

Report on Events Organized by Department of Zoology

1. In House Skill Development Programme on Enhancing E-Learning Through ICT Tools (December 17 -19, 2020).

The Life Science Association organized an Online In-House Skill Development Programme on “Enhancing E-Learning Through ICT Tools” from December 17 to December 19, 2020. The program aimed to familiarize students with ICT tools used in teaching, develop skills for transitioning from offline to online learning, and address students’ queries through hands-on training. **Dr. Madhu** coordinated the course, which comprised six hours of training over three days, with 56 first-year B.Sc. Life Science students from Daulat Ram College participated. The sessions covered essential ICT tools. On the first day, Dr. Sonika Sharma introduced Google Classroom, followed by a session on Google Docs and Google Slides by Dr. Jyotsna Singh. The second day featured Dr. Jyoti Taneja’s session on Google Drive, Google Scholar, Google Sheets, and Chrome extensions. On the final day, Dr. Aditi Puri demonstrated Google Forms and ChemSketch, while Dr. Anju Jain explained Google Meet. Participants joined a Google Classroom using their GSuite ID, submitted assignments, and provided feedback through Google Forms. Students actively engaged in the program, reporting enhanced knowledge of ICT tools. They expressed enthusiasm for learning advanced tools such as graphic design and podcast creation. The most appreciated topics were Google Classroom, Meet, and Docs, highlighting their relevance in e-learning

2. Skill Development Program on ‘Information and Communications Technology tools’ (November 24-25 2021)

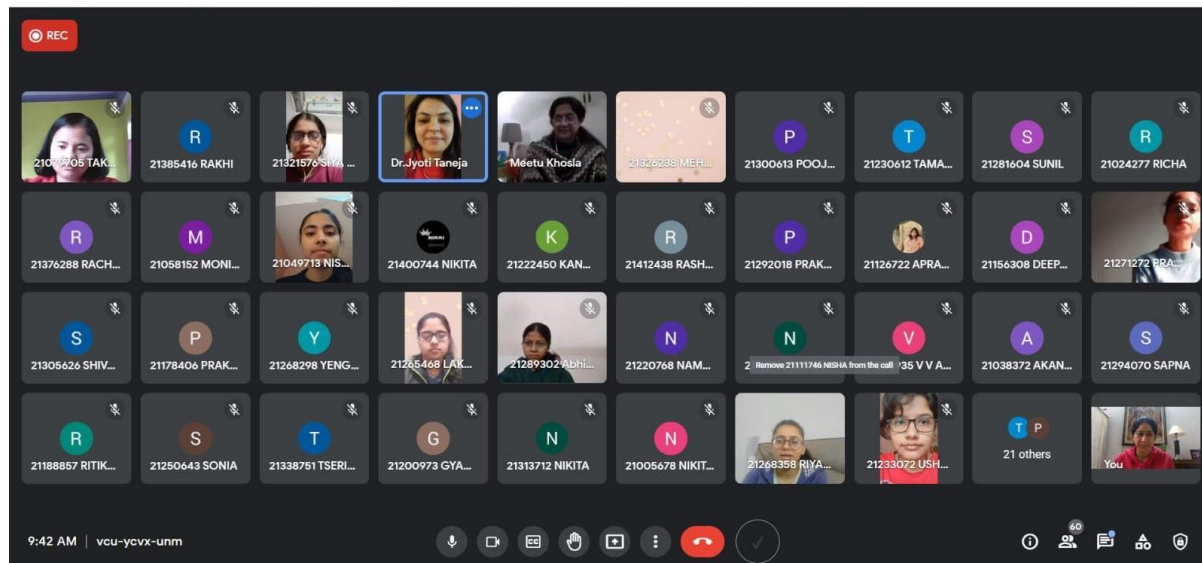
On 24th November, the event was presided over by the Teacher Incharge, **Dr. Jyoti Taneja** with a heartfelt welcome to Dr. Meetu Khosla, coordinator of SDP. She gave her best wishes for this event. This was followed by a brief intro on official gsuite id and importance of learning skill development program on Information and Communications Technology tools. Students were informed of attending all sessions and submitting quizzes and assignments on time.

Session 1 of SDP was conveyed at 9:30 am by Dr. Sonika Sharma. The students were introduced to the classroom and the various options were discussed. The mobile view of the classroom was also explained. The facilitator also explained to the students how to respond to assignments. Along with this, students were given hands-on practice on how to upload assignments and the conversion of assignments to pdf for uploading and tracking their academic progress was also discussed. The session came to an end with a question-answer session and students were given assignments based on the skill they learnt.

Session 2 was mentored by Dr. Jyotsna on the use of google doc explaining its various features and know-about while in Session 3 participants were guided by Dr. Neha Niharika on the use of google forms and google meet which boosted their self-confidence in using these platforms for their daily academic assessments and records. This was an opportunity for the participants to get acquainted with these web-based programs and have real-time collaboration with their acquaintances.

