

**DBT Star College Scheme**  
**Annual Report [August 2022-July 2023]**  
**Hindu College**  
**(Department of Botany, Chemistry, Physics and Zoology)**

The DBT Star College Scheme aims to strengthen the academic and practical skills of undergraduate (UG) students by providing enhanced support for quality improvement in science education. This report highlights the various academic activities organized by the various science departments of Hindu College under this scheme during the period **August 2022-July 2023**, focusing on Extension Experiments in regular laboratory courses, Project Work, Value-Added/Add-On Courses, Invited Talks, Field/Lab Visits & Laboratory Staff Training.

**Extension Experiments/Hands-on**

*Annexure-I*

**Department of Botany**

1. Preparation of herbarium and identification of Ethno-botanical important plants
2. Introduction to Bioinformatics and Python and Recent Trends in Health care AI
3. Hands on training on literature and data extraction from PUBMED
4. Working of Microscope with camera and taking images from it
5. Identification of plants mentioned in the Abhigyan Sakuntalam, with Hindi department
6. To estimate TDS of five water samples
7. Identification of medicinal plants and part of plant used
8. Identification and classification of plants in the campus
9. How to use the autoclave and other sterilization techniques?
10. Preparation of the Nutrient Agar media
11. Purification of single microbe using the streaking

**Department of Chemistry**

1. To carry out solid phase synthesis of azomethines mechanochemically
2. Determination of Alkalinity of soap solution-PSC
3. Effect of pH on the activity of  $\alpha$  amylase
4. Bromination by Green Method
5. Enthalpy of dissociation of Ammonium Hydroxide using by Hess's Law.
6. Enthalpy of Neutralization of weak acid and weak base by using Hess's Law
7. Extra element detection-Green method
8. Preparation of copper nanoparticles by different chemical precursors using chemical reduction method
9. To determine the acid value of given oil
10. To determine the composition of ferric ion – salicylic acid complex using absorptionmetrically using Job's method
11. To determine the amount of calcium in the given calcium supplement tablet
12. To determine the amount of exchangeable calcium ions and magnesium ions in a soil sample

13. To prepare silver nanoparticles using neem/curry leaves extract
14. Estimation of iron in the given iron tablet.
15. Synthesis of Nerolin
16. To determine the rate constant of the saponification of the ethylacetate by NaOH conductometrically



### Department of Physics

1. Develop an algorithm to apply Morse Potential in understanding properties of diatomic molecules (HCl, LiH, NaCl etc) through modelling using SCILAB.
2. Understand Maxwell Boltzmann speed distribution theory and its application using SCILAB.
3. Understand Wood Saxon potential and apply the same in modelling Nucleus of an atom using SCILAB.
4. Realize 5 variable k map; PSE 2nd Sem, June 2022
5. Design a specific Voltage crossing detector using 741 IC (operational amplifier)
6. Interface Tricolor LED, SSD & LCD with ATmega 328 microcontroller
7. Interface LED and vary its intensity using PWM feature of ATmega 328
8. Solve time independent Schrodinger wave equation for a particle trapped in an infinite potential well using XCOS computational tool
9. Solve time independent Schrodinger wave equation for a particle trapped in an modified potential well with different potential height using finite difference method
10. Solve time independent Schrodinger wave equation for s-wave of hydrogen atom following coulomb potential using XCOS computational tool
11. To measure the length of Hindu college playground using Parallax method
12. To measure the shadow length of student height as a function of time and estimate the angle of declination of the Sun on September 5, 2022
13. To estimate the speed of light using Romer's experiment through observation of Jupiter satellite Io with Stellarium software
14. Retrograde motion of superior planets as observed from inferior planets using Stellarium software
15. Plot solar analemma at different latitudes on Earth and other planets at different times during the day using Stellarium.
16. Estimate the duration of solar day and sidereal day for different planets including Earth using Stellarium
17. Study the motion of Halley comet around the Sun and estimate the eccentricity of its orbit using Stellarium
18. Find the angle of maximum elongation of Mercury and Venus as observed from the Earth during eastern and western elongation and verify Kepler's law using Stellarium

19. Understanding horoscopes of a student with change in astronomical positions of different celestial objects in different constellations using Stellarium.
20. Design a Sundial for an observer present at Hindu College.
21. Design altitude measurement device with inclination correction factor applicable in Horizon coordinate system
22. Estimate the radius of planet Earth through measurement of shortest shadow length at a particular latitude
23. Estimate the location of zero shadow day for a particular location and simulate the same using Stellarium
24. Study the frequency response of RC circuit as a low pass and high pass filter.
25. Design a seven-segment display driver using logic gates.
26. Find the factorial of a number using microprocessor 8085
27. Find the time taken by 8085 microprocessors to run a program using T-states
28. To study the phase shift in a RC circuit
29. Modeling & Solving Physics Problems on topics: Motion of Falling body in a Resisting Medium, Variation of current & charge in a LR circuit, Projectile Motion, Energy Oscillation in LC Circuit
30. Plotting Cornu's Spiral by Numerical Integration of Fresnel Integrals
31. To design an active low pass filter
32. To divide 8-bit number by another 8-bit number using 8051 microcontroller
33. To AND and OR two 8-bit numbers using 8051 microcontroller
34. To multiply two 8-bit numbers using 8051 microcontroller
35. To blink the inbuilt LED in Arduino UNO
36. To blink LEDs with delay using an Arduino UNO
37. To read Potentiometer values and toggle an LED based on a threshold value using Arduino UNO
38. To design a Module-10 counter (decade counter) with a 7-segment LED display using an Arduino UNO
39. Applications of Network Theorems for AC circuits
40. Design of CD Sundial and understand the time zone concept
41. Study the motion of Halley comet and find its eccentricity through Stellarium.
42. To study dwarf planets and verify Kepler's Laws of motion using Stellarium.



## Department of Zoology

1. Staining of Histone proteins by Fast green
2. Differential Staining of RNA and DNA in fish blood cells
3. Study of microscopy for studying cytochemical stains
4. Introduction and purpose for cytochemical staining in cell biology
5. Study of phagocytic activity of head kidney and splenic macrophages in Indian Stinging Catfish, *Heteropneustes fossilis*
6. Study of Life cycle and culture of *Drosophila melanogaster*
7. Study of Imaginal Discs, Salivary glands and Polytene chromosome in *Drosophila melanogaster*
8. Study of morphology and sex determination in *Drosophila melanogaster*
9. Estimation of Dissolved oxygen in water samples collected from different sites of Delhi and outside Delhi (U.P and Haryana)
10. To observe the diversity of Zooplankton and Phytoplankton in water samples collected from different sites of Delhi and outside Delhi (U.P and Haryana)
11. Study of the life cycle of the phytophagous insect pest, tobacco caterpillar, *Spodoptera litura* (Fab.) and the assessment of damage caused to plants.

  
**Co-ordinator**  
Hindu College  
Star College Programme

  
प्राचार्य/Principal  
हिन्दू महाविद्यालय, दिल्ली-7  
Hindu College, Delhi-7

## Internships/Projects

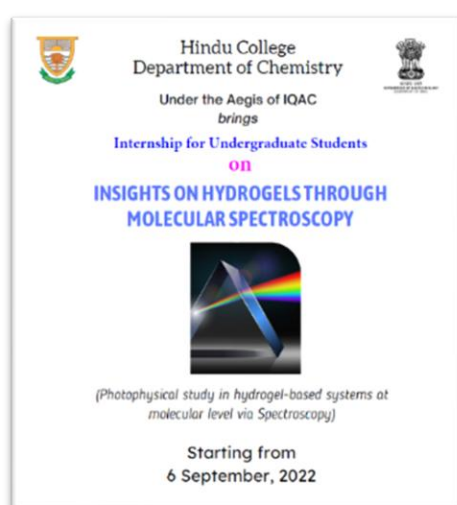
## *Annexure-II*

### Department of Botany

1. To study karyotypes of different plants and to prepare and ideogram to classify the karyotypes into various symmetry classes.
2. Isolation of microbes from the soil, air and water
3. How to write a scientific review paper

### Department of Chemistry

1. Project-Spirocyclic synthesis
2. Project-Heterocyclic synthesis
3. Project- Design, synthesis & characterization of chalcone derivative derivatives and their biological activities.
4. Project-Phytochemical extraction from plant source.
5. Project-Design of nanocatalyst and its application in waste water treatment.
6. Project-Pharmacological studies of tribal plants of Kerala
7. Internship on Reaction Infographics
8. Internship on scientific writing
9. Internship on Insights on hydrogels through Molecular Spectroscopy
10. Internship on Green perspectives on waste/spent lithium ion batteries
11. Inernship program on “Synthesis and Characterization of Medicinal Important Organic Compounds”




