



Miranda House
UNIVERSITY OF DELHI

**DS Kothari Centre for Research and Innovation in
Science Education**

Summer Workshop 2020

**Flavour of Research:
Investigative Projects in Multidisciplinary Contexts**

	MIRANDA HOUSE University of Delhi	
	Flavour of Research Investigative Projects in Multidisciplinary Contexts	
	Summer Workshop (June – July 2020)	
	Orientation Program Date: 30 June 2020 11.00 am onwards	
	Prerequisite: Zoom Application Join Zoom Meeting https://zoom.us/j/98886335809?pwd=TWQ1Z1krdUhCdGdmTkFCQmVHREhldz09	
	Meeting ID: 988 8633 5809 Password: 7b3uQj	
		
		
		

Summer Workshop 2020
Flavour of Research: Investigative Projects in Multidisciplinary Contexts

The 6-week long Summer Workshop 2020 was held from 30 June to 9 August 2020. 283 students carried out projects in interdisciplinary fields and successfully completed them. 45 faculty members of the five participating Departments mentored 62 project groups. In earlier years, projects under Summer Workshop have largely been experimental hands-on projects funded by the College and the star scheme of DBT. Owing to the pandemic, research projects under the Summer Workshop 2020 were conducted through online processes.

DEPARTMENT OF BOTANY

The Department of Botany conducted the following student research projects under DSKC.

Project 1:

Title of the project: Management of insect pests of pulse crops in India

Mentors: Dr. Janaki Subramanyan and Dr. Neetu Chaudhary

Students:

1. Preeti Panwar, B.Sc. Life Science Miranda House IInd Year
2. Shivani Kumari, B.Sc. Life Science Miranda House IInd Year

Project 2:

Title of the project: Bt Cotton in India

Mentors: Dr. Janaki Subramanyan and Dr. Neetu Chaudhary

Students:

1. Aanchal, B.Sc. Life Science Miranda House IInd Year
2. Amisha, B.Sc. Life Science Miranda House IInd Year
3. Sakshi Mehta, B.Sc. Life Science Miranda House IInd Year

Project 3:

Title of the project: "SARS-Cov2: A Survey based Study"

Mentors: Dr. Madhu Bajaj and Dr. Renuka Agrawal

Students:

1. Pooja Sheora, B.Sc. (H) Botany II Year
2. Bharti Singh, B.Sc. (H) Botany Miranda House IInd Year
3. Laiba Fatima, B.Sc. (H) Botany Miranda House IInd Year
4. Jyotsana Dharamraj, B.Sc. (H) Botany Miranda House IInd Year

Project 4:

Title of the project: Review article on *Selaginella bryopteris*- the Sanjeevani Booti

Mentors: Dr. Saloni Bahri and Dr. Somdutta Sinha Roy

Students:

1. Prachi Choudhary, B.Sc. (H) Botany Ist Year
2. Shreya, B.Sc. (H) Botany Ist Year

Project 5:

Title of the project: Effect of carbohydrates on pollen of *Catharanthus roseus* in vitro-A review

Mentors: Dr. Saloni Bahri and Dr. Somdutta Sinha Roy

Students:

1. Preeti Gupta, B.Sc. (H) Botany I Year
2. Anjali, B.Sc. (H) Botany I Year

Project 6:

Title of the project: A review on plant species identified for mitigating particulate matter

Mentors: Dr. Saloni Bahri and Dr. Somdutta Sinha Roy

Students:

1. Shweta Rana, B.Sc. (H) Botany Miranda House IInd Year
2. Ashmita Bhagat, B.Sc. (H) Botany Miranda House IInd Year

Project 7:

Title of the project: Plant species resistant to Sulphur dioxide pollution-A review

Mentors: Dr. Saloni Bahri and Dr. Somdutta Sinha Roy

Students:

1. Pallavi Sharma, B.Sc. (H) Botany Miranda House IInd Year
2. Pragya Jha, B.Sc. (H) Botany Miranda House IInd Year

Project 8:

Title of the project: Food Adulteration and its Impact on Society

Mentors: Dr. Deepali and Dr. Rajeshwari

Students:

1. Ms. Balwant Kaur, B.Sc. Life Science Miranda House IInd Year
2. Ms. Garima Singh, B.Sc. Life Science Miranda House IInd Year
3. Ms. Muskan Johnson, B.Sc. (H) Botany Miranda House IInd Year
4. Ms. Swati Nayak, B.Sc. (H) Botany Miranda House IInd Year

DEPARTMENT OF CHEMISTRY

The Department of Chemistry conducted the following student research projects under DSKC.