Day 2 began with the introduction by Dr. Jyoti Singh on data presentation and its interpretation using graph pad prism, a commercially available scientific 2D graphing and statistics software. Last session of Day 2 was being done by Ms. Aashi, to make students familiar with Canva, a graphic design platform, used to create social media graphics, presentations, posters, documents, and other visual content.

In the end, students were given a final MCQ, to know their overall learning and understanding. The overall feedback of the students was collected via google forms which were quite pleasing as they got to learn a whole new set of necessary skills in a well-organized environment.

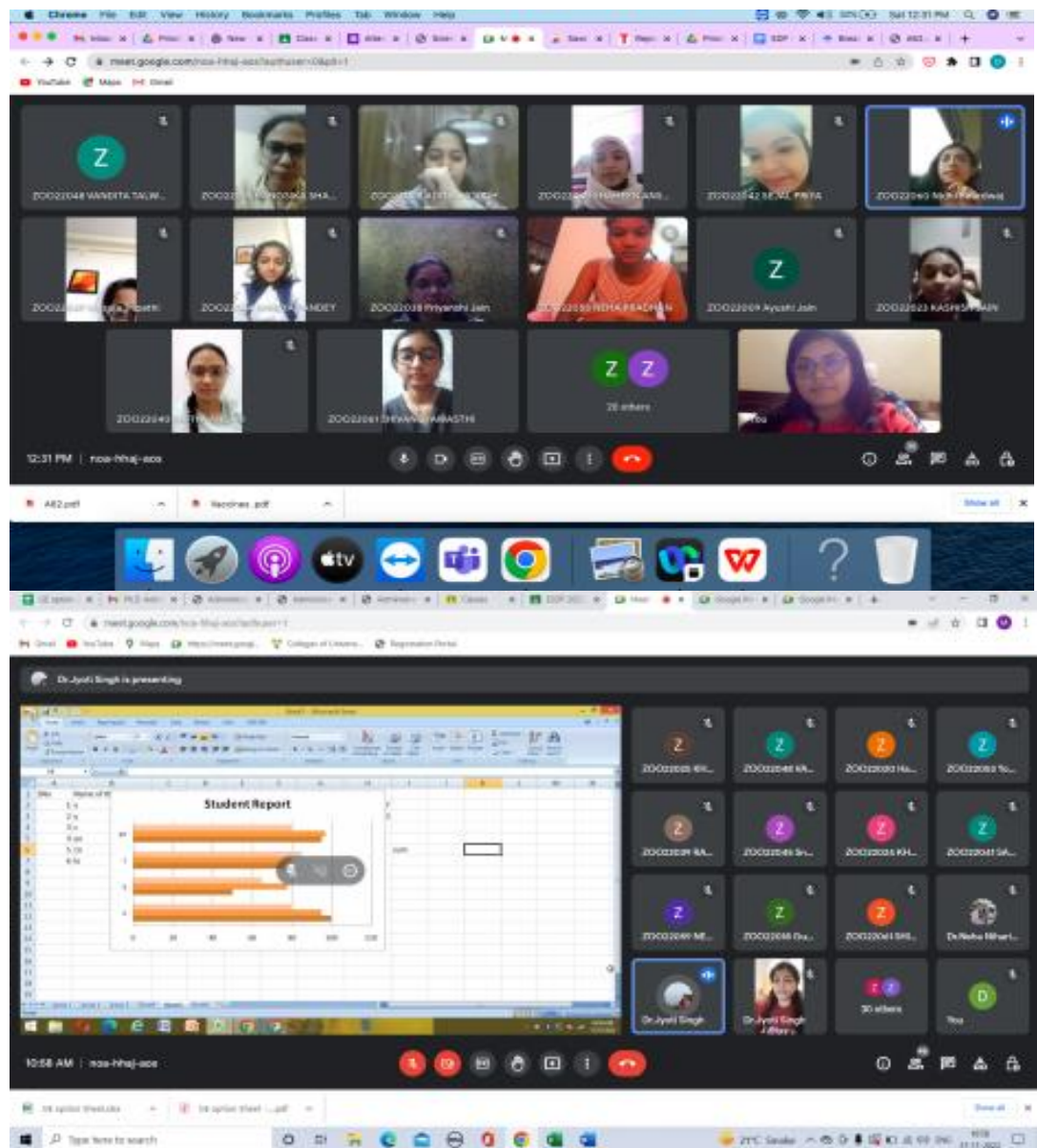


3. SDP on 'Enhancing Learning Through ICT Tools' (November 26-27, 2022)

The Digital Literacy course, coordinated by **Dr. Madhu and Dr. Sonika Sharma**, was conducted on November 26 and 27, 2022, from 9:00 AM to 1:00 PM. The program aimed to equip students with essential digital tools to enhance their learning process in a blended mode. On the first day, Dr. Neha Niharika introduced students to posters, research articles, and Google Docs, followed by a session on Google Drive, Google Scholar, and Chrome extensions by Dr. Jyoti Taneja. The second day featured Dr. Jyoti Singh's session on Google Classroom and Spreadsheets, while the final session was dedicated to resolving queries and hands-on assignments, led by Dr. Jyoti Taneja, Dr. Jyoti Singh, and Dr. Neha Niharika.