Hindu College  
Department of Chemistry

Under the Aegis of IQAC  
brings

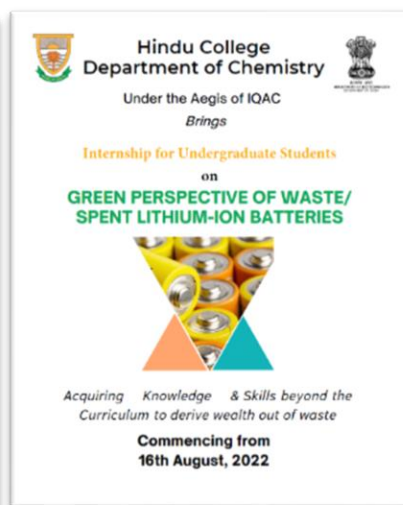
Internship for Undergraduate Students  
ON

**INSIGHTS ON HYDROGELS THROUGH  
MOLECULAR SPECTROSCOPY**



(Photophysical study in hydrogel-based systems at  
molecular level via Spectroscopy)

Starting from  
6 September, 2022




Hindu College  
Department of Chemistry

Under the Aegis of IQAC  
Brings

Internship for Undergraduate Students  
on

**GREEN PERSPECTIVE OF WASTE/  
SPENT LITHIUM-ION BATTERIES**



Acquiring Knowledge & Skills beyond the  
Curriculum to derive wealth out of waste

Commencing from  
16th August, 2022



HINDU  
Department of Chemistry  
Hindu College  
University of Delhi

Under the Aegis of  
DST Star College Scheme & IQAC  
In Collaboration with  
IIT Delhi PMRF Scheme  
Brings

Internship Programme  
on

**Synthesis and Characterization  
of Medicinal Important  
Organic Compounds**

Registration Open

- ELIGIBILITY: B.Sc. PURSUING STUDENTS
- CERTIFICATES FOR ALL PARTICIPANTS

Date of Commencement:  
20 March 2023

Registration Link:  
<https://forms.gle/UP3U6ZWPUGPY37>

Contact Us  
9811379402, 9990236688  
chemistry@hinducollege.ac.in



## Department of Physics

1. To design a moving robot and control its dynamics using Arduino Microcontroller. (01.06.2022 to 31.07.2022)
2. Understand the relation between temperature and composition of stars by application of Maxwell Boltzmann distribution and Saha ionization theory through modelling using SCILAB. (1.8.2022 to 30.10.2022)
3. Designed a circuit that estimates salt content of various vegetables and check feasibility of aging of vegetables in presence of salt. (3.05.2022 to 30.07.2022)
4. Measure the refractive index of various solvent using Newton Ring method (3.05.2022 to 30.07.2022)
5. Computational Optical Imaging
6. Control of Traffic Light Signals Using Arduino Uno Microcontroller Board
7. Elementary Application of FFT in Signal Processing
8. Laplace Equation in Spherical Polar Coordinates using FDM
9. Numerical Solution to 1-D Steady State Heat Conduction problem using Finite Element Method
10. Estimating Ground State Energy of 2D Square & Triangular Lattices using MD Simulation
11. Coriolis Force and its effect on Orbiting Satellites
12. Solving Burgers Equation using Spectral Method
13. Analyzing Fraunhofer Diffraction Patterns of variedly shaped Apertures using FFT
14. Investigating the Normal Modes of Vibration of a String using FDM and FFT techniques
15. Optimization methodology for denoising implementation in high pass filtering operation in image processing
16. A computational investigation on motion of a spinning top



## Department of Zoology

1. Insecticidal activity of botanicals (turmeric powder) against the pulse beetle, *Callosobruchus chinensis* (L.) Coleoptera:Bruchidae) (Aman Patel)
2. Repellent activity of common spices against rice weevil, *Sitophilus oryzae*. (Shravana B. and Anaghasree S.)
3. An observational study on leaf-rolling lepidopterans. (Irene and Sravya)
4. Study of drawing circles around ants by using less toxic solutions. (Vikash and Rohith)
5. Test several household and natural solutions for their effectiveness as an ant repellent. (Himanshi Guleria and Akhilesh)
6. Behavioral effect of bio-repellents on *Sitophilus oryzae*, and extent of seed damage on different rice varieties. (Priyanshu Gupta and Ajad)
7. To study cognitive learning and observational learning in *Camponotus* (Anju and Priyanshu Bindal).
8. Feeding frequency of parrots and the factors affecting it: Summer season vs winter season (Atavika and Bhawani)
9. Nesting behaviour of birds on different tree species in Delhi/ NCR (Nishika and Nisha)
10. Feeding habits of pigeons and their behaviour towards light and sounds of different animals (Divya and Robertson)
11. Structural and compositional modification by pigeons in building their nest (Suboor Saifi)
12. Study of the life cycle of stored grain pest, pulse beetle, *Callosobruchus chinensis* (L.) on different pulses, and the extent of damage caused to various stored grains (Navya Verghese).
13. Study of the pesticidal activity of botanicals (turmeric powder) on pulse beetle, *Callosobruchus chinensis* (L.) reared on different pulses and its implications in pest management (Akshat Rastogi, Jyoti Chaudhary, Vasu Khajuria)

  
**Co-ordinator**  
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Star College Programme

  
**प्राचार्य/Principal**  
हिन्दू महाविद्यालय, दिल्ली-7  
Hindu College, Delhi-7

## Industrial/ Academic/ Field Visits

## *Annexure-III*

### Department of Botany:

1. Mother dairy plant in Delhi, to understand the working of the plant on 25<sup>th</sup> June, 2022 with 50 students.
2. Research visit to PUSA IARI Delhi, Phytotron facility, Microbiology lab, Seed development division on 16<sup>th</sup> March, 2023 with 50 students.
3. Visit to IGIB to learn the techniques of sequencing the genome on 28<sup>th</sup> June, 2022 with 24 students



### Department of Chemistry:

1. Organized research lab visit to NPL-Delhi on 27<sup>th</sup> September 2022 for 42 students.
2. Organized research lab visit to IIT Delhi on 22nd & 23rd June 2023 along with 44 students.





**Department of Physics:**

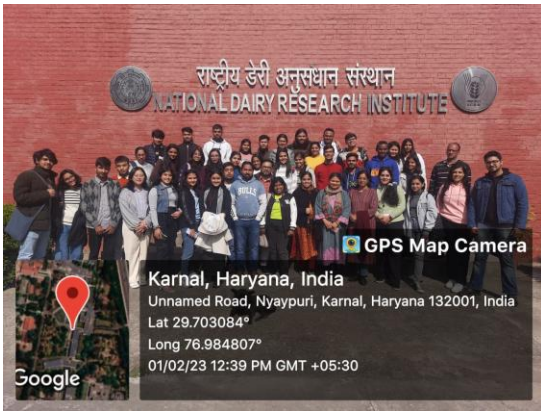
1. Visit to National Physics Laboratory on 28.09.2022 with 60 students.
2. Visit to Jantar Mantar on 23.02.2023 with 80 students
3. Visit to IITD XRD Lab & MPMS3 and Glove Box Lab on April 8 & April 15 2023 with 28 students
4. Visit to National Physics Laboratory on 19.5.2023 to celebrate World Metrology Day (WMD) 2023 with 22 students.



**Department of Zoology:**

1. Research and Industrial visit to the Mother Dairy Plant, Patparganj, ND on 6<sup>th</sup> December, 2022 along with 42 students
2. Educational visit to the National Zoological Park, Delhi on 10<sup>th</sup> January, 2023 along with 33 students.
3. Visit to National Dairy Research Institute (NDRI), Karnal, Haryana on 1<sup>st</sup> Feb. 2023 along with 40 students.
4. Field visit to the National Zoological Park, Delhi on 25<sup>th</sup> March, 2023 with 25 students.



