

REPORT:

SCIENCE FOUNDATION COMMITTEE 2023-24

The Science Foundation committee comprised of the following members in the year 2023-24:

Dr. Priya Goel (Teacher In-charge, Department of Zoology) - Convenor

Dr. Reeta Kumari (Teacher In-charge, Department of Botany) - Co-convenor

Prof. Anurag Mishra (Teacher In-charge, Department of Electronics)

Dr. Sudha Arora (Teacher In-charge, Department of Mathematics)

Dr. Sujata Khatri (Teacher In-charge, Department of Computer Science)

Dr. Nupur Verma (Teacher In-charge, Department of Physics)

Dr. Mahaveer (Teacher In-charge, Department of Chemistry)

Dr. Charu Kalra (Department of Botany)

Dr. Anuja Soni (Department of Computer Science)

Activities related to Science Promotion, Science Outreach, awareness programs and academia-industry interface were organized and successfully culminated. Inter-disciplinary activities were promoted and appreciated by the stakeholders (students, faculty and school students called for the outreach programs).

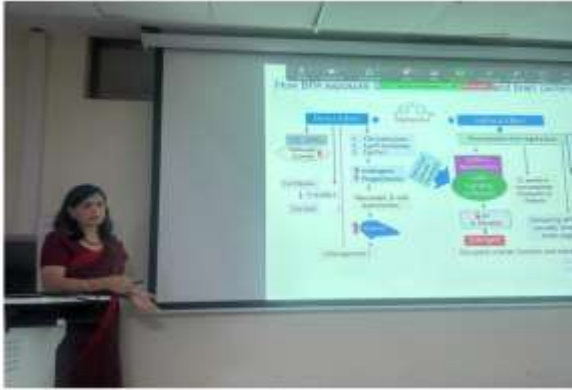
Below is the report of Science Foundation committee for the Academic Year 2023-24:

SYMPOSIUM on TREnds in Aptitude for Skill Development in Undergraduate REsearch (TREASURE)

Date: 20th September 2023;

Venue: Seminar Room (Room No. 307)

Organized in association with DBT Star Program under the aegis of National Academy of Sciences, Delhi and IEEE. The first lecture was delivered by Prof. Venu Gopal Achanta, a director at National Physical Laboratory, New Delhi on the topic 'Metamaterials' and their applications'. Dr. Achanta talked about metamaterials in detail followed by its use in optical filters, medical devices and their applications. The second lecture was delivered by Prof. Rita Singh, Professor and Chairperson, Department of Zoology, University of Delhi. Dr. Singh talked about 'Reproductive Hormones: Environmental Implications in cardiovascular and mental well being. The lecture began with the information about PCOD/PCOS, how the brain reacts during the menstrual cycle, excess body weight in the women with PCOS followed by how the hormone estrogen influence the male brain development, estrogen exposure from oral contraceptive and their side effects like cancer, heart attack and their prevention. The third lecture was delivered by Dr. Debasisa Mohanty, Director at National Institute of Immunology, New Delhi. DR. Mohanty discussed 'Molecular Simulations to digital twins: how scientific computing is driving major advances in biology and medicine'. The lecture began with explaining basic terms like computation biology and bioinformatics, how the study of 3D structure of protein is useful in the advancement in science for drug and vaccine designing; followed by student interaction with the speakers in-person.



Science Foundation Committee & 2017 Star College Program
Bharat Disha Handicapped College, University of Delhi
 under the aegis of
The National Academy of Sciences, India (NASI) - India Chapter & 217 Science Centre Building (217) - India Chapter
Symposium on 75 Years in Pursuit for 21st Century in Undergraduate Education (75NAASU)
 Date: 27th September 2017 (Wednesday)

<p>Prof. Anil Singh Associate Professor (Education), New Delhi</p>	Microbiology and their applications 10:30 am - 12:30 pm <i>Science Seminar Hall (Block No. 207)</i>
<p>Prof. Anil Singh Professor and Chairman, University of Information Technology and Engineering, Gurgaon</p>	Hands-on Training on TQM Implementation of Health and MICR/IT using KANBAN 12:30 pm - 01:30 pm <i>Science Seminar Hall (Block No. 207)</i>
<p>Dr. Subodh Mishra Director, National Institute of Information Technology</p>	Regenerative Stem Cells: Environmental Implications for Cardiovascular and neural cell biology 01:30 pm - 03:30 pm <i>Science Seminar Hall (Block No. 207)</i>
<p>Prof. N. Chand Lal, Managing Professor, Department of Physics, College of Science, University of Delhi</p>	Molecular Simulations in Digital Textiles: How recently computing is affecting major advances in Biology & Medicine? 03:30 pm - 04:30 pm <i>Science Seminar Hall (Block No. 207)</i>