The course covered fundamental ICT tools such as Google Docs, Forms, Drive, Classroom, and extensions, along with research paper writing and spreadsheet applications. Students were assessed through assignments based on session topics, evaluating their ability to apply acquired skills. Upon completion, participants gained proficiency in using ICT tools for projects, managing spreadsheets, and designing posters for conferences. The course successfully enhanced digital

literacy among students, empowering them to navigate online learning resources efficiently.

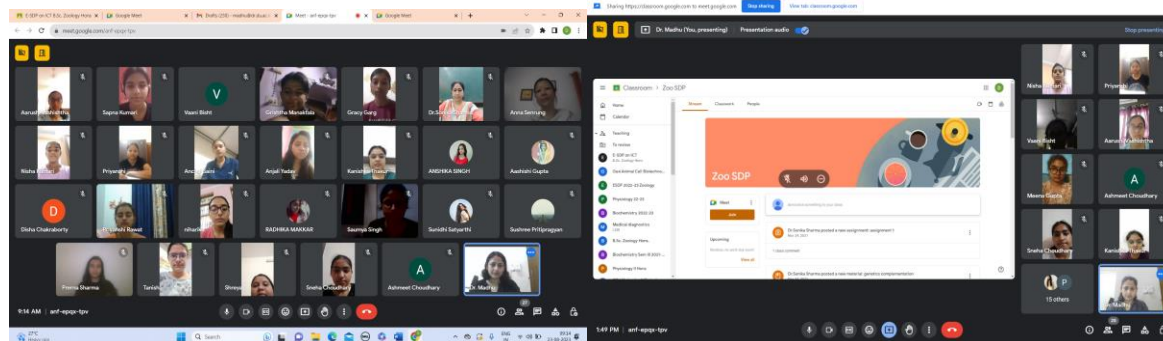


4. E-SDP on "Enhancing Learning Through ICT Tools" (August 23-24, 2023)

The Zoology Department conducted a two-day E-SDP on "Enhancing Learning Through ICT Tools" from August 23 to 24, 2023, under the coordination of **Dr. Sonika Sharma and co-ordination of Dr. Madhu**. The program, designed to introduce first-year Zoology students to essential digital tools, aimed to enhance digital literacy and facilitate a blended learning experience. A total of 32 students participated in interactive sessions covering various ICT tools. On the first day, Ms. Anna Senrung introduced MS PowerPoint and biological illustrations, followed by a session on Google Meet and Google Classroom by Dr. Madhu. The second day

included sessions by Dr. Sonika Sharma on assignment submission, Google Sheets, and Excel, while Dr. Jyotsna Singh covered Google Drive, Calendar, Forms, Docs, and Jamboard.

The course emphasized the use of Google tools, spreadsheets, and biological illustrations to improve students' academic skills. Participants were assessed through assignments that tested their ability to apply the acquired skills. Upon completion, students gained proficiency in ICT tools for projects and assignments, spreadsheet management, and digital collaboration. The program successfully enhanced students' digital literacy, preparing them for efficient academic work and future research endeavors.



5. Hands-on training program workshop, "Life Sciences: Tools and Techniques," (July 13-19, 2022)

The Zoology Department conducted a five-day hands-on training program, "Life Sciences: Tools and Techniques," from July 13 to 19, 2022. Coordinated by **Dr. Jyoti Taneja and co-coordinated by Dr. Sonika Sharma**, the course aimed to enhance students' practical skills in life sciences through comprehensive wet lab training. A total of 36 second-year students from Zoology, Biochemistry, and Life Sciences participated in sessions covering key areas such as medical diagnostics, cell biology, molecular biology, biochemistry, ecology, and developmental biology. The workshop featured expert-led sessions on essential laboratory techniques, including blood pressure measurement, hemoglobin estimation, differential leucocyte count, chick windowing, PCR, DNA estimation, enzyme bioassay kinetics, chromatography, and ecological studies.

The course bridged the gap between theoretical learning and hands-on laboratory experience, equipping students with essential research and diagnostic skills. Assessments were conducted through assignments, self-practice, and continuous evaluation. Students gained expertise in handling laboratory instruments, performing experiments, and real-time observation of chick embryonic development. The program successfully provided exposure to modern life science techniques, enhancing employability and preparing students for higher studies and research. A lab manual was also provided to facilitate continued learning beyond the course.