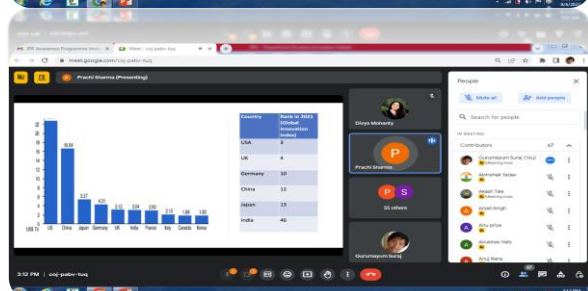
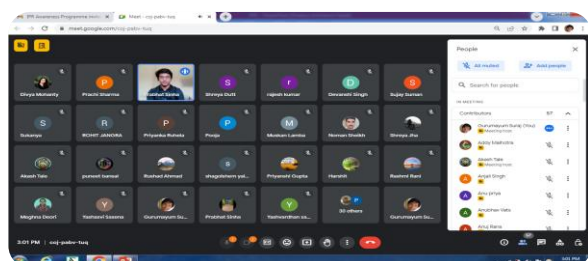


*Reem*  
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Hindu College, Delhi-7

### Department of Botany

1. Workshop on “IPR Awareness Programme”, organized by Department of Botany, under the aegis of National IP Awareness Mission (NIPAM), on September 4, 2023.
2. National Symposium on “Integrated Vector Management (IVM)”, organized by Department of Chemistry, Zoology and Botany, on 9<sup>th</sup> June 2023.
3. One day seminar on “Collecting Scientific Innovation at Science Museum, London”, organized by Department of Chemistry, Zoology and Botany, 14<sup>th</sup> Nov 2022.
4. One day national seminar on “A Mental Health Awareness Orientation: A Brief About Physical and Genetic Disorders”, organized by Department of Chemistry, Botany, Physics & Zoology, on 23<sup>rd</sup> November 2022.
5. International conference “Infectious Disease Management and Control”, organized by Department of Chemistry, Botany, Physics & Zoology, on 12<sup>th</sup> December 2022



**Government of India**  
 Ministry of Commerce and Industry  
 Department for Promotion of Industry and Internal Trade  
 Office of Controller General of Patents, Designs and Trademarks

*In collaboration with*  
**Department of Botany**  
**Hindu College**  
 (University of Delhi)  
 Light Gradient Colors

(Under aegis of National Intellectual Property Awareness Mission and DBT Star College Scheme)

*Presents*  
**IPR Awareness Programme**  
 By Mrs. Prachi Prateeti  
 Examiner of Patents and Designs,  
 IPO, Dwarka, CGPDTM, Ministry of Commerce

**September 4, 2023 at 3:00 PM via Google meet**

Registration Link: <https://forms.gle/n1juE91pLwdnkYR9>

<b>Prof. Anju Srivastava</b> Patron Principal, Hindu College	<b>Dr. D. Usha Rao</b> Controller of Patents and Designs, Intellectual Property Office, Delhi, Ministry of Commerce	<b>Mrs. Prachi Prateeti</b> Coordinator Examiner, Patents and Designs, Chemical Division, IPO, Delhi
<b>Prof. Reena Jain</b> Coordinator DBT Star College Scheme Hindu College	<b>Dr. Rajesh Kumar</b> Department Coordinator (Botany) DBT Star College Scheme Hindu College	<b>Dr. Divya Mohanty</b> Convener Department of Botany Hindu College
<i>Organising Committee Members</i>		
<b>Prof. Anuradha Sharma</b> Dr. Ravindra Kumar	<b>Dr. Kuldeep Kumar Koul</b> Teacher-in-Charge Dr. Vivek Chopra	<b>Dr. D. Monika Ram</b> Dr. Ekta Chaudhary



## **Department of Chemistry**

1. International conference and workshop on “Twelve principles of green chemistry and UN-SDGs”, organized by Department of Chemistry, Department of Zoology, Department of Botany and Department of Physics, from 9-10<sup>th</sup> November 2023.
2. National Symposium on “Integrated Vector Management (IVM)”, organized by Department of Chemistry, Department of Zoology and Department of Botany, on 9<sup>th</sup> June 2023.
3. One-day workshop session on “Intellectual Property Rights”, organized by Department of Chemistry & Department of Physics, on 18<sup>th</sup> January 2023.
4. International Conference on “Environment, Water, Agriculture, Sustainability and Health-Strategizing a Greener Future”, organized by Department of Chemistry, on 12<sup>th</sup> January 2023.
5. International Conference on “Infectious Diseases: Management, Control and Prevention”, organized by Department of Chemistry, Botany, Physics & Zoology, on 12<sup>th</sup> December 2022.
6. Session on “A Mental Health Awareness Orientation: A Brief About Physical and Generic Disorders”, organized by Department of Chemistry, Botany, Physics & Zoology, on 23<sup>rd</sup> November 2022.
7. “Great talks: Collecting Scientific Innovation at the Science Museum, London” organized by Department of Chemistry, Botany, Physics & Zoology in collaboration with British Council on 14<sup>th</sup> November 2022.
8. One day seminar on “Flavours and Fragrance”, organized by Department of Chemistry and Department of Botany, on 19<sup>th</sup> September 2022



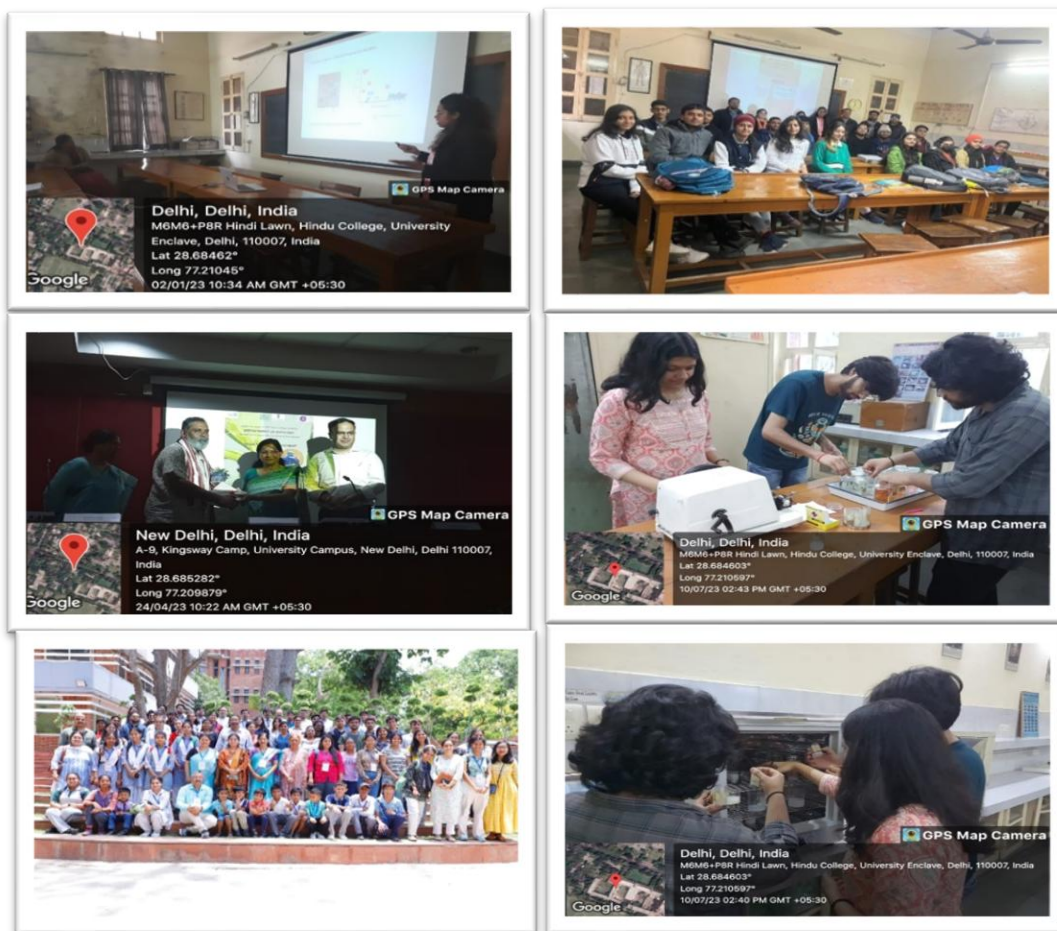
## Department of Physics

1. Seminar on “SI units in perspective of industry”, organized by Department of Physics, in association with CSIR, New Delhi on 5<sup>th</sup> September, 2023.
2. Seminar on “Super Massive Black hole in early galaxies”, organized by Department of Physics, in association with University of Delhi, on 6<sup>th</sup> February, 2023
3. Seminar on “Optics and Photonics around us”, organized by Department of Physics, in association with IIT,, New Delhi, on 6<sup>th</sup> February, 2023
4. Seminar on “Climate change and depletion of ground water in India and on global Scale”, organized by Department of Physics, in association with Institute of Environmental Physics, University of Heidelberg, Germany.
5. One-day workshop session on “Intellectual Property Rights”, organized by Department of Chemistry & Department of Physics, on 18<sup>th</sup> January 2023.