Sponsor: Prof. N. Chand Lal, Managing Professor, Department of Physics, College of Science, University of Delhi
 Co-sponsor: Dr. Pawan Kumar, Chairman, Science Foundation Committee, Bharat Disha Handicapped College, University of Delhi
 Organized by: Bharat Disha Handicapped College, University of Delhi



**Educational visit to the open day program at:
NATIONAL INSTITUTE OF IMMUNOLOGY, DELHI;**

Date: 11th January 2024 (Thursday)

Convenor: Dr. Priya Goel, Associate Professor, Department of Zoology

**Teacher coordinators: Dr. Guddu Kumar, Dr. Jai Kumar, Dr. Vinay Singh Dagar;
Assistant Professor, Department of Zoology**

Students from the Department of Zoology visited National Institute of Immunology – a premier research institute of India, located at Aruna Asaf Ali Marg, Delhi. Nineteen students from B.Sc. (H) Zoology 1st year and seven students from B.Sc. (H) Zoology 3rd year visited the campus. The open day was organized on the theme of India's Vaccine Self-Reliance, and as an outreach initiative of India International Science Festival 2024. In the morning session, welcome address was given by Dr. Debasisa Mohanty, Director NII followed by a public talk by Dr. Sekhar Mande, Former DG of CSIR, Honorary Distinguished Scientist at NCCS, National President of Vibha. He stressed on the need to promote and popularize Science among young people of India and gave an overview of the upcoming India International Science Festival 2024. The morning session continued with a public talk on “*Learn how vaccines work and success story of India's vaccine self-reliance*” delivered by Dr. Nimesh Gupta, Chief of Vaccine Immunology Lab, NII. Through this informative talk, students understood the history of development of vaccines and their mechanism of action inside the human body, very deeply.

Various posters were displayed by the scientists and research scholars of NII on the latest research being done in their respective labs. Students visited the posters, interacted with the scientists and research scholars and got a chance to witness the latest research in various fields of immunology. Students could also gather information about various internship programs at NII and their suitability and scope for the programs. Posters were related to the latest viral disease outbreaks, immune system responses of human body, COVID-19 vaccine, DNA vaccines, RNA vaccines, purification of vaccines and their quality control.

Parallel to the poster session, there was an exhibition by the National Science Centre at Buland Darwaza, NII. Various exhibits developed by NSC were displayed viz. vortex stirrer, liquid painting, striker board, parabola, Pythagoras theorem, and many more that raised interest in the inquisitive student-mind.

Post-Lunch sessions of the open day included visit to various research and sophisticated equipment facilities at NII viz. Transmission electron microscopy facility, X-ray crystallography facility, FACS facility, COVID facility, NMR lab, Central instrument facility under the guidance of NII staff. Technicians explained in detail about the principle and working of various equipments with live demonstration of each instrument. The day concluded with the quiz competition, science-based games, and Science Trivia organized in the auditorium. Scientific enquiry- and knowledge-based questions were asked to the student audience seated in the auditorium. Students actively participated and could answer many questions successfully, competing with students from other colleges and institutes present there. The overall experience of the students was good, knowledge-enhancing and motivating.



Group photograph at NII campus.



Poster session; students understanding the latest research at NII.



