts in making the event a **grand success**.

The event concluded on a joyful note with **distribution of sweets and prasad**, spreading positivity and warmth among the attendees. The **Basant Panchami celebrations** served as a **perfect blend of devotion, culture, and celebration**, leaving students and faculty members with cherished memories.

Date of Celebration: 3rd February 2025



7. World Cancer Day

Under the **leadership** of the **Principal, Dr. Savinder Pal**, the **Department of Science, Red Ribbon Club, and NSS Unit** observed **World Cancer Day** on **5th February 2025** with a strong commitment to spreading **awareness about cancer prevention, early detection, and the significance of a healthy lifestyle** in reducing the risk of the disease.

The event commenced with an **informative session**, where faculty members and guest speakers provided **insightful discussions on various aspects of cancer**, including its causes, symptoms, preventive measures, and the role of regular health check-ups in **early diagnosis**. Special emphasis was laid on **lifestyle modifications**, such as **maintaining a balanced diet, engaging in regular physical activity, and avoiding tobacco and alcohol consumption, to minimize cancer risks**.

A **poster-making competition** was organized as part of the awareness campaign. The activity witnessed **enthusiastic participation from around 50 students**, who displayed their **creativity and knowledge** through **thought-provoking posters** with impactful messages related to **cancer awareness and prevention**. Their artwork beautifully conveyed **the importance of early detection, the need for regular screenings, and the significance of leading a cancer-free life through healthy choices**.

The event was further enriched by an **address from the Vice Principal, Dr. Raminder Kaur**,

who motivated students to adopt a **proactive approach toward their health**. She stressed the **importance of a nutritious diet, physical fitness, and mental well-being** in building a **strong immune system** that helps prevent various diseases, including cancer.

The **World Cancer Day** served as a **powerful platform to educate students and faculty members about the global fight against cancer**. It successfully **instilled awareness, inspired positive lifestyle changes, and reinforced the need for collective efforts in combating the disease**. The event concluded with a **vote of thanks** to the organizing committee and participants for their valuable contributions in making this initiative a meaningful and impactful one.

Key Highlights of the Event:

- **Informative session on cancer awareness and prevention**
- **Poster-making competition with enthusiastic student participation**
- **Discussions on lifestyle changes to reduce cancer risks**
- **Inspirational speech by Vice Principal Dr. Ruminder Kaur**

Through this event, reaffirmed its **commitment to promoting health consciousness and empowering students with knowledge** that can help them lead healthier lives and contribute to society as **responsible and informed individuals**.

Date of Event: 5th February 2025



8. Biotechnology Workshop at LPU, Phagwara

On **February 22, 2025**, a group of **17 enthusiastic students** accompanied by **Assistant Professors Dr. Swapnil and Ms. Tunish Kaur**, attended an **advanced biotechnology workshop** at **Lovely Professional University (LPU), Phagwara**. The event aimed to provide **hands-on experience and practical exposure** to students pursuing **biotechnology and life sciences**, helping them bridge the gap between **theoretical concepts and real-world applications**.

Objectives of the Workshop

The workshop was designed to:

- Enhance **practical skills** in biotechnology.
- Provide **hands-on training** in modern laboratory techniques.
- Introduce students to **advanced research methodologies**.
- Encourage **interactive learning** through live experiments.
- Foster **scientific curiosity** among students.

Key Highlights of the Workshop

Hands-on Practical Training

Students were given an opportunity to **actively participate in laboratory experiments**, where they performed:

- **DNA Extraction:** A fundamental technique in molecular biology used for **genetic research, forensic science, and medical diagnostics**.
- **Gel Electrophoresis:** A technique used to **separate and analyze DNA fragments**, which is crucial for **genetic fingerprinting, disease detection, and research studies**.
These experiments helped students gain a **deeper understanding of biotechnology applications** in fields such as **genetics, medicine, and pharmaceuticals**.

Guidance from Expert Scientists

The workshop was **coordinated by Dr. Minhaz Khan (HOL) and Dr. Gurmeen Kaur**, who ensured a **well-structured learning experience** for the students.