## Department of Zoology

1. “Great talks: Collecting Scientific Innovation at the Science Museum, London” organized in collaboration with Departments of Chemistry, Botany, Physics & British Council on 14<sup>th</sup> November 2022.
2. International Conference on “Infectious Diseases: Management, Control and Prevention”, in collaboration with Departments of Chemistry, Botany & Physics, on 12<sup>th</sup> December 2022.
3. Talk on “Exploring therapeutic role of Endoplasmic Reticulum in Alzheimer’s Disease”, on 2<sup>nd</sup> Jan. 2023.
4. Workshop on “Cardiac & Respiratory Physiology”, on 11<sup>th</sup> April, 2023.
5. Lecture cum interactive session on “Insect pest management”, on 24<sup>th</sup> April, 2023.
6. National Symposium on “Integrated Vector Management (IVM)”, on 9<sup>th</sup> June 2023.
7. Workshop on “Microtomy”, on 10<sup>th</sup> July, 2023.
8. Workshop on “Vermicomposting” in collaboration with Ecoprabandhan, an authorized agency of MCD, on 26<sup>th</sup> September 2023.



*Reena*  
**Co-ordinator**  
Hindu College  
Star College Programme

*Anjali*  
**प्राचार्य/Principal**  
हिन्दू महाविद्यालय, दिल्ली-7  
Hindu College, Delhi-7

## **Invited Talks**

## ***Annexure-V***

### **Department of Botany:**

1. Invited talk on “Flavours and Fragrance” by Mr. Hans Holger Gliewe, Chairman, IFRA on 19th September 2022.
2. Invited talk on “Flavours and Fragrance” by Ms. Martina Bianchini, President, IFRA on 19th September 2022.
3. Invited talk on “Flavours and Fragrance” by Mr. Michael Carlos, Chairman Emeritus, IFRA on 19th September 2022.
4. Invited talk on “Flavours and Fragrance” by Mr. Dirk Hudig, Secretary General, European risk and Innovation Forum on 19th September 2022.
5. Invited talk on “GREAT Talks: Collecting Scientific Innovation at the Science Museum, London” by Ian Blatchford, Director & CEO of Science Museum Group, UK on 14th November 2022.
6. Invited talk on “GREAT Talks: Collecting Scientific Innovation at the Science Museum, London” by Natasha Mcenore, Keeper of Medicine at Science Museum, London on 14th November 2022.
7. Invited talk on “Infectious Diseases: Management, Control and Prevention” by Prof. Ronalodo Oliveira, UFRPE Recife, Brazil on 12th December 2022.
8. Invited talk on Infectious Diseases: Management, Control and Prevention by Dr. Lindomar Pena, FIOCRUZ Recife, Brazil on 12th December 2022.

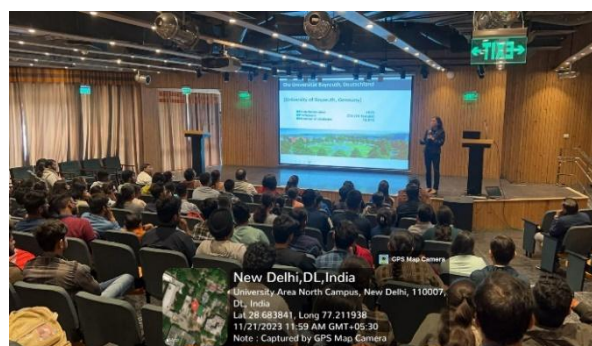


### **Department of Chemistry:**

1. Invited talk on “Flavours and Fragrance” by Mr. Hans Holger Gliewe, Chairman, IFRA on 19th September 2022.
2. Invited talk on “Flavours and Fragrance” by Ms. Martina Bianchini, President, IFRA on 19th September 2022.
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8. Invited talk on Infectious Diseases: Management, Control and Prevention by Dr. Lindomar Pena, FIOCRUZ Recife, Brazil on 12th December 2022.
9. Invited talk on “Sustainable water resources development and management in rural and urban areas: an introduction” by Prof. Pankaj Kumar Roy, Professor & Director, School of Water Resources Engineering, Jadavpur University held on 12th January 2023.
10. Invited talk on “Water Reuse -Innovation, Science & Technology to align with National Missions: Case study of the development of TERI’s TADOX® Technology” by Dr. Nupur Bahadur, Senior Fellow & Head, NMCG-TERI Centre of Excellence held on 12th January 2023.
11. Invited talk on “Sustainable Separation and Recovery of Lithium from Leach liquor of Spent LiBs using Membrane-based Hybrid Technology” by Dr. Ramesh Kumar, Post Doc Researcher, Department of Earth Resources & Environmental Engineering, Hanyang University, 222-Wangsimni-ro, Seongdong-gu, Seoul 04763, Republic of Korea held on 12th January 2023.
12. Invited talk on “Water Contaminants: Fate and existence during treatment process” by Dr. Noor Afshan Khan, Senior scientist, CSIR-National Environmental Engineering Research Institute, Delhi Zonal 12th January 2023.
13. Invited talk on “Ecotoxicology and its Role in Understanding Eco-Health” by Dr. Suhel Parvez, Professor & Head, Department of Toxicology, School of Chemical and Life Sciences, Jamia Hamdard held on 12th January 2023.
14. Invited talk on “Phytopharmaceuticals: A New Drug Class Regulated in India” by Dr. Neeraj Tandon, Former Scientist-G and Head, Medicinal Plants Division, Indian Council of Medical Research, Delhi held on 13th January 2023.
15. Invited talk on “Innovation, Science & Technology to align with National Missions: Case study of the development of TERI’s TADOX® Technology” by Prof. Nupur Bose, University Prof.& Head, P.G.Department of Geography, & Prof-in-Charge, Dept. of Environment and Water Management (Retd.) A.N.College, Patliputra University, Patna, India held on 13th January 2023.
16. Invited talk on “Recovery, Recycle and Reuse-Based Green Biorefinery Strategies for A Sustainable and Secure Future” by Dr. Pinaki De, Senior Scientist, CSIR - National Institute For Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, Kerala held on 13th January 2023.
17. Invited talk on “Graphene integrated photocatalyst development for transformation of anthropogenic CO<sub>2</sub> to Bio-methanol” by Dr. Jayato Nayak, Assistant Professor, Centre for Life Science, Mahindra University, Hyderabad held on 13th January 2023.
18. Invited talk on “National Framework on Safe Reuse of Treated Water for India” by Dr. Girija Bharat, Director, Mu Gamma Consultants Pvt Ltd. Gurugram held on 13th January 2023.

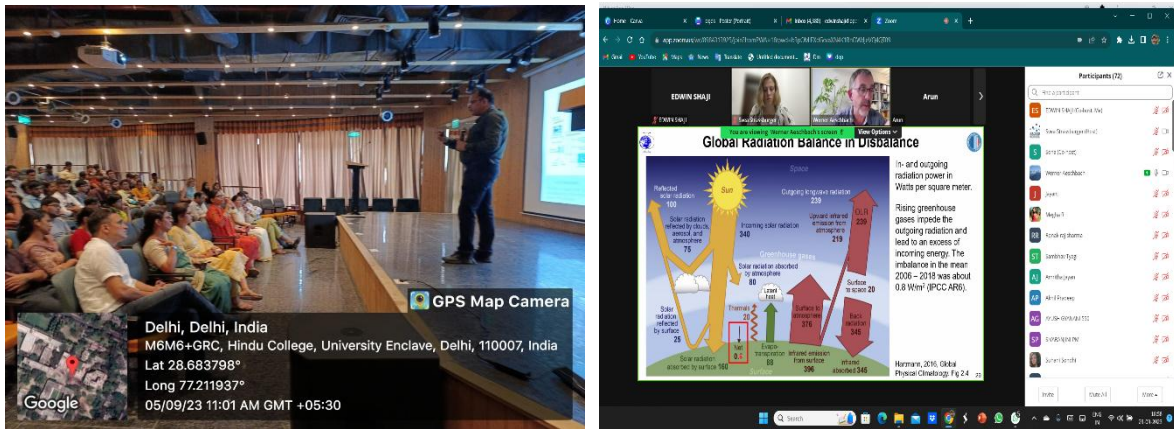
19. Invited talk on “Space radiation-induced accelerated aging, associated cancer risk, and potential mitigation strategies” by Prof. Shubhankar Suman, Associate Professor, SOM - Oncology Academic Department, Georgetown University held on 13th January 2023.
20. Invited talk on “Intellectual Property Rights” by Mr. Sudarshan Kumar Bansal, Senior Partner, IPR held on 18th January 2023.
21. Invited talk on “Intellectual Property Rights” by Mr. Rahul Kumar Jaiswal, Examiner of Patents & Design International, IPO held on 18th January 2023.
22. Invited talk on “Intellectual Property Rights” by Mr. Rajesh Kumar Meena, Examiner of Patents & Design, IPO held on 18th January 2023.
23. Invited talk on "Intellectual Property Rights", under National Intellectual Property Awareness Mission (NIPAM) by Dr. Rohit Rathore, Assistant Controller of Patents & Designs, IPO held on 24th January 2023
24. Invited talk on “Chemical Recycling of Ocean-borne and Post-Consumer Plastic to Renewable Polymers” by Prof. Basudeb Saha, President & CEO- Rikarbon Inc., US held on 24th January 2023.
25. Invited talk on “Green Chemistry: 25 Years of the 12 Principles” by Prof. John C. Warner, President, Chief Technology Officer, and Chairman of the Board of the Warner Babcock Institute for Green Chemistry, US held on 9th November 2023.
26. Invited talk on “Carbon Upcycling from Waste Materials:A Journey on Practicing Green Chemical Principles” by Prof. Basudeb Saha, President & CEO, RiKarbon Inc., US held on 9th November 2023.
27. Invited talk on “Translational Research-Innovation to business reward using green biology and chemistry” by Dr. Alok Adholeya, Director, Translational Research & Innovations Pvt. Ltd, Delhi held on 9th November 2023.
28. Invited talk on “Bioplastics-Value Proposition” by Dr. G. S. Kapur, Consultant-Energy Transition & Petrochemicals & Adjunct Professor, Jamia Hamdard University, Delhi held on 9th November 2023.
29. Invited talk on “Green Chemistry Tools for Process Research” by Dr. Rakeshwar Bandichhor, Vice President, Dr. Reddy's Laboratories Limited, Hyderabad held on 10th November 2023.
30. Invited talk on “Sustainable Approach for Synthesis of small Organic Molecules” by Prof. Hitendra Patel, Professor, Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar held on 10th November 2023.
31. Invited Talk on “Sustainable region-selective cascade methods for the synthesis of drug-like molecule” by Prof. Rajasekhara Reddy Sabbasani, Professor, SAS, Dept. of Chemistry, VIT, Vellore held on 10th November 2023.
32. Invited Talk on “Green and sustainable transformations through organocatalysis” by Dr. Bubun Banerjee, Faculty advisor, Green Chemistry Network Centre Chapter, Akal University held on 10th November 2023.
33. Invited Talk on “Marine Algae as Source of Green Chemistry” by Dr. S. Sadish Kumar Director and Professor, ITS College of Pharmacy, Ghaziabad held on 10th November 2023.
34. Invited Talk on “Polymers: What, why and where” by Prof. Seema Agarwal, Academic Director and Professor, University of Bayreuth Germany held on 21st November 2023.