Students learning the vortex formation



Students getting the demo of TEM facility

NATIONAL SCIENCE DAY'24; 28th – 29th February 2024; theme - “**Indigenous technologies for Viksit Bharat**”; organized by **Science Foundation Committee** under the aegis of **DBT Star College Program** in association with **Indraprastha Vigyan Bharati**. Day-1 started with lamp lighting and an inaugural address by **convenor Dr. Priya Goel** followed by the keynote lecture by **Dr. Shikha Rastogi**, Scientist, Innovation Protection Unit, Council of Scientific & Industrial Research (CSIR) on ‘**Indigenous Technologies**’ followed by talk on ‘**IPR and Environment**’ by **Dr. Arun Kumar Maurya**, Department of Botany, MultaniMal Modi College (CCS University), Meerut (U.P). A **National level Quiz Theme ‘Science & Technology’ Pragyan** by Department of Physics (coordinator; Dr. Kulvinder Singh) and ‘**Crafting Documents with Overleaf: A Hands-On Workshop**’ by Department of Computer Science (coordinators: Dr. Anuja Soni and Dr. Sujata Khatri) were also organized. Day-2 events included hands-on workshops on ‘**Learning UV-Visible Spectroscopy Through Green Experiments**’ and ‘**Development of Scientific Poster Making Skills**’: A Hands-on Workshop organized by Department of Chemistry (coordinator: Dr. Mahaveer Genwa). Fun with Science activities were also organized that included **Science Housie, Sudoku Competition, Step into Spotlight** and **Auction – with Mathematical twist**. The events witnessed a huge participation of faculty and around 500 students of the college.



SCIENCE FOUNDATION COMMITTEE
under the aegis of DBT Star College Program
in association with Indraprastha Vigyan Bharati
organizes
SCIENCE DAY'24 28th -29th February 2024
Theme - "Indigenous technologies for Viksit Bharat"

<p>Wednesday, 28th February 2024</p> <p>10:30 am Inaugural Function @ Auditorium</p> <p>11:00 – 12:00 noon @ Auditorium 'Indigenous Technologies' Dr. Shikha Rastogi Scientist, Innovation Protection Unit, Council of Scientific & Industrial Research (CSIR)</p> <p>12:00 noon – 1:00 pm @ Auditorium 'IPR and Environment' Dr. Arun Kumar Maurya Department of Botany, MultaniMal Modi College Meerut, Affiliated to CCS University, Meerut (U.P)</p> <p>10:00 am – 1:30 pm @ ICT Centre, 2nd floor PRAGYAN – the National level Quiz Theme 'Science & Technology'</p> <p>11:00 am – 1:00 pm @ Computer Science Lab-1 (4th floor) Crafting Documents with Overleaf: A Hands-On Workshop</p>	<p>Thursday, 29th February 2024</p> <p>9:30 am – 12:30 pm @ Chemistry lab-1 Workshop on Learning UV-Visible Spectroscopy Through Green Experiments</p> <p>1:30 pm – 4:30 pm @ Chemistry Room No. 004 'Development of Scientific Poster Making Skills': A Hands-on Workshop</p> <p>10:00 am – 11:00 am @ Auditorium Science Housie</p> <p>11:00 am – 2:00 pm @ Auditorium Step into Spotlight</p> <p>10:00 am-11:00 am @ Room No. 212 Sudoku Competition</p> <p>2:30 pm – 5:00 pm @ Auditorium Auction – with Mathematical twist</p>
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Patron & Officiating Principal
Prof. Hem Chandra Jais

Convenor, Science Foundation Committee
Dr. Priya Goel

Coordinator, DBT Star College Program
Prof. Manoj Saxena

Co-convenor: Dr. Roopa Kurnat, Executive Committee: Dr. Kulvinder Singh, Dr. Anurag Mishra, Dr. Sujata Arora, Dr. Nigam Verma, Dr. Sujata Khatri, Dr. Anuja Soni, Dr. Mahaveer Genwa, Dr. Charu Kalia





Some glimpse of the event

SANGANIKA | THE COMPUTER SCIENCE SOCIETY
DEEN DAYAL UPADHYAYA COLLEGE

in collaboration with
SCIENCE FOUNDATION DEEN DAYAL UPADHYAYA COLLEGE
on the occasion of
SCIENCE DAY
is original study

INDUSTRY ACADEMIA TECHNICAL TALK ON
CRAFTING DOCUMENTS WITH OVERLEAF
A HANDS-ON WORKSHOP ON CREATING INDUSTRY LEVEL PROFESSIONAL DOCUMENTS USING LATEX

TOPIC OF DISCUSSION

- Fundamentals of LaTeX document preparation
- Navigate Overleaf's interface effectively
- Explore advanced techniques to create professional-quality and industry level documents with ease