- **Dr. Gurleen Kaur** played a key role in conducting **live demonstrations** of experiments and addressing students' queries regarding **research methodologies, laboratory procedures, and career opportunities in biotechnology**.
- The faculty members of LPU **guided students through every step of the experiment**, explaining its significance in modern **biological research and medical science**.

Encouragement from the College Principal

At the end of the workshop, **Dr. Savinder Pal, Principal of the college**, congratulated the students for their **active participation and curiosity**. She:

- **Praised the initiative**, emphasizing the importance of **practical exposure in scientific education**.
- Encouraged students to **take part in more research-oriented programs**.
- Motivated them to **pursue careers in biotechnology, genetics, and life sciences**, highlighting the growing **demand for skilled professionals** in these fields.



9. National Science Day

The **Science Department** in collaboration with **Puran Singh Society** and the **Red Ribbon Club**, successfully organized a **two-day celebration of National Science Day on February 27 and 28 February 2025**. The event was dedicated to **innovation, scientific exploration, and the promotion of scientific temperament** among students. The theme for this year's celebration was:

“Empowering Indian Youth for Global Leadership in Science and Innovation for Viksit Bharat.”

This theme emphasized the **importance of scientific knowledge and technological advancements** in shaping a progressive and self-reliant India. The event provided students with a **platform to showcase their skills, creativity, and critical thinking in various scientific disciplines**.

Exciting Events and Competitions

A series of engaging and thought-provoking events were organized as part of the celebration, including:

Mind Marathon

- A unique quiz competition held on Science Day to promote awareness about scientific advancements & innovations.
- Participants actively engaged in discussions on general knowledge topics, enhancing their understanding & awareness.

Cinematics Discoveries

- A special **scientific documentary screening** was conducted to highlight **groundbreaking discoveries and inventions** that have shaped the modern world.
- The event helped students understand the **real-world applications of science in everyday life**.

Science in the Spotlight

- A **debate competition** where students expressed their views on **the role of science in national development**.
- Topics included **AI in education, the impact of biotechnology, space exploration, and the future of sustainable energy**.
- The event provided a **platform for intellectual discussions and the exchange of innovative ideas**.

Invention Station

- Students presented **working models, scientific experiments, and research projects** demonstrating their **creativity and problem-solving skills**.
- The competition encouraged students to think **out-of-the-box and develop practical solutions to real-world challenges**.

Judging Panel and Participation

The competitions were evaluated by **eminent judges**:

- **Mr. Sushil Kumar**
- **Ms. Monika**
- **Ms. Priti Markanda**

More than **60 students enthusiastically participated**, displaying their **scientific expertise and passion for innovation**. The **quality of presentations, research models, and creative ideas** impressed both the judges and faculty members.

Encouragement from the College Principal

At the conclusion of the event, **Dr. Savinder Pal, Principal of the college**, congratulated all the participants for their **dedication and enthusiasm**. She:

- Appreciated the **Science Department, faculty, and student organizers** for making the event a **grand success**.
- Encouraged students to **actively participate in scientific research and technological innovations**.
- Emphasized the role of **science in shaping a sustainable and developed future for India**.
- Motivated the faculty and students to **organize more such events in the future to foster scientific curiosity and innovation**.

Impact and Learning Outcomes

- **Encouraged students to think critically and explore scientific concepts beyond textbooks**.
- **Promoted awareness about the significance of science in national development**.
- **Enhanced creativity, teamwork, and problem-solving skills** through competitions.
- **Inspired students to pursue careers in STEM (Science, Technology, Engineering, and Mathematics)**.



10. WORLD WATER DAY

The **Internal Quality Assurance Cell (IQAC)** in collaboration with the **Professor Puran Singh Science Society** and the **Red Ribbon Society** organized an impactful celebration of **World Water Day** under the globally resonant theme **“Leveraging Water for Peace.”**

The event was marked by a sense of urgency and collective responsibility, as water continues to be one of the most vital and endangered resources on our planet. In alignment with the United Nations' observance of the day, the celebration aimed to shed light on the essential role of **freshwater in promoting peace, stability, and cooperation among communities**.

One of the central attractions of the program was a **Placard Poster Presentation**, featuring the creative and thought-provoking contributions of **around 25 students**. The placards depicted a wide range of ideas and messages, from the importance of water conservation to the potential of water as a source of global unity. The students used their art and words to emphasize that **equitable and sustainable water management is not just an environmental issue, but a crucial step towards peace-building and conflict prevention**.