Hands-on Training in Life Sciences: Tools and Techniques 13 to 19 July 2022

Course Coordinator: Dr. Jyoti Taneja and Dr. Sonika Sharma

Topics covered:

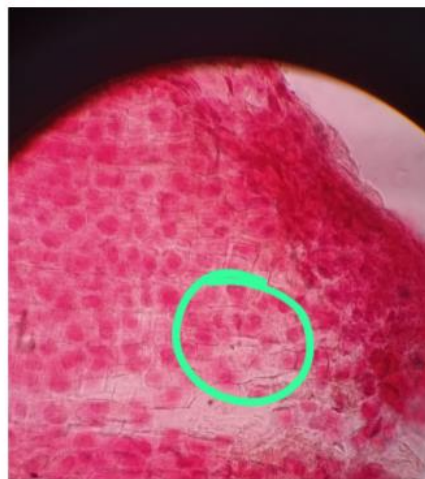
Introduction to Biology: To learn use of microscope and micropipette, Principles of fixation and staining, Paper chromatography

Medical Diagnostics techniques: Measurement of Blood pressure, Estimation of Hemoglobin, Differential leucocyte count

Cell Biology, Molecular Biology and Biochemical techniques: Study of mitosis and meiosis, Study of X inactivation in human cheek cells, Quantitative and qualitative estimation of protein, Enzyme activity bioassay kinetics and achromic point determination, Primer designing and Polymerase Chain Reaction (PCR), DNA estimation

Practical methods in Ecology: Study of Pond water ecosystem

Key experiments in Developmental Biology: Chick windowing method and Observation of early embryonic development



Speakers in the course:

Mr. Amit
Dr. Madhu
Dr. Sonika Sharma
Dr. Pallavi
Dr. Jyoti Singh
Ms. Kungreiliu Panmel
Dr. Meenakshi Thakur
Dr. Neha Niharika
Dr. Sunita k. Yadav
Dr. Jyoti Taneja



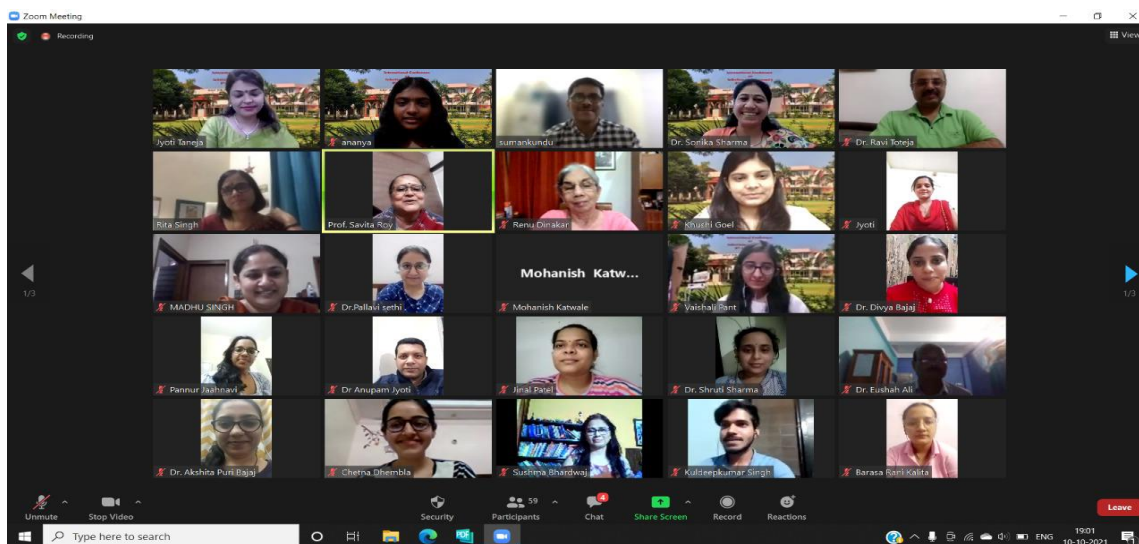
6. Workshop on "Tools and Techniques for *Drosophila* Maintenance' (May 26-30, 2023)

The workshop on "Tools and Techniques for *Drosophila* Maintenance" was organized by Dr. **Madhu and Dr. Sonika Sharma**, and held from 26th to 30th May 2023 at Daulat Ram College, University of Delhi. The workshop aimed to introduce students to *Drosophila* as a key animal model for research and development, focusing on its handling, culturing, and basic molecular techniques. The sessions spanned from 9:00 am to 4:00 pm each day. The first day featured an **introductory lecture by Dr. Chitra Bhasin** on the *Drosophila* life cycle and food preparation. On the second day, Dr. Madhu and Dr. Sonika Sharma taught *Drosophila* handling and polytene chromosome preparation. The third day included techniques such as the separation of eye pigments using TLC and isolation of genomic DNA and total proteins. The final day covered gel electrophoresis and SDS-PAGE techniques. The workshop objectives included providing an in-depth understanding of *Drosophila*'s life cycle, culturing, handling, and molecular techniques. Participants, including students from the B.Sc. Life Sciences 4th semester learned skills applicable to their future research. Assessment was based on reports submitted by the students, summarizing the tools and techniques learned. The workshop equipped students with essential skills for using *Drosophila* in molecular biology research.