**Department of Physics:**

1. Invited talk on “Super Massive Black hole in early galaxies” by Prof. Patrick Das Gupta, Professor, University of Delhi on 6th February 2023 with 200 beneficiaries.
2. Invited talk on “Optics and Photonics around us” by Prof. Anurag Sharma, IIT Delhi on 6<sup>th</sup> February 2023 with 200 beneficiaries.
3. Invited talk on “Climate change and depletion of ground water in India and on global Scale” by Prof. Dr Werner Aeschbach, Institute of Environmental Physics, University of Heidelberg, Germany on 29th September 2023 with 100 beneficiaries

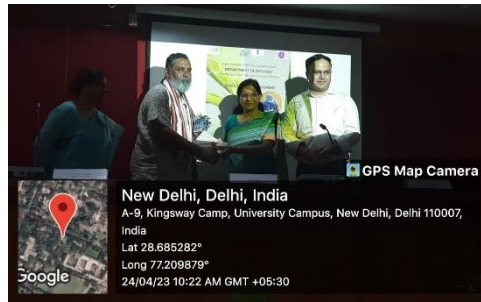
- Invited talk on “SI units in perspective of industry” by Dr. Mahesh Kumar on 5th September 2023 with 200 beneficiaries.



### Department of Zoology:

- Invited talk on “Infectious Diseases: Management, Control and Prevention” by Prof. Ronaldo Oliveira, UFRPE Recife, Brazil on 12th December 2022.
- Invited talk on Infectious Diseases: Management, Control and Prevention by Dr. Lindomar Pena, FIOCRUZ Recife, Brazil on 12th December 2022.
- Invited talk on “Exploring therapeutic role of Endoplasmic Reticulum in Alzheimer’s Disease” by Ms. Karnika Gupta, Dementia Research Institute, Department of Clinical Neurosciences, University of Cambridge, on 2nd Jan. 2023.
- Invited talk cum interactive session on “Insect pest management” by Dr T.V. Sajeev, Chief Scientist, KFRI, Thrissur, Kerala, on 24<sup>th</sup> April 2023.
- Invited talk cum interactive session on “Science of sleep for good health: Animal studies driving concepts from Basics to bench side” by Dr Kamalesh Gulia, Scientist ‘G’ & Head, Division of Sleep Research, Sri Chitra Tiunal Institute of Medical Sciences & Technology, Thiruvananthapuram, Kerala, on 6<sup>th</sup> Oct. 2023.








Under the aegis of IQAC & DBT Star college scheme  
**DEPARTMENT OF ZOOLOGY**  
 Organizes a Lecture cum Interactive session on

**SCIENCE OF SLEEP FOR GOOD HEALTH: ANIMAL STUDIES  
 DRIVING CONCEPTS FROM BASICS TO BENCH SIDE**

 6 OCTOBER, 2023

 11:00 AM-12:30 PM

 SEMINAR ROOM






*Resource person*  
**DR KAMALESH GULIA**  
(alumna of Hindu College- Batch of 1984)  
 Scientist 'G' & Head, Division of Sleep Research  
 Biomedical Technology Wing  
 Sree Chitra Tirunal Institute for Medical Sciences & Technology  
 Thiruvananthapuram 695012, Kerala.

**ORGANIZING COMMITTEE**  
 • DR ANUPAM V. SHARMA  
 Coordinator (Zoology) DBT Star college scheme  
 • DR SOMA M. GHORAI (Teacher-in-charge) &  
 the entire Faculty, Department of Zoology


For more details, you may contact:  
 Mohit Nama (President, Genesis): 97728 29167  
 Vikas Taak (Treasurer, Genesis): 90573 38696


**Prof. Reena Jain**  
 Coordinator, DBT Star college scheme

**Prof. Anju Srivastava**  
 PATRON, Hindu College

Under the aegis of DBT Star College Scheme  
**DEPARTMENT OF ZOOLOGY**  
 organizes an Invited Talk cum Interactive Session  
 on  
**INSECT PEST MANAGEMENT**  
 by





**DR T V SAJEEV**  
**CHIEF SCIENTIST**  
KERALA STATE RESEARCH INSTITUTE  
 THRISSUR, KERALA

At: 10:00 AM on 24th April 2023  
 Venue: Seminar Hall

**ORGANIZING COMMITTEE**  
 Dr Anupam V. Sharma, Convenor; DBT Coordinator, Zoology; Dr Varunendra S. Rawat, Treasurer in Charge  
 Dr Soma M. Ghorai, Dr Neetu, Mr Kiran K. Salam, Dr Diga Bajaj, Dr Mohit Kumar, Dr Animesh B. Mishra

Student Coordinators:  
 Vikas Taak : 9057338696 Mohit Nama : 97728 29167

Reena

Co-ordinator  
 Hindu College  
 Star College Programme

Anju

प्राचार्य/Principal  
 हिन्दू महाविद्यालय, दिल्ली-7  
 Hindu College, Delhi-7

## Summer Trainings/Add-on/Certificate Courses

## *Annexure-VI*

1. Insights into Fundamentals of Spectroscopic & Microscopic Techniques (Part-I: Microscopic techniques, XPS & Raman Spectroscopy) 1<sup>st</sup>-16<sup>th</sup> June 2023.
2. Insights into Fundamentals of Spectroscopic & Microscopic Techniques (Part-II: NMR, IR, UV-VIS and Fluorescence Spectroscopy) 19<sup>th</sup> June-5<sup>th</sup> July 2023.
3. Conducted Summer training on Scilab Programming with Project Work from 16<sup>th</sup> June 2022 to 31<sup>st</sup> July 2022.
4. Conducted Summer training on Robotics using Arduino from 10<sup>th</sup> June 2023 to 31<sup>st</sup> July 2023.
5. Value-Added Course on Digital Signal Processing for Biomedical Applications April-June 2023
6. Value-Added Course on Unidirectional and Bidirectional Wireless Charger for Electric Vehicles August-December 2022.
7. Value-Added Course on Introduction to Biomechanics & Simulations March-April 2023
8. Value addition course on Computational quantum mechanics using XCOS 1<sup>st</sup> June 2023 to 31<sup>st</sup> July 2023.
9. Add-On course on Machine Learning in Physics from 5<sup>th</sup> September 2023 to 10<sup>th</sup> December 2023.
10. Conducted Summer training on 'Evaluation of the pesticidal &/or repellent activity of turmeric rhizome/ powder on an economically important insect pest of stored grains-the pulse beetle, *Callosobruchus chinensis* L. (Coleoptera)' from 23<sup>rd</sup> May to 20<sup>th</sup> July, 2023.