Dr. Savinder Pal, Principal of the College, addressed the gathering with great conviction and concern. In her speech, she highlighted the urgent need to **sustainably manage our freshwater resources, protect the hydrosphere, and ensure equitable access to clean water for all**. She emphasized that water, being a shared necessity, can serve as a bridge rather than a barrier — fostering cooperation between individuals, communities, and nations. She also spoke about the college's commitment to **raising awareness and cultivating environmentally responsible attitudes** among students. She praised the organizers and students for their enthusiastic participation and thoughtful expressions, calling such initiatives crucial for nurturing socially conscious and environmentally aware citizens.

The event culminated with a **pledge-taking ceremony**, where students vowed to **use water judiciously**, recognize its immense value, and **never waste even a single drop**. This symbolic act reinforced the idea that **every individual has a part to play in water conservation and in building a more sustainable and peaceful world**.

Through this observance of World Water Day once again reaffirmed its dedication to **environmental education, sustainable development, and global harmony**, making it clear that small efforts can lead to meaningful change when driven by awareness, intention, and unity.



11. WORLD EARTH DAY

In a meaningful and inspiring initiative, the **Internal Quality Assurance Cell (IQAC)** in collaboration with the **Eco Club** and **Red Ribbon Society** organized a vibrant celebration of *Earth Day* under the compelling theme:

“The Urgency of Restoring Our Planet for a Sustainable Future.”

The event was thoughtfully designed to not only raise awareness but also to foster a sense of responsibility and proactive environmental stewardship among students and staff. One of the major highlights of the celebration was the **Placard Poster Presentation**, in which **approximately 25 students** enthusiastically participated. Each placard carried a powerful message or visual artwork representing the students' concerns, ideas, and solutions relating to current environmental challenges. These creative expressions served as a visual reminder of the urgent need to protect and restore our planet.

The core objective of this event was to **diversify, educate, and activate** the environmental movement, both within the college and beyond. It aimed to instill the understanding that **small, individual actions can collectively lead to transformative global impact**, especially at a time when humanity faces serious environmental crises including climate change, biodiversity loss, deforestation, and pollution.

Dr. Savinder Pal, Principal of Kamla Nehru College, graced the occasion with her presence and delivered a motivational address to the gathering. She commended the efforts of the organizing committees and the students for their enthusiastic participation. In her address, Dr. Pal encouraged everyone to embrace the slogan **“Our Power, Our Planet,”** emphasizing that every individual has the power to contribute to the planet's healing process.

She further stressed the importance of integrating **sustainable practices** into daily life — from mindful consumption and responsible production to waste reduction and conservation of resources. Dr. Pal expressed her concern over the deteriorating environmental conditions and reminded the audience of their role in protecting and preserving nature for future generations.

The event concluded on a powerful and emotional note, as all participating students and attendees **took a solemn pledge** to commit themselves to environmental preservation. They vowed to take concrete steps, both big and small, to safeguard the Earth — recognizing their role not just as inhabitants of the planet but as its stewards.

This Earth Day celebration served as a timely and powerful reminder that **education, awareness, and action go hand-in-hand** when it comes to restoring the health of our planet. The event successfully ignited a spark of responsibility, creativity, and commitment among the youth — the true torchbearers of a sustainable future.



12. ANTI TOBACCO DAY

The Internal Quality Assurance Cell (IQAC) organized a special awareness event on the occasion of World Anti-Tobacco Day celebrated on 31st May 2025. The initiative aimed to sensitize students about the severe health risks associated with tobacco use and to promote a healthy, tobacco-free lifestyle.

The program began at 11:00 a.m. in the Audio Visual Lab, featuring two impactful activities:

Poster-Making Competition

Declamation Contest

A total of 25 students participated in the event, expressing their creativity and concern through powerful posters and persuasive speeches. The participants highlighted the harmful effects of tobacco consumption and the importance of quitting tobacco to lead a healthier life.

The event was successfully conducted under the joint efforts of the Science Department and the Red Ribbon Club, whose dedication made the program both meaningful and impactful.