7. International Conference on "Infections and Immunity (October 8-10, 2021)

The International Conference on "Infections and Immunity," organized by the Department of Zoology at Daulat Ram College, University of Delhi, took place from October 8-10, 2021 coordinated by **Dr. Jyoti Taneja** and **Dr. Sonika Sharma**. The conference featured esteemed speakers, including **Dr. Parveen Gupta**, **Dr. Manu Anantpadma**, **Dr. Amrendra Kumar**, **Dr. Tavpritesh Sethi**, **Dr. Rajesh Pandey**, and **Prof. Daman Saluja**. The event was inaugurated by **Prof. Balram Pani**, Dean of Colleges, University of Delhi, and featured keynote addresses from renowned experts in the field. The conference addressed various themes such as genome surveillance of infective agents, the role of artificial intelligence in disease treatment, vaccine design, and the management of COVID-19. The sessions included presentations by leading researchers, with open discussions encouraging interaction. A highlight of the event was the poster presentation competition, where **35 posters** from research scholars and undergraduates were scrutinized by experts, with selected posters being featured in a special issue of ***Chemical Biology Letters***. The conference attracted **126 participants** from across India, including faculty members, researchers, and students, and provided valuable insights into the immune system and industrial applications in vaccine development. The event concluded with a cultural performance, followed by a valedictory session and award ceremony. The conference successfully fostered collaboration, learning, and recognition of scientific achievements.



8. Student Training Workshop on ‘Research Analysis: Tools and Techniques’ (August 16-21, 2021)

A six-day online Student Training Workshop on “Research Analysis: Tools and Techniques” was organized by the Zoology Department, Daulat Ram College, University of Delhi, from 16-21 August 2021. Coordinated by **Dr. Jyoti Taneja and Dr. Sunita Yadav**, the workshop aimed to provide undergraduate students with a multidisciplinary approach to enhance their research skills. The workshop began with a welcome address by Dr. Taneja and continued with discussions on scientific temperament and research fundamentals. Two sessions were held daily, covering diverse topics essential for research proficiency. On Day 1, Dr. Taneja discussed research methods, including the formulation of research questions, qualitative and quantitative designs, and data collection tools. Dr. Sonika Sharma’s session focused on data presentation, particularly graphical representation. Day 2 featured Dr. Priya Bharadwaj’s sessions on data analysis using descriptive

statistics and GraphPad Prism for biostatistics. Day 3 included data analysis with MS Excel by Dr. Sunita K. Yadav, followed by Dr. Pallavi Sethi's session on ANOVA. On Day 4, Dr. Neha Niharika guided students in poster presentation techniques, while Dr. Madhu taught publication writing. Day 5 covered research publication writing, with Dr. Meenakshi Thakur and Dr. Jyotsna leading sessions on review and abstract/report writing. On Day 6, Dr. Sushma Bharadwaj discussed ethical considerations, referencing, and plagiarism. Participants engaged enthusiastically, completing MCQ quizzes and a final test to assess their learning. Dr. Inderkant Singh was invited as a guest speaker for the valedictory session.

9. Winter workshop on 'Academic Writing' (December 18, 2022- January 15, 2023)

The **Winter Workshop on 'Academic Writing'**, organized by the **Department of Zoology, Daulat Ram College, University of Delhi**, was conducted in a **hybrid mode** from **December 18, 2022, to January 15, 2023**, every Sunday from **11:00 AM to 1:30 PM**. Coordinated by **Dr. Sunita K. Yadav and Dr. Jyoti Taneja**, the workshop aimed to develop students' academic writing skills, enhance research methodologies, and introduce them to digital tools for scholarly work. A total of **20 students** participated in this interactive learning experience.

The sessions covered key aspects of **academic writing, including** research methodology, data presentation, grammar and plagiarism detection tools, paraphrasing techniques, fellowship and internship guidance, digital flyer designing, PowerPoint presentation skills, literature review, and abstract writing. **The workshop featured resource persons, including Dr. Jyoti Taneja, Dr. Jyoti Singh, Dr. Sunita K. Yadav, Dr. Anita Garg Mangla, Dr. Nisha, Ms. Aashi, Ms. Khushi, Dr. Priya Bhardwaj and Dr. Jyotsna Singh**, among others. Each session was **followed by an e-quiz and assignments** to assess student learning. Students actively engaged in discussions, hands-on activities, and real-life case studies. **Feedback was overwhelmingly positive**, with students requesting similar workshops in the future. The workshop successfully inspired participants to **undertake independent research projects** and refine their academic writing skills for **higher education and professional development**.

10. SDP on "Unveiling the Animal World in Behavioural Way" (March 23rd, 2023, to April 8th, 2023)

The Student Development Program (SDP) titled "Unveiling the Animal World in Behavioural Way" was coordinated by **Dr. Jyoti Singh and Dr. Neha Niharika**. The program took place from March 23rd, 2023, to April 8th, 2023, with sessions held every Thursday and Saturday. A total of 34 students both from Zoology and Life Sciences attended the program.

This course provided the students an overview of animal behaviour and chronobiology starting from historical perspective to types of behaviours and their evolutionary significance. The course also highlighted types, mechanisms and importance of the biological rhythms and biological clocks operating in the living organisms. This program provided the learners to understand and appreciate the different types of animal behaviours, their adaptive, evolutionary and practical significance.