*Reena*  
Co-ordinator  
Hindu College  
Star College Programme

*Anil*  
प्राचार्य/Principal  
हिन्दू महाविद्यालय, दिल्ली-7  
Hindu College, Delhi-7

### Botany Department

1. Outreach program was organised for the students of Modern School Delhi to demonstration “The process of multiplication of plant cells through study of mitosis in the onion root tips” and “various methods of estimation of pH from different water samples”. 50 students participated in the event and learnt the mitosis with all fine details.
2. Outreach programme was organised on 5<sup>th</sup> June 2023 for the school students of Kendriya Vidyalaya, Gulabi Bagh Delhi for tree plantations.
3. Outreach Program was organised on Public Awareness on Mosquito-Borne Diseases & Their Management for 200 students on 10<sup>th</sup> June 2023.
4. Botany department faculties were invited as resource person to deliver lecture on Mendelian Genetics on 9<sup>th</sup> June, 2023 at Sarvodaya Co-Ed Vidyalaya, Gulabi Bhagh, Delhi
5. Botany department faculty were invited as resource person to deliver lecture on Biotechnology to XIIth class students of Sarvodaya Co-Ed Vidyalaya, Gulabi Bhagh, Delhi, on 26<sup>th</sup> July, 2023.
6. Conducted Hands on Training in Handling Mitosis in onion root tips for medical aspirants at Sarvodaya Co-Ed Vidyalaya, Gulabi Bagh, Delhi on 14<sup>th</sup> June 2023.



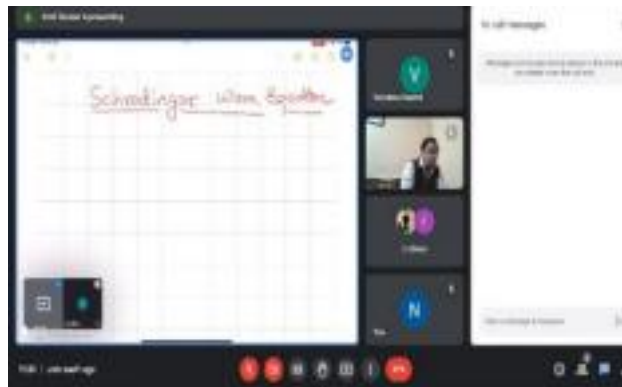
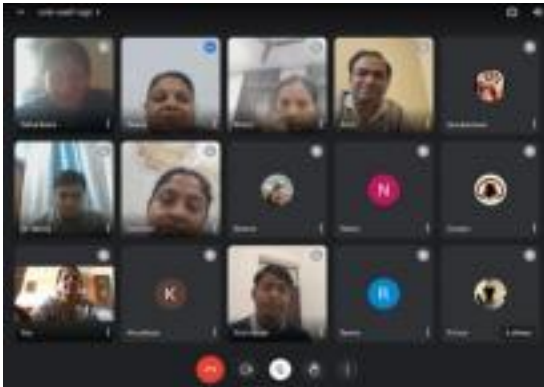
### Chemistry Department

1. An outreach programme titled "The Boons of Green Chemistry & Nanotechnology: Unravelling the Real Life Experiments" was conducted to enhance the understanding of science via hands-on experimental training to higher secondary science students on 7<sup>th</sup> July 2022. 57 students from four different branches of Modern School, Delhi/NCR participated in the programme.
2. RSC Teachers' Training Programme was organised on 6-7<sup>th</sup> June 2023, where 36 teachers from different Schools, Delhi/NCR participated
3. Outreach Program was organised for Public Awareness on Mosquito-Borne Diseases & Their Management for around 200 students on 10<sup>th</sup> June 2023.
4. Preventive health checkup program cum medical consultation was conducted for young girls (150) in collaboration with Tirath Ram Shah Charitable Hospital, Delhi on 24th November 2023.



## Physics Departments

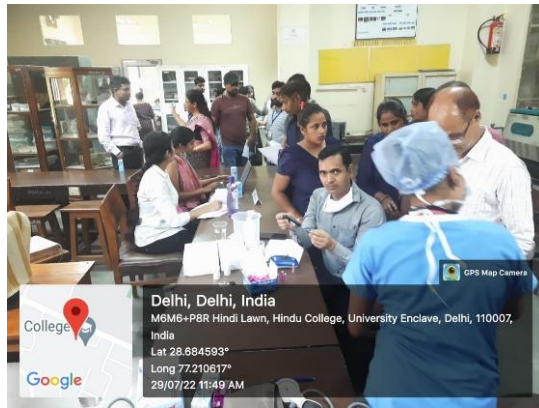
1. An outreach programme was conducted to enhance the understanding of science via hands-on experimental training to higher secondary science students on 7<sup>th</sup> July 2022. 57 students from four different branches of Modern School, Delhi/NCR participated in the programme
2. Outreach program was organised for Maharani Laxmibai College for Women, Haryana from 14<sup>th</sup> December 2022 to 17<sup>th</sup> December 2022.
3. Another outreach program was organised for Maharani Laxmibai College for Women, Haryana from March-April 2023.
4. RSC Teachers' Training Programme was organised on 6-7<sup>th</sup> June 2023, where 36 teachers from different Schools, Delhi/NCR participated
5. Outreach Program was organised for Public Awareness on Mosquito-Borne Diseases & Their Management for around 200 students on 10<sup>th</sup> June 2023.



### Zoology Department

1. Outreach program 'Basic Techniques in Biological Sciences' for 25 School students and teachers was organized from 7<sup>th</sup> to 9<sup>th</sup> June, 2022.
2. Outreach program 'Ignite the Young Minds' was organized for 30 students of Modern School, Delhi/NCR on 6<sup>th</sup> July, 2022
3. Outreach program for non-teaching staff of the college was conducted in form of 'Preventive Health Checkup camp' (in collaboration with Sri Balaji Action Medical Hospital & Action Cancer Institute, Paschim Vihar, ND & Department of Anthropology, DU) on 29<sup>th</sup> July, 2022
4. Outreach Program for Public Awareness on Mosquito-Borne Diseases & their Management was organised in collaboration with Absolute Human Care Foundation (AHCF), New Delhi, for around 100 students on 10<sup>th</sup> June, 2023.





*Reem*  
**Co-ordinator**  
 Hindu College  
 Star College Programme

*Anjali*  
**प्राचार्य/Principal**  
 हिन्दू महाविद्यालय, दिल्ली-7  
 Hindu College, Delhi-7

### **Botany Department**

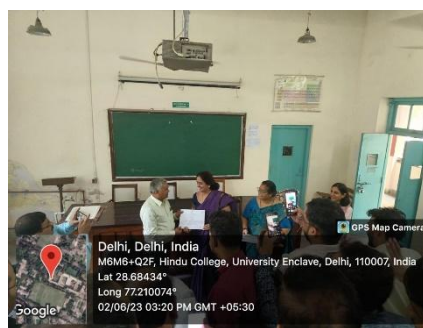
A training Program was organized on ‘Maintenance of Records (Stock Register) and Stores’ on 23 June 2022 in which 12 lab staff participated



### **Chemistry Department**

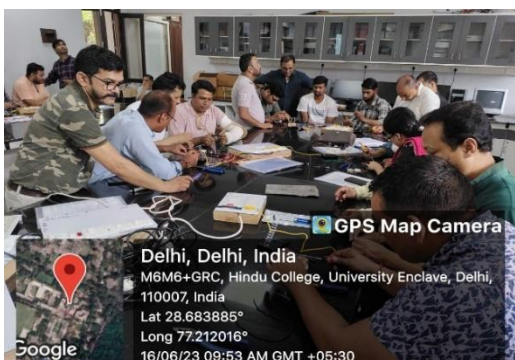
1. A workshop was organized for the laboratory staff to enhance the knowledge on 13<sup>th</sup> and 14<sup>th</sup> July 2023. 17 non-teaching staff participated in the program to upskill their expertise
2. A workshop on Fire Safety was organized on 13<sup>th</sup> July 2022 in which Mr. Paras Kumar, Station Officer, Fire Safety Management Academy, Rohini Sector-8, Delhi demonstrated the preventive measure to be taken for fire safety to nearly 35 participants.
3. Laboratory Staff Training Program on Basic IT Skills, Instrumentation Techniques and Stock Maintenance was organized from 29<sup>th</sup> May to 2<sup>nd</sup> June 2023 in which 30 non-teaching staff participated.