Dr. Savinder Pal, Principal of the college, lauded the initiative and appreciated the efforts of the faculty and student participants. She encouraged the students to spread the message of anti-tobacco awareness beyond the campus and become advocates of healthy living in their communities.



13. WORLD ENVIRONMENT DAY:

World Environment Day was celebrated on 29th May 2025 and 31st May 2025 under the aegis of the Punjab Pollution Control Board. The event was a collaborative effort of the ECO Club, Science Department, and NSS unit of the college, focusing on the theme of "Ending Plastic Pollution Globally" and promoting eco-friendly alternatives.

The celebrations commenced on 29th May with a "Green Drive," wherein students showcased their creativity by crafting and using non-plastic bags, emphasizing the importance of sustainable practices. A thought-provoking lecture was delivered by Dr. Priyanka Aeri, Assistant Professor in the Home Science Department, on eco-friendly choices over plastic, inspiring students to adopt greener lifestyles.

The program continued on 31st May with a spirited debate on plastic pollution, followed by an oath-taking ceremony where students pledged to make environment-friendly choices in their daily lives.

In her closing address, Principal Dr. Savinder Pal lauded the efforts of the organizing committees (ECO Club, Science Department, and NSS unit) and the enthusiastic participation of students. She emphasized the significance of such initiatives in nurturing responsible citizens who can contribute meaningfully towards environmental conservation.



Inter-College Competition

1. INTER-COLLEGE COMPETITION AT HMV COLLEGE, JALANDHAR

KNCW added another feather to its cap as students from the Science Department delivered an exceptional performance at the Inter-College Competition hosted by Hans Raj Mahila Maha Vidyalaya (HMV), Jalandhar, on March 12, 2025. Guided and supported by the esteemed Principal, Dr. Savinder Pal, a team of 28 enthusiastic students from KNCW participated in a variety of intellectually stimulating and creative events that brought together young minds from colleges across Punjab.

The event served as a dynamic platform for students to showcase their academic knowledge, scientific curiosity, and artistic talents. The team of our college competed in diverse activities such as Quiz, Poster Presentation, Rangoli, and Rang De Prakriti, a themed competition centered on succulent and foliage plants.

The students displayed outstanding creativity and teamwork, earning accolades in multiple categories. Ritika and Satwinder Kaur, students of B.Sc. Computer Science and Non-Medical Semester II, secured the third prize in the Poster Presentation event, impressing the judges with their innovative content and presentation. Additionally, Manraj Kaur Malhi and Rakhi from B.Sc. Non-Medical Semester II were appreciated for their commendable contributions in the same category.

In the Rang De Prakriti competition, our students truly excelled. They were awarded second prize for their aesthetically appealing and scientifically accurate display of succulent and cacti plants, while their foliage plant presentation won the third prize, reflecting both botanical knowledge and creativity.

Adding further academic value to the day, the participants attended an enriching extension lecture delivered by Dr. Ashish from Punjab Technical University. His insightful talk focused on India's monumental contributions to the field of Mathematics and the promising scope of the subject in the future, leaving the audience inspired and intellectually stimulated.

Principal Dr. Savinder Pal expressed immense pride in the students' achievements & congratulated them for their dedication and performance. She emphasized the importance of active participation in such extracurricular and co-curricular events, which play a vital role in holistic development and confidence-building among students. She encouraged all students to continue exploring their potential and engaging in learning opportunities beyond the classroom.

The event not only highlighted the talent and commitment of KNCW's young scholars but also reaffirmed the college's dedication to academic excellence and all-round student development.



GREEN SQUAD

The Green Squad is an enthusiastic team of B.Sc. (Medical) students committed to maintaining the botanical garden and college lawns with dedication and care. Their primary role is to ensure the well-being of plants by regularly monitoring their growth, preserving old and valuable species, and keeping the entire campus clean and green.

Beyond just maintenance, the team actively works towards enhancing the college's eco-friendly initiatives. They have taken the initiative to plant hyperaccumulators and bio remediators—special plants known for their ability to absorb pollutants and improve soil health. These efforts not only contribute to a healthier environment but also make the campus a more sustainable and beautiful place for everyone.

Through their consistent efforts, the Green Squad fosters a culture of environmental awareness and responsibility, inspiring students and staff to contribute towards a greener, cleaner, and more sustainable future.