The practical aspect of course helped the students to design and analyse the research hypothesis/study critically.



11. Mentor-Mentee Awareness Program on ‘Demystifying the Importance of Sexual Health’ on October 12, 2023

The Department of Zoology, Daulat Ram College, University of Delhi, organized a Mentor-Mentee Awareness Program on ‘**Demystifying the Importance of Sexual Health**’ on October 12, 2023 under the coordination of **Dr. Jyoti Taneja** and **Dr. Sunita K. Yadav**. The event began with the lighting of the ceremonial lamp, followed by a Ganesh Vandana classical dance performance by Vidushi. **Prof. Rita Singh**, Dept. of Zoology, University of Delhi, delivered a talk on ‘Modulation of Neural Pathways by **Estrogen: Adverse Effects of Environmental Estrogens on Mental and Endocrine Health**’. An eminent researcher, Prof. Singh has received prestigious awards such as the LE STADIUM Visiting Professor, INRA France, and the Young Scientist Award from DST.

The program featured an interactive session with **Dr. Puja Sharma** (Obstetrics & Gynaecology, Daksh Clinic, Hauz Khas), who discussed cervical cancer, sexual maturity, and safe contraceptive methods. The event’s cultural segment included a Sattriya dance performance by Hansika, a member of Anhad, the classical dance society. Additionally, a **poster competition** on sexual health was held at the intercollegiate level, judged by **Dr. Rajalaxmi M.** and **Dr. Kiran Rangari**. Winners included Hansika (1st), Sneha Kumari (2nd), and Tsering Yangchen (3rd). With 289 participants, including 42 intercollege students, the event successfully engaged young minds, fostering awareness and scientific dialogue on sexual health.

Mentor-mentee awareness program on 'Demystifying sexual health in Women' October 12, 2023

Coordinator: Dr. Jyoti Taneja and Dr. Sunita K Yadav



12. SDP on “Lifestyle disorders and its Management” (January 20th, 2024, to February 3rd, 2024)

The Student Development Program (SDP) titled “Lifestyle Disorders and its Management” was coordinated by **Dr. Neha Niharika and Dr. Jyoti Singh**. The program ran from January 20th, 2024, to February 3rd, 2024, with sessions held every Monday and Saturday. A total of 24 students from zoology and life sciences participated in this offline course.

Lifestyle disorders are part of Non communicable diseases (NCD), and are not passed from person to person. Through this course students were introduced to various common lifestyle disorders and their preliminary diagnosis. This SDP highlighted the important lifestyle related disorders with main emphasis on PCOS and describes the risks and remedies in relation to adopting a better lifestyle. This course helped the learner about the screening methods for common adulterants and nutritional requirements in different age groups.

DEPARTMENT OF ZOOLOGY
DAULAT RAM COLLEGE
Presents
NAAC Grade "A" ACCREDITED
is organising

SKILL DEVELOPMENT PROGRAM
Under the Aegis of IQAC

LIFESTYLE DISORDERS
Date: 20th January 2024 onwards

HIGHLIGHTS:

- LIFESTYLE DISEASE (PCOD)
- PSYCHOLOGICAL WELL BEING
- METHODS OF ADULTERATION DETECTION
- DELETERIOUS EFFECTS OF ADDICTION

REGISTRATION LINK
<https://forms.gle/7fqXCZSt7kYV7VP6>

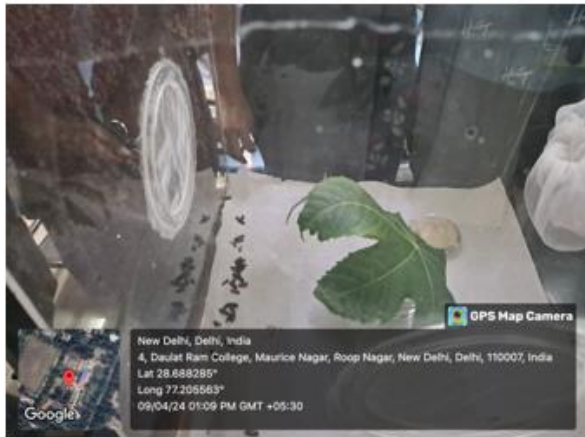
FEES-INR 500

Limited Seats!!! ONLY FOR ORCIans

Principal: Prof. Sangeeta Roy
Vice Principal: Prof. Sangeeta Bhandari
IQAC Coordinator: Prof. Rajni Sahni
Teacher In-Charge: Dr. Sonika Sharma
SEIP Convener: Prof. Meenu Khosla
Coordinator's: Dr. Neha Niharika, Dr. Jyoti Singh