## Physics Department

1. Proper Training of Welding, Cutting, Grinding, Soldering, Circuit Designing was given to 3 non-teaching laboratory staff on 15<sup>th</sup> June 2023
2. One Week National Workshop for Laboratory Staff on Skill Enhancement was organized from 12<sup>th</sup> June 2023 to 16<sup>th</sup> June 2023 for 24 laboratory staff



## Zoology Department

A hands-on training session on the use of the spirometer instrument purchased out of the DBT grant was organized for the laboratory staff during the workshop on 'Cardiac and Respiratory physiology (spirometry)' was organized on **11<sup>th</sup> April, 2023**.





**HINDU COLLEGE**  
 UNIVERSITY OF DELHI

**DEPARTMENT OF ZOOLOGY**  
 ORGANIZES A  
**WORKSHOP**  
 (under the aegis of DBI Star College scheme)  
 ON  
**CARDIAC & RESPIRATORY PHYSIOLOGY**

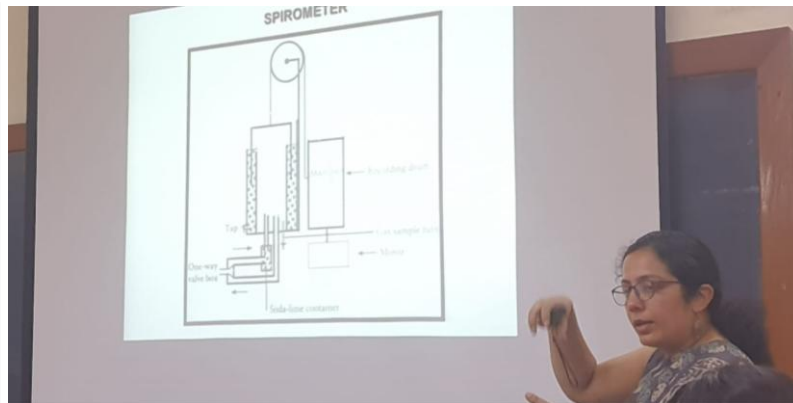



**10:30 | INTRODUCTION**  
**11:00 | TALK & PRACTICAL DEMONSTRATION BY**  
**DR MEENAL DHALLI, DEPARTMENT OF ANTHROPOLOGY, DU**  
**12:00-14:00 | HANDS-ON PRACTICAL SESSION FOR STUDENTS.**

**DATE:** 11 APRIL, 2023 (TUESDAY)  
**TIME:** 10:30 AM TO 2 PM  
**VENUE:** ROOM NO. 12, 14 & ZOOLOGY MUSEUM

**ORGANIZING COMMITTEE**  
 Dr Anupam V. Sharma (Convener)/ DBI Coordinator (Zoology)  
 Dr Soma M. Ghosal, Dr Nitendra, Dr Varunendra S. Rawat, Mr. Kiran S. Saha  
 Dr Divya Bajaj, Dr Mohit Kumar, Dr Amanan Bhatnagar

FOR DETAILS, YOU MAY CONTACT MR VIKAS TANK (STUDENT COORDINATOR) AT 9627228696




  
**Co-ordinator**  
 Hindu College  
 Star College Programme


  
**प्राचार्य/Principal**  
 हिन्दू महाविद्यालय, दिल्ली-7  
 Hindu College, Delhi-7

## **Faculty Trainings**

## ***Annexure-IX***

### **Department of Botany**

1. Dr. Vivek Chopra has successfully completed a 4-Week Faculty Induction/Orientation Programme for “Faculty in Universities/Colleges/Institutes of Higher Education” from 23rd May – 21st June, 2023 organised by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission On Teachers and Teaching.
2. Dr. Divya Mohanty has successfully completed a 4-Week Faculty Induction/Orientation Programme for “Faculty in Universities/Colleges/Institutes of Higher Education FIP-34” organised by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from 23rd May – 21st June, 2023.
3. Dr. Gurumayum Suraj Sharma has successfully completed a 4-Week Faculty Induction/Orientation Programme for “Faculty in Universities/Colleges/Institutes of Higher Education FIP-34” organised by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from 23rd May – 21st June, 2023.
4. Dr. Gurumayum Suraj Sharma has successfully completed an online training on "Engaging Youth and Adolescents in Disaster Risk management and Climate change adaptation" organized by National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India in collaboration with Hansraj College University of Delhi from 26th -28th July 2023.
5. Dr. Vivek Chopra has successfully completed online Two – Week Refresher Course in “BOTANY” from 29th July – 13th August, 2023 organised by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission On Teachers and Teaching.
6. Dr. Divya Mohanty has successfully completed an online Two – Week Refresher Course in “BOTANY” organised by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from 29th July – 13th August, 2023.
7. Dr. Gurumayum Suraj Sharma has successfully completed online Two – Week Refresher Course in “BOTANY” organised by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from 29th July – 13th August, 2023.
8. Dr. Ravindra Kumar has successfully completed One-Week National Faculty Development Program (FDP) on “Floriculture and Horticulture" from 16th - 22nd August 2023.
9. Dr. Ravindra Kumar has successfully completed One-Week National Faculty Development Program (FDP) on “Green Belt development for Smart Cities" from 5th - 11th September 2023.

10. Dr. Divya Mohanty has successfully completed an online training on "Engaging Youth and Adolescents in Disaster Risk management and Climate change adaptation" organized by National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India in collaboration with Hansraj College University of Delhi from 26th -28th July 2023.

### **Department of Chemistry**

1. Dr Aman Bhardwaj has successfully completed a course workshop on Science and Society organised by VAC committee in collaboration with Hansraj College, University of Delhi under the aegis of Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi on 20th October 2022.
2. Dr. Dinesh Kumar has successfully completed one-week Online Faculty Development Program on "Python: Essentials, Programming and Analytics" jointly organised by University of Delhi and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education, 27th October-3rd November 2022.
3. Dr Aman Bhardwaj has successfully completed one-week Online Faculty Development Program on "Python: Essentials, Programming and Analytics" jointly organised by University of Delhi and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education, 27th October-3rd November 2022.
4. Dr. Manoj Chahal has successfully completed a course workshop on Yoga: Philosophy and Practice organised by VAC committee in collaboration with Aryabhata College, University of Delhi under the aegis of Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi on 28th October 2022.
5. Dr. Dinesh Kumar has successfully completed one-week Online Faculty Development Program on "Visual Communications, Photography, Graphic Design & Animation and Digital Film Production" jointly organised by University of Delhi and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education, 4th -11th November 2022.
6. Dr. Jaspreet Kaur has successfully completed Inter-Disciplinary Two-Week Refresher Course on "Advanced Research Methodology" held on 22nd April – 6th May 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
7. Dr. Dinesh Kumar has successfully completed 4 Week Faculty Induction/ Orientation Programme for "Faculty in Universities/Colleges/ Institute of Higher Education" held on 23rd April – 22nd May 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
8. Dr. Sushma Yadav has successfully completed 4 Week Faculty Induction/ Orientation Programme for "Faculty in Universities/Colleges/ Institute of Higher Education" held on 23rd May – 21st June 2023

- organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
9. Dr. Dinesh Kumar has successfully completed Inter-Disciplinary Two-Week Refresher Course on “Managing Online Classes & Co-Creating MOOCS 27.0” held on 6th – 20th June 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
  10. Dr. Manoj Chahal has successfully completed 4 Week Faculty Induction/ Orientation Programme for “Faculty in Universities/Colleges/ Institute of Higher Education” held on 22nd July – 20th August 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
  11. Dr. Neha Kapoor has successfully completed One-Week National Faculty Development on Organic Farming and Biofertilizers from 7th – 13th August 2023 jointly organized by University of Delhi (Department of Botany and SEC Committee); Swami Shraddhanand College, University of Delhi; Shaheed Rajguru College of Applied Sciences for Women, University of Delhi; Chaudhary Charan Singh Hisar Agricultural University (CCSHAU), Hisar and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMNMTT) of Ministry of Education.
  12. Dr. Neera Sharma has successfully completed Seven-Days Bioinformatics Skill Development Training Program on Ligand-Protein Interaction through Molecular Docking, MD Simulation & PCA in Determining Essential Dynamics from 7th – 14th December 2023 organised by CSIR-Central Institute of Medicinal & Aromatic Plants, Lucknow.
  13. Prof. Anju Srivastava has successfully completed the Capacity Building Workshop on Green Hydrogen organized by Hydrocarbon Sector Skill Council (HSSC) OIBD Bhawan, Noida, U.P. held on 18th -19th December 2023 and received certificate of Master Trainer.
  14. Prof. Reena Jain has successfully completed the Capacity Building Workshop on Green Hydrogen organized by Hydrocarbon Sector Skill Council (HSSC) OIBD Bhawan, Noida, U.P. held on 18th -19th December 2023 and received certificate of Master Trainer.
  15. Dr. Devanshi Magoo has successfully completed the Capacity Building Workshop on Green Hydrogen organized by Hydrocarbon Sector Skill Council (HSSC) OIBD Bhawan, Noida, U.P. held on 18th -19th December 2023 and received certificate of Trainer.
  16. Dr. Dinesh Kumar has successfully completed the Capacity Building Workshop on Green Hydrogen organized by Hydrocarbon Sector Skill Council (HSSC) OIBD Bhawan, Noida, U.P. held on 18th - 19th December 2023 and received certificate of Trainer.
  17. Dr. Manolata Devi has successfully completed NEP Orientation and Sensitization Programme (online) from 18th - 28th December 2023 organised by UGC Malviya Mission-Teacher Training Programme (MM-TTP), NIPA.