GREEN SQUAD: Ms. Tunish, Dr. Tavisha

THE TEAM "GREEN SQUAD"



Sr. No.	Class	Name of Students
1.	B.Sc. (Med) Sem V	Vinny
2.	Do	Gurleen Kaur
3.	Do	Sukirti
4.	B.Sc. (Med) Sem III	Gurleen
5.	Do	Taniya
6.	Do	Gurpreet Mahi
7.	Do	Komal
8.	B.Sc. (Med) Sem I	Rachna
9.	Do	Gurdeep
10.	Do	Gurman
11.	Do	Dapinder Kaur

ENERGY SQUAD

The **Energy Squad** is a proactive team of **B.Sc. Non-Medical and Computer Science** students dedicated to raising awareness about **energy conservation** and preventing energy wastage. They actively educate and motivate others to adopt responsible energy usage practices for a more sustainable future.

As part of their mission, the team conducts **regular inspections** across the college premises to ensure **zero energy wastage**. In a significant step towards sustainability, they have launched an **innovative project** focused on water conservation. Under this initiative, **drained water** is collected and repurposed for **secondary uses**, such as watering plants, thereby reducing unnecessary water wastage.

To further emphasize the importance of energy preservation, the **Energy Squad** also participates in global initiatives like **Earth Hour**, encouraging students and faculty to take part in reducing electricity consumption and promoting a greener, more energy-efficient campus. Through their dedicated efforts, they inspire others to adopt environmentally conscious habits and contribute to a more sustainable world.

TEACHERS INCHARGE: Ms. Ashmeet, Ms. Isha

THE TEAM "ENERGY SQUAD"



Sr.No.	Class	Name of Students
1.	B.Sc. (Comp. Sci.) Sem V	Priyanka
2.	B.Sc. (Non-Med) Sem V	Simran
3.	Do	Priya
4.	Do	Diksha
5.	Do	Neha
6.	Do	Rajwinder
7.	B.Sc. (Comp. Sci.) Sem III	Jaspreet
8.	Do	Savita
9.	B.Sc. (Non-Med) Sem I	Lavleen
10.	Do	Ekta

Students Enrolled for Higher Studies

SESSION 2024-2025

Sr.No.	Name	Class	Institute
1.	Sanjana	B.Ed	Kamla Nehru College of Education for Women, Phagwara
2.	Harman	B.Ed	Ramgharia college of Education, Phagwara
3.	Panna	B.Ed	Ramgharia college of Education, Phagwara
4.	Garima	B.Ed	Kamla Nehru College of Education for Women, Phagwara
5.	Swati Sharma	B.Ed	Kamla Nehru College of Education for Women, Phagwara
6.	Alka	M.Sc.Chemistry	LPU
7.	Harleen	ILETS	Elevation Institute
8.	Jaskaranpreet Kaur	M.Sc.Chemistry	GNA University
9.	Isha Sharma	M.Sc.Chemistry	GNA University
10.	Jyoti	B.Ed	Kamla Nehru College of Education for Women, Phagwara
12.	Manroop Kaur	ILETS	Milestone institute

Placements

SESSION 2024-2025

Sr.No	Name	Class	Job
1.	Megha	B.Sc(N.Med)	Teacher (S.G.H Public School, Palahi Sahib)

Workshops/Seminars/Webinars attended by Teachers

Sr.No	Name	Number of webinars/Seminars/workshops attended
1.	Mrs. Priyanka	04
2.	Ms. Pinky	04
3.	Ms. Khushi	04
4.	Dr.Tavisha	04

SHINING STARS OF SCIENCE DEPARTMENT MEDICAL



KAJAL KUMARI
MARKS: 340/400
PERCENTAGE: 85%



VINNY BANGAR
MARKS: 320/400
PERCENTAGE: 80%



GURLEEN KAUR
MARKS: 319/400
PERCENTAGE: 80%



SUKIRTI SHARMA
MARKS: 318/400
PERCENTAGE: 80%

NON-MEDICAL



NEHA
MARKS: 309/400
PERCENTAGE: 77%



SARIKA
MARKS: 308/400
PERCENTAGE: 77%