13. SDP on “Economic Importance and Management of Beneficial Insects” (March 2 to April 6, 2024)

The Skill Development Programme (SDP) on “Economic Importance and Management of Beneficial Insects” was conducted by the Zoology Department of Daulat Ram College from March 2 to April 6, 2024. This hybrid event, coordinated by Dr. Jyotsna Singh and Dr. Meenakshi Thakur, aimed to impart practical knowledge on the rearing and management of economically significant insects. The programme featured interactive sessions, hands-on training, and an educational visit to the Indian Agricultural Research Institute (IARI), PUSA, Delhi. Eminent speakers such as Prof. Amit Garg and Dr. Kanchan Srivastava discussed topics ranging from entrepreneurship in sericulture to forensic entomology. Sessions covered diverse aspects, including apiculture, silkworm rearing, insect-based protein sources, and pathogen management in insect farming. Hands-on activities involved preparing temporary slides of pollen grains, analyzing honey quality, and examining the morphological features of honeybees. The educational visit provided students with real-world exposure to apiary maintenance and insect product extraction techniques. By the end of the SDP, participants had gained insights into the commercial potential of beneficial insects, inspiring them to explore internships and entrepreneurial opportunities in this field. The event received highly positive feedback, highlighting its success in fostering scientific and practical skills among students.



Students enjoying the fruits of their labor, the successful rearing of tobacco caterpillar, *Spodoptera litura* (as part of the hands-on project) after the completion of SDP. |





14. Student Training Workshop “Tools and Techniques for *Drosophila* Maintenance” (June 12-14 and June 18-20, 2024)

The *Drosophila* Resource Centre, Department of Zoology at Delhi University hosted a comprehensive workshop focused on the tools and techniques used for handling *Drosophila melanogaster*, commonly known as the fruit fly. This event aimed to enhance the skills of undergraduate students interested in genetic research and experimental biology. The workshop commenced with an insightful keynote address by **Dr. Sonika Sharma** who highlighted the significance of *Drosophila* as a model organism in genetics and developmental biology. Participants were then introduced to the various tools essential for *Drosophila* handling. The session covered the use of fly vials, anesthetizing equipment, and microscopes. A detailed demonstration was given on the **preparation of media for *Drosophila* culture**, emphasizing the importance of maintaining a sterile environment to prevent contamination and ensure healthy fly populations. Participants learned about the ***Drosophila* life cycle**, from egg to adult, and the significance of each stage in genetic studies. A session on preparing nutritious media for *Drosophila* culture emphasized the importance of maintaining optimal conditions for fly development. One of the highlights of the workshop was the **hands-on session**, where participants had the opportunity to practice techniques for **anesthetizing and sorting flies based on**

phenotypic traits such as eye color. The workshop covered genomic DNA isolation techniques, followed by the separation of *Drosophila* eye pigments using the **Thin Layer Chromatography (TLC)** method, illustrating chemical analysis of biological samples. An Experiment on preparing **polytene chromosomes** from *Drosophila* salivary glands allowed participants to observe chromosomal structures, crucial for understanding **gene mapping and expression**. Participants engaged in **gel electrophoresis** to analyze DNA samples and explored the different stages of the *Drosophila* life cycle through interactive sessions. This comprehensive workshop provided invaluable practical experience, enabling attendees to apply these techniques in their research and deepen their understanding of *Drosophila* as a model organism.