REGISTER HERE

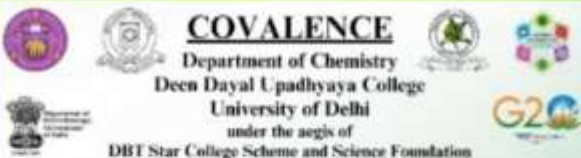
THURSDAY
28 February, 2024

VENUE
CS LAB 1
4TH FLOOR


STARTS AT
11:00AM

Dr. Anuja Sood | Workshop Coordinator
Dr. Sujata Khatri | Workshop Coordinator
Dr. Riya Goyal | Co-ordinator
Prof. Hem Chandra Jain | Officiating Principal




COVALENCE
 Department of Chemistry
 Deen Dayal Upadhyaya College
 University of Delhi
 under the aegis of
 DBT Star College Scheme and Science Foundation
 on the occasion of Science Day
 is conducting a student driven workshop on
Development of Scientific Poster Making Skills
 Date: 29th February, 2024 Time: 01:30 pm Venue: Room number 004
Resource Person
 Mr Vyom Sharma
 B.Sc. Physical Sciences with Chemistry
 Deen Dayal Upadhyaya College, University of Delhi
 Prof. Hem Chand Jain Dr Chetna Agrish Dr Mahaveer Gerna
 Officiating Principal Convener Teacher In-Charge




COVALENCE
 Department of Chemistry
 Deen Dayal Upadhyaya College
 University of Delhi
 under the aegis of
 DBT Star College Scheme and Science Foundation
 on the occasion of Science Day
 is conducting
 Workshop on
Learning UV-Visible Spectroscopy Through Green Experiments
 On
 Date: 29th February, 2024 at 09:30 am
 Venue: Chemistry Laboratory 1
Resource Persons
 Dr Poojit Badrara, Dr Chetna Agrish, Dr Jyoti Singh and Ms Mantra Bai
 Prof. Hem Chand Jain Dr Chetna Agrish Dr Mahaveer Gerna
 Officiating Principal Convener Teacher In-Charge



INTERNATIONAL SYMPOSIUM ON FRONTIERS IN APPLIED SCIENCES_ISFAS'24; 19th March 2024; Venue: Seminar Hall (509); Convenor: **Dr. Priya Goel**; Organizing Secretaries: **Dr. Mahaveer Genwa** and **Dr. Reeta Kumari**. The Keynote lecture '**Integrating Artificial Intelligence in Drug Discovery: Making New Medicines Faster and Smarter**' was delivered by **Prof. Gagan Dhawan**, (IoE Fellow, University of Delhi), Registrar, Dean, International Affairs and Dean, School of Allied Medical Sciences, Delhi Skill and Entrepreneurship University, Delhi. **Prof. Sonika Bhatnagar**, Head, Department of Biological Sciences and Engineering, Netaji Subhas University of Technology (NSUT), Delhi discussed '**Machine Learning Approaches for Medicine and Biology**'. **Dr. Tushar Kumeria**, Scientia Senior Lecturer, School of Materials Science and Engineering, University of New South Wales, Kensington, Sydney, NSW Australia talked about '**Porous Materials for Biomedical Applications**'. Further sessions included '**Nanocatalysts for water remediation from toxic pollutants**' by **Dr. Vinod Kumar**, Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi, Delhi; '**Fostering Excellence in Transformational Research, Innovation and Publication Ethics**' by **Dr. Bhagat Singh**, Dept. of Medical Lab Technology, Faculty of Paramedical Sciences, Uttar Pradesh University of Medical Sciences, Uttar Pradesh, '**Electronic Properties of Organic Semiconducting Materials**' by **Dr. Praveen K. Budakoti**, Cheminformatician, Deepmatter, Munich, Germany and '**Sorbent Technology for Water Remediation**' by **Prof. Ranu Nayak**, Amity Institute of Nanotechnology, Amity University, Noida. Around 250 students of biological and chemical sciences attended the symposium in person and 200+ attended online. All the sessions were quite informative and aroused interest in the students' minds for taking up related research work in the future.





Report prepared by:
Dr. Priya Goel
Convenor
Science Foundation committee 2023-24