## Department of Physics

1. Dr. Manju Bala has successfully completed Inter-Disciplinary Two-Week Refresher Course on “Managing Online Classes & Co-Creating MOOCS 27.0” held on 11th – 25th March 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
2. Dr. Amit Tanwar has successfully completed 4 Week Faculty Induction/ Orientation Programme for “Faculty in Universities/Colleges/ Institute of Higher Education” held on 23rd April – 22nd May 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
3. Dr. Neha Batra Bali has successfully completed 4 Week Faculty Induction/ Orientation Programme for “Faculty in Universities/Colleges/ Institute of Higher Education” held on 23rd April – 22nd May 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
4. Dr. Manju Bala has successfully completed 4 Week Faculty Induction/ Orientation Programme for “Faculty in Universities/Colleges/ Institute of Higher Education” held on 23rd April – 22nd May 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
5. Dr. Geeta Ray has successfully completed 4 Week Faculty Induction/ Orientation Programme for “Faculty in Universities/Colleges/ Institute of Higher Education” held on 23rd April – 22nd May 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
6. Dr. Ankur Shandilya has successfully completed 4 Week Faculty Induction/ Orientation Programme for “Faculty in Universities/Colleges/ Institute of Higher Education” held on 23rd April – 22nd May 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
7. Dr. Ginminlen Touthang has successfully completed one Week Faculty Development Programme on "Open Source Tools for Teaching and Research" held from 22nd - 28th May, 2023, organised by Teaching Learning Centre Ramanujan College in collaboration with Dolphin PG Institute of Biomedical and Natural Sciences, Dehradun under PMMMNMTT, Ministry of Education, Government of India.
8. Dr. Neha Batra Bali has successfully completed Inter-Disciplinary Two-Week Refresher Course on “Advanced Research Methodology” held on 21st June – 5th July 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
9. Dr. Ginminlen Touthang has successfully completed 4 Week Faculty Induction/ Orientation Programme for “Faculty in Universities/Colleges/ Institute of Higher Education” held on 22nd June – 21st July 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).

10. Dr. Priyanka has successfully completed One-Week National Faculty Development Program on "Basic Skill in Experimental Physics" organized by University of Delhi in collaboration with Daulat Ram College, DU and Guru Angad Dev Teaching Learning Centre, a Centre under PMMMNMTT, Ministry of Education, Government of India held from 17th - 23rd July, 2023.
11. Dr. Ankur Shandilya has successfully completed One-Week National Faculty Development Program on "Basic Skill in Experimental Physics" organized by University of Delhi in collaboration with Daulat Ram College, DU and Guru Angad Dev Teaching Learning Centre, a Centre under PMMMNMTT, Ministry of Education, Government of India held from 17th - 23rd July, 2023.
12. Dr. Ginminlen Touthang has successfully completed One-Week National Faculty Development Program on "Basic Skill in Experimental Physics" organized by University of Delhi in collaboration with Daulat Ram College, DU and Guru Angad Dev Teaching Learning Centre, a Centre under PMMMNMTT, Ministry of Education, Government of India held from 17th - 23rd July, 2023.
13. Dr. Ankur Shandilya has successfully completed Inter-Disciplinary Two-Week Refresher Course on "Managing Online Classes & Co-Creating MOOCS 27.0" held on 6th – 20th June 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
14. Dr. Amit Tanwar has successfully completed one-week Online Faculty Development Program on "Python in Data Analytics" from 7th -13th August 2023 organised by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
15. Dr. Neha Batra Bali has successfully completed one-week Online Faculty Development Program on "Python in Data Analytics" from 7th -13th August 2023 organised by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).
16. Dr. Geeta Ray has successfully completed Inter-Disciplinary Two-Week Refresher Course on "Advanced Research Methodology" held on 22nd August – 5th September 2023 organized by TLC, Ramanujan College, University of Delhi under the Aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (Ministry of Education).

### **Department of Zoology**

1. Dr Anupam V. Sharma successfully completed the training workshop on "Bioecology and Physiology of Invasive Fall Armyworm", organized by Division of Entomology, ICAR-IARI, New Delhi, on 18-20 Jan., 2023.
2. Mr Kiran Kumar Salam successfully completed 4 Week Faculty Induction/ Orientation Programme for "Faculty in Universities/Colleges/ Institute of Higher Education" from 23 May–21 June, 2023 organized by TLC, Ramanujan College, University of Delhi.
3. Dr Amaan Buniyaadi successfully completed 4 Week Faculty Induction/ Orientation Programme for "Faculty in Universities/Colleges/ Institute of Higher Education" from 23 May–21 June, 2023 organized by TLC, Ramanujan College, University of Delhi.

4. Dr Divya Bajaj successfully completed “4-Week Faculty Induction/Orientation Programme” for “Faculty in Universities/Colleges/Institutes of Higher Education” from 23rd May – 21st June 2023 organized by TLC, Ramanujan College, University of Delhi.
5. Dr Ravi Kumar Goswami successfully completed One-Week Online National Faculty Development Program “Sericulture” jointly organized by Centre for Skill Development and Seri-Technology & Department of Zoology, Hansraj College in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi from 22-27 June, 2023.
6. Dr Amaan Buniyaadi successfully completed One-week Faculty Development program on “Sericulture: Reading and its application” organized by ANDC College and Delhi University from 8-14 August, 2023.
7. Dr Divya Bajaj successfully completed one-week faculty development program on “Sericulture: Rearing and its Application” organized by University of Delhi (Skill Enhancement Course Committee) in collaboration with Acharya Narendra Dev College from 8-14 August, 2023.
8. Dr Divya Bajaj successfully completed two-week Interdisciplinary refresher course on “Research Methodology and Data Analysis” organized by Ministry of Education PMMMNT in collaboration with Indian Accounting Association, NCR Chapter from 28 July -10 August, 2023.
9. Mr Kiran Kumar Salam successfully completed One-Week National Faculty Development Program “Skill Development in Cultivating Green Future organized by University of Delhi (Department of Botany) in collaboration with Chaudhary Charan Singh Hisar Agricultural University (CCS-HAU), Haryana, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, Swami Shraddhanand College, University of Delhi and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education on 4-10 September, 2023.
10. Dr Ravi Kumar Goswami successfully completed One-Week National Faculty Development Program “Skill Development in Cultivating Green Future organized by University of Delhi (Department of Botany) in collaboration with Chaudhary Charan Singh Hisar Agricultural University (CCS-HAU), Haryana, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, Swami Shraddhanand College, University of Delhi and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education from 4-10 September, 2023.
11. Dr Mohit Kumar successfully completed One-Week National Faculty Development Program “Hydroponics and Aeroponics farming” organized by University of Delhi (Department of Botany) in collaboration with Chaudhary Charan Singh Hisar Agricultural University (CCSHAU), Haryana, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, Swami Shraddhanand College, University of Delhi and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education from 4-10 September, 2023.



**1. DROSOPHILA LAB:**

The adults of the tiny, fruit fly *Drosophila melanogaster* are generally found flying next to rotting and under ripe fruits, and their immature stages are found within those fruits. It is used as an experimental organism for the study of animal behavior, genetics, etc. Different activities take place in the *Drosophila* research lab. set up with the help of financial support from the DBT Star college scheme, for the students as stated below:

- Summer training, Internship and small projects. Fly Pushing (Virgin Collection; Experimental Crosses; Screening; Stock Constructions, etc.)
- Fly stocks maintained in BOD
- Fly work areas that are confined and their observation.



Stereo microscope

Drosophila vial

Drosophila bottles



## 2. E-waste Skill Center

Skill enhancement courses committee of university of Delhi has sanctioned the establishment of Skill Development center at Hindu College. The skill center will be a boon for the students and faculty members as it will enable reuse recycle of electronic components along with repairing of certain electronic equipments, thus leads to sustainability.



*Reem*  
**Co-ordinator**  
Hindu College  
Star College Programme

*Anjali*  
**प्राचार्य/Principal**  
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