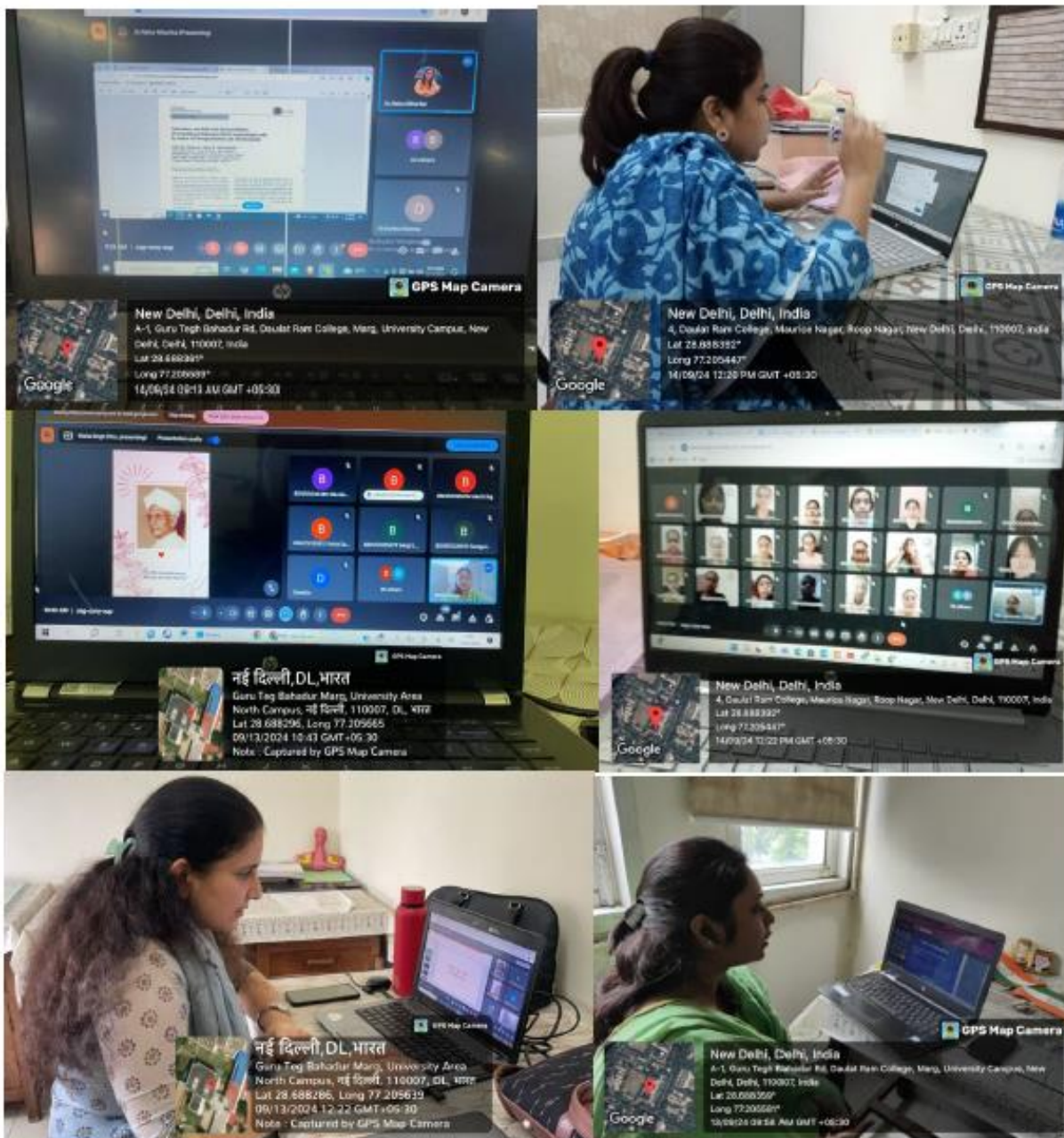


15. SDP on Enhancing Learning Through ICT Tools (September 13-14, 2024).

The Skill Development Programme (SDP) on Enhancing Learning Through ICT Tools was organized by the Zoology Department, Daulat Ram College, University of Delhi, on September 13-14, 2024. Coordinated by **Dr. Jyoti Singh and Dr. Neha Niharika**, the online program aimed to familiarize students with various ICT tools essential for academic and research purposes. Fifty students participated in interactive sessions conducted by faculty members from the Zoology Department.

The sessions covered Google Classroom, Google Docs, Google Forms, Google Slides, Canva, MS PowerPoint, MS Excel, and plagiarism detection tools. On the first day, Dr. Nisha Singh introduced students to PowerPoint and Canva for assignment presentations, while Dr. Pallavi Sethi demonstrated Google Classroom management and plagiarism detection tools. The second day featured Dr. Neha Niharika guiding students in Google Forms creation for research surveys and data analysis, followed by Dr. Jyotsna Singh, who covered Google Drive, Docs, and Slides for collaborative learning.

Students engaged in hands-on activities, including designing conference posters, creating Google Forms, and preparing presentations. Assignments were submitted via Google Classroom, and a quiz assessed learning outcomes. The program enhanced students' digital literacy, academic efficiency, and research capabilities, equipping them with modern technological skills for higher education and professional growth.



16. Skill Development Programme on “In Silico Novel Therapeutics Discovery” (September 24 to October 19, 2024)

The Zoology Department of Daulat Ram College, under the aegis of IQAC, successfully conducted the Skill Development Programme (SDP) 2024-2025 titled "**In Silico Novel Therapeutics Discovery**" from **September 24 to October 19, 2024**. Coordinated by **Dr. Anna Senrung**, the program aimed to equip students with bioinformatics tools for drug discovery. The training included hands-on experience with NCBI databases, Exspasy tools for sequence translation, enzymatic active site identification, homology modeling, molecular docking, and ADMET

analysis. The offline and online hybrid format ensured seamless integration into the students' academic schedule.

The program featured **guest lectures by Prof. Madhu Chopra and Prof. Alok Chandra Bharti** and hands-on sessions led by in-house experts **Dr. Anna Senrung, Dr. Sunita K. Yadav, and Dr. Radhika Gupta**. Topics included protein structural analysis, target identification, and lead therapeutic prediction using computational tools. Students actively engaged through themed assignments, quizzes, and practical exercises.

The SDP significantly enhanced participants' **computational biology skills**, preparing them for advanced research. Students provided positive feedback, highlighting the program's role in bridging theoretical learning with practical application. The event concluded with a **valedictory session**, awarding certificates to successful participants and reinforcing the department's commitment to skill-based education.



Principal addressing the students at the inaugural Session

Guest of Honour:
Prof. Alok C. Bharti

Chief Guest:
Prof. Madhu Chopra

Principal:
Prof. Savita Roy

SDP Co-Convenor:
Dr. Reema Dehal

 **GPS Map Camera**



New Delhi, Delhi, India

A-1, Guru Tegh Bahadur Rd, Daulat Ram College, Marg, University Campus, New Delhi,
Delhi, 110007, India

Lat 28.688325°

Long 77.205628°

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