Project 1:

Title of the Project: Effect of Covid-19 on the environment

Mentors: Dr. Sharda M. Sonkar, Dr. Sujata Sengupta and Dr. Shivani

Students:

1. Navpreet Kaur, B.Sc. (H) Chemistry Miranda House, Ist Year
2. Sanna, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Shagun Paliwal, B.Sc. (H) Chemistry Miranda House, Ist Year
4. Sakshi, B.Sc. (H) Chemistry Miranda House, Ist Year
5. Riya Kumari, B.Sc. (H) Chemistry Miranda House

Project 2:

Title of the Project: The Drug discovery process with special focus on Covid-19 drug candidates

Mentors: Dr. Sharda M. Sonkar, Dr. Sujata Sengupta and Dr. Shivani

Students:

1. Hana Fathima Keloth, B.Sc. (H) Chemistry Miranda House
2. Anjana R Chandran, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Muskan Singh, B.Sc. (H) Chemistry Miranda House
4. Manisha, B.Sc. (H) Chemistry Miranda House

Project 3:**Title of the Project: Extraction of perfumes from plants**

Mentors: Dr. Sharda M. Sonkar, Dr. Sujata Sengupta and Dr. Shivani

Students:

1. Nandini Kapoor, B.Sc. Physical Science Hindu College
2. Garima Tomar, B.Sc. Physical Science Hindu College
3. Shweta Gaur, B.Sc. Physical Science Hindu College
4. Aditi Bajaj, B.Sc. (H) Chemistry Hindu College

Project 4:**Title of the Project: Docking simulation of Cyclin-Dependent Kinase 2 (CDK2) with (7YG)**

Mentors: Dr. Smriti Bhatia and Dr. Mamta Bhandari

Students:

1. Neha Sharma, B.Sc. (H) Chemistry Miranda House
2. R Bhuvaneshwari, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Shweta Nirwan, B.Sc. (H) Chemistry Miranda House, Ist Year
4. Zainab Fatima, B.Sc. (H) Chemistry Miranda House, Ist Year

Project 5:**Title of the Project: Docking a Serine Protease Inhibitor: Benzamide Docking into Betatrypsin**

Mentors: Dr. Smriti Bhatia and Dr. Mamta Bhandari

Students:

1. Vini, B.Sc. (H) Chemistry Miranda House, Ist Year
2. Srishti, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Kriti Shakya, B.Sc. (H) Chemistry Miranda House, Ist Year
4. Preeti, B.Sc. (H) Chemistry Miranda House, Ist Year

Project 6:**Title of the Project: Molecular Docking: HIV Protease Inhibitor XK263**

Mentors: Dr. Smriti Bhatia and Dr. Mamta Bhandari

Students:

1. Rakhi, B.Sc. (H) Chemistry Miranda House, Ist Year
2. Sakshi, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Sonam, B.Sc. (H) Chemistry Miranda House, Ist Year

Project 7:**Title of the Project: Science of a fingertip pulse oximeter**

Mentors: Dr. Amrita T Sheikh, Dr. Malti Sharma and Dr. Mallika Pathak

Students:

1. Nisha Naziya Parangodath, B.Sc. (H) Chemistry Miranda House, Ist Year
2. Anjel Fathima KK, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Akshaya Mohan, B.Sc. (H) Chemistry Miranda House, Ist Year
4. Keerthi E, B.Sc. (H) Chemistry Miranda House, Ist Year

Project 8:**Title of the Project: Computational study of some Organic and Inorganic compounds using Avogadro software**

Mentors: Dr. Amrita T Sheikh, Dr. Malti Sharma and Dr. Mallika Pathak

Students:

1. Ishika Bansal, B.Sc. (H) Chemistry Miranda House
2. Divya Singh, B.Sc. (H) Chemistry Miranda House
3. Komal, B.Sc. (H) Chemistry Miranda House

Project 9:

Title of the Project: Boosting the Immune System to fight COVID -19

Mentors: Dr. Bani Roy and Dr. Lata Rana

Students:

1. Kalpana Mahala, B.Sc. (H) Chemistry Miranda House
2. Kanika Deshwal, B.Sc. (H) Chemistry Miranda House
3. Kirti, B.Sc. (H) Chemistry Miranda House
4. Meghna Manoharan, B.Sc. (H) Chemistry Miranda House, Ist Year

Project 10:

Title of the Project: Cancer chemotherapy and the role of Nanochemistry

Mentors: Dr. Bani Roy and Ms. P Lishinai Paoteimai

Students:

1. Aarushi Gupta, B.Sc. (H) Chemistry Miranda House
2. Aarti, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Raveena Kumari, B.Sc. (H) Chemistry Miranda House
4. Sheetal Kaur, B. Sc. Chem (H) SGTB Khalsa College
5. Shubhdeep Kaur, B. Sc. Chem (H) SGTB Khalsa College

Project 11:

**Title of the Project: (a) Advanced Techniques for Materials Characterization
(b) In Vitro study of Metal Oxides Nano-materials for Anticancer Application**

Mentors: Dr. Kalawati Saini

Students:

1. Shruti Sharma, B.Sc. (H) Chemistry Miranda House, Ist Year
2. Payal Yadav, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Yousuf Khan, B.Sc. (H) Chemistry Kirori Mal College
4. Yashasvi Banyla, B.Sc. (H) Chemistry Miranda House, Ist Year
5. Samya Raj, B.Sc. (H) Chemistry Miranda House, Ist Year
6. Taniya, B. Sc. Chem (H) SGTB Khalsa College
7. Shivani Malik, B. Sc. Chem (H) SGTB Khalsa College

Project 12:

Title of the Project: Antiviral nano coatings for Personnel Protective Equipment

Mentors: Dr. Anuushka Pal

Students:

1. Shilpi Yadav, B.Sc. (H) Chemistry Miranda House, Ist Year
2. Snehal Kumari, B.Sc. (H) Chemistry Miranda House, Ist Year
3. Vandana Kumari, B.Sc. (H) Chemistry Miranda House, Ist Year
4. Vaishali Singh, B.Sc. (H) Chemistry Miranda House, Ist Year

DEPARTMENT OF MATHEMATICS

The Department of Mathematics conducted the following student research projects under DSKC.

Project 1:**Title of the Project: Sentiment Analysis**

Mentors: Dr. Rekha Gupta and Mr. Sarikidrisi

Students:

1. Anushka Rathore, B.Sc. Physical Sciences (CS) Miranda House Ist Year
2. Garima, B.Sc. Physical Sciences (CS) Miranda House Ist Year
3. Ridam, B.Sc. Physical Sciences (CS) Miranda House Ist Year
4. Seema, B.Sc. B.Sc. Physical Sciences (CS) Miranda House Ist Year
5. Supriya Jangir, B.Sc. Physical Sciences (CS) Miranda House Ist Year
6. Swasti, B.Sc. Physical Sciences (CS) Miranda House Ist Year
7. Varsha, B.Sc. Physical Sciences (CS) Miranda House Ist Year

Project 2:**Title of the Project: A Comprehensive Study of Migration Flow**

Mentors: Ms. Apeksha and Mr. Mohammad Sarik Idrisi

Students:

1. Jagriti Yadav, B.Sc. Physical Sciences (CS) Miranda House Ist Year
2. Swati Tomar, B.Sc. Physical Sciences (CS) Miranda House Ist Year
3. Rajul Beniwal, B.Sc. Physical Sciences (CS) Miranda House Ist Year
4. Simran Mathania, B.Sc. Physical Sciences (CS) Miranda House Ist Year
5. Tanu Yadav, B.Sc. Physical Sciences (CS) Miranda House Ist Year

Project 3:**Title of the Project: Home Automation using IOT**

Mentors: Ms.Apeksha and Dr. Rekha Gupta

Students:

1. Shreyasi Singha, B.Sc. (H) Mathematics Miranda House, Ist Year
2. Shrishti Rohilla, B.Sc. (H) Mathematics Miranda House, Ist Year
3. Vrinda, B.Sc. (H) Mathematics Miranda House, Ist Year
4. Pragati Gupta, B.Sc. (H) Mathematics Miranda House, Ist Year
5. Manisha, B.Sc. (H) Mathematics Miranda House, Ist Year
6. Drishti Garg, B.Sc. (H) Mathematics Miranda House, Ist Year
7. Garima Yadav, B.Sc. (H) Mathematics Miranda House, Ist Year
8. Ankita Bishnoi, B.Sc. (H) Mathematics Miranda House, Ist Year

Project 4:**Title of the Project: Database Privacy and Security 2020**

Mentors: Mr. Mohit Kumar, Mr. Naveen Gupta, Mr. Sarik Idrisi

Students:

1. Deeya Bhatia, B.Sc. (H) Mathematics Miranda House, Ist Year
2. Devanshi Agarwal, B.Sc. (H) Mathematics Miranda House, Ist Year
3. Jai Shree Arora, B.Sc. (H) Mathematics Miranda House, IInd Year
4. Mansi Ray, B.Sc. (H) Mathematics Miranda House, Ist Year
5. Nandana Harikrishnan, B.Sc. Physical Sciences (CS) Miranda House Ist Year

Project 5:**Title of the Project: A Comprehensive Study of the use of Eigenfaces in Facial Recognition Systems**

Mentors: Mr. Naveen Gupta, Ms. Apeksha and Mr. Mohit Kumar Macchal

Students:

1. Antima Jangid, B.Sc. Physical Sciences (CS) Miranda House, Ist Year
2. Arshi Rizvi, B.Sc. (H) Mathematics Miranda House, Ist Year
3. Ashika Deb, B.Sc. (H) Mathematics Miranda House, Ist Year
4. Disha Verma, B.Sc. (H) Mathematics Miranda House, Ist Year
5. Kritika Mishra, B.Sc. (H) Mathematics Miranda House, Ist Year
6. Nancy Dahiya, B.Sc. Physical Sciences (CS) Miranda House Ist Year
7. Rhea Ajit John, B.Sc. Physical Sciences (CS) Miranda House Ist Year
8. Tahrima Ansari, B.Sc. (H) Mathematics Miranda House, Ist Year

Project 6:

Title of the Project: User-Based Collaborative Filtering in Recommendation Systems

Mentors: Mr. Naveen Gupta and Mr. Mohit Kumar Macchal

Students:

1. Anoushka Saha, B.Sc. (H) Mathematics Miranda House, Ist Year
2. Anshika Srivastava, B.Sc. (H) Mathematics Miranda House, IInd Year
3. Arshiya Srivastava, B.Sc. Physical Sciences (CS) Miranda House Ist Year
4. Deeksha Mishra, B.Sc. (H) Mathematics Miranda House, IInd Year
5. Deepali Rajput, B.Sc. (H) Mathematics Miranda House, IInd Year
6. Harshita Pahwa, B.Sc. Physical Sciences (CS) Miranda House Ist Year
7. Khushi Meemrot, B.Sc. Physical Sciences (CS) Miranda House Ist Year
8. Yoshita Sood, B.Sc. (H) Mathematics Miranda House, IInd Year

Project 7:

Title: Algebraic structure of genetic inheritance

Mentors: Ms. Apeksha and Dr. Rekha Gupta

Students:

1. Niranjana M, B.Sc. (H) Mathematics Miranda House, IInd Year
2. Radhika Singh, B.Sc. (H) Mathematics Miranda House, IInd Year
3. Nishu, B.Sc. (H) Mathematics Miranda House, IInd Year
4. Merin Christopher, B.Sc. (H) Mathematics Miranda House, IInd Year
5. Anshu Verma, B.Sc. (H) Mathematics Miranda House, Ist Year
6. Aardra Mohan, B.Sc. (H) Mathematics Miranda House, IInd Year

PHYSICS DEPARTMENT

Project 1:

Title of the Project: Retractable Helmet

Mentors: Dr. Mallika Verma and Dr. Monika Tomar

Students:

1. Abhimanyu, B. Tech. Chandigarh University
2. Tapur, B.Sc. (H) Physics Miranda House, Ist Year
3. Ujjwal, B.Sc. (H) Physics Miranda House, Ist Year
4. Vishakha, B.Sc. (H) Physics Miranda House, Ist Year

Project 2:

Title of the Project: Introduction to Einstein-Cartan Theory

Mentor: Dr. Sunita Singh

Students:

1. Eishita, B.Sc. (H) Physics Miranda House, IInd Year

2. Divya, B.Sc. (H) Physics Miranda House, IInd Year
3. Diksha, B.Sc. (H) Physics Miranda House, IInd Year

Project 3:

Title of the Project: Black hole Thermodynamics

Mentor: Dr. Sunita Singh

Students:

1. Kirti Garg, B.Sc. (H) Physics Hindu College
2. Himanshu Chauhan, B.Sc. (H) Physics ARSD College
3. Mridul Kandpal, B.Sc. (H) Physics Kirori Mal College
4. Ankita Dawra, B.Sc. (H) Physics Kirori Mal College

Project 4:

Title of the Project: Riemannian Geometry

Mentor: Dr. Sunita Singh

Students:

1. Nikita Chaurasia, B.Sc. (H) Physics Miranda House, Ist Year
2. Pallavi Tanwar, B.Sc. (H) Physics Miranda House, Ist Year
3. Paridhi Goel, B.Sc. (H) Physics Miranda House, Ist Year
4. Sakshi Raheja, B.Sc. (H) Physics Miranda House, Ist Year

Project 5:

Title of the Project: Space-time near a Black Hole

Mentor: Dr. Sunita Singh

Students:

1. Rashmi Sarwal, B.Sc. (H) Physics Miranda House
2. Navita Kukreati, B.Sc. (H) Physics Miranda House
3. Sunidhi Rawat, B.Sc. (H) Physics Miranda House
4. Stanzin Angmo, B.Sc. (H) Physics Miranda House
5. Neha Chaudhary, B.Sc. (H) Physics Miranda House

Project 6:

Title of the Project: Spontaneous Symmetric Breaking

Mentor: Dr. Sunita Singh

Students:

1. Yash Arya, B.Sc. (H) Physics Miranda House
2. C. Jayshree, B.Sc. (H) Physics Miranda House, III Year

Project 7:

Title of the Project: Symmetries in Physics

Mentor: Dr. Sunita Singh

Students:

1. Nisha, B.Sc. (H) Physics Miranda House

Project 8:

Title of the Project: Face Recognition using Gabor Filter and Principal Component Analysis

Mentor: Dr. Sonam Singh

Students:

1. Rajdeep Kaur, M.Sc. Physics Delhi University, Ist Year

Project 9:

Title of the Project: Astronomical Image Processing

Mentor: Dr. Sonam Singh

Students:

1. Koushiki Pohit, B.Sc. (H) Physics Miranda House, IInd Year
2. Anusha Pandey, B.Sc. (H) Physics Miranda House, IInd Year
3. Anjali Yadav, B.Sc. (H) Physics Miranda House, IInd Year
4. Kajal, B.Sc. (H) Physics Miranda House, IInd Year
5. Manya Sinha, B.Sc. (H) Physics Miranda House, IInd Year

Project 10:

Title of the Project: Measuring acceleration due to gravity using Image Processing techniques

Mentor: Dr. Sonam Singh

Students:

1. Sakshi Arora, B.Sc. (H) Physics Miranda House, Ist Year
2. Anuska Bhuyan, B.Sc. (H) Physics Miranda House, Ist Year
3. Shally Yadav, B.Sc. (H) Physics Miranda House, Ist Year
4. Manya M Kumar, B.Sc. (H) Physics Miranda House, Ist Year
5. Krishnapriya KS, B.Sc. (H) Physics Miranda House, Ist Year

Project 11:

Title of the Project: QR Elucidation in Zxing-SCILAB Interface

Mentor: Dr. Sonam Singh

Students:

1. Anirudh Walia, B.Tech. Chandigarh University, IInd Year
2. Neha Yadav, B.Sc. (H) Physics Miranda House, Ist Year
3. Nisha, B.Sc. (H) Physics Miranda House, Ist Year
4. Sumit Kumar, B.Sc. (H) Physics Miranda House, Ist Year

Project 12:

Title of the Project: Study of Tidal Phenomenon using Lagrangian formulation

Mentor: Dr. Sonam Singh

Students:

1. Neha Mondal, B.Sc. (H) Physics Miranda House, IIIrd Year
2. Priya, B.Sc. (H) Physics Miranda House, IIIrd Year
3. Shivani Yadav, B.Sc. (H) Physics Miranda House, IIIrd Year
4. Shambhvi Nigam, B.Sc. (H) Physics Miranda House, IIIrd Year
5. G Vishnupriya, B.Sc. (H) Physics Miranda House, IIIrd Year

Project 13:

Title of the Project: Fake currency detection using Digital Image Processing

Mentor: Dr. Sonam Singh

Students:

1. Manshi Rani, B.Sc. (H) Physics Miranda House, IIIrd Year
2. Monalisha Patra, B.Sc. (H) Physics Miranda House, IIIrd Year

Project 14:

Title of the Project: Atmospheric Physics

Mentor: Dr. Divakar Pathak

Students:

1. Saloni Singla, B.Sc. (H) Physics Miranda House, IInd Year
2. Neha Sharma, B.Sc. (H) Physics Miranda House, IInd Year
3. Seema Sahu, B.Sc. (H) Physics Miranda House, IInd Year
4. Suchana Adhikari, B.Sc. (H) Physics Miranda House, IInd Year

Project 15:**Title of the Project: "Understanding the Forecast - Global Warming"**

Mentor: Dr. Divakar Pathak

Students:

1. Amrutha Devan, B.Sc. (H) Physics Miranda House, Ist Year

Project 16:**Title of the Project: Review Article based on Understanding of structural and optical properties of Cr_{3+} doped Al_2O_3 .**

Mentor: Dr. Geeta Rani

Students:

1. Vaishali, B.Sc. (H) Physics Miranda House
2. Anu Singh, B.Sc. (H) Physics Miranda House
3. Ronak, B.Sc. (H) Physics Miranda House, Ist Year
4. Ritika, B.Sc. (H) Physics Miranda House, Ist Year

Project 17:**Title of the Project: Basics of Monte Carlo in Python**

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Kalpana Khatar, B.Sc. (H) Physics Miranda House, Ist Year
2. Yuglesh Kumari, B.Sc. (H) Physics Miranda House, Ist Year
3. Preety, B.Sc. (H) Physics Miranda House, Ist Year
4. Moni Kumari, B.Sc. (H) Physics Miranda House, Ist Year

Project 18:**Title of the Project: Likelihood Analysis and Chi-Square Estimation**

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Sumedha Panja, B.Sc. (H) Physics Miranda House
2. Vidushi Sharma, B.Sc. (H) Physics Miranda House
3. Roopal, B.Sc. (H) Physics Miranda House, Ist Year
4. Srishti, B.Sc. (H) Physics Miranda House
5. Tanu Chaudhary, B.Sc. (H) Physics Miranda House, Ist Year

Project 19:**Title of the Project: Study of Likelihood Analysis as a Statistical Tool to Constrain Parameters of a Model**

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Manasvi Gautam, B.Sc. (H) Physics Miranda House, Ist Year
2. Bhoomija Chaurasia, B.Sc. (H) Physics Miranda House, Ist Year

3. Anjali Sharma, B.Sc. (H) Physics Miranda House, Ist Year
4. Diksha Kushwaha, B.Sc. (H) Physics Miranda House, Ist Year
5. Khushboo Yadav, B.Sc. (H) Physics Miranda House, Ist Year

Project 20:

Title of the Project: Likelihood and Chi-Square Techniques for Parameter Estimation

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Anupama Raj E K, B.Sc. (H) Physics Miranda House, Ist Year
2. Arundathi Dev, B.Sc. (H) Physics Miranda House, Ist Year
3. Chandana DS, B.Sc. (H) Physics Miranda House, Ist Year
4. Denna Thomas, B.Sc. (H) Physics Miranda House, Ist Year
5. Merin Shaji, B.Sc. (H) Physics Miranda House, Ist Year

Project 21:

Title of the Project: Parameter Estimation using Maximum Likelihood Method and Chi-Square Fitting

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Apeksha Pundir, B.Sc. (H) Physics Miranda House, IInd Year
2. Manya Mahajan, B.Sc. (H) Physics Miranda House, Ist Year
3. Gayatri K P, B.Sc. (H) Physics Miranda House, Ist Year
4. Lakshita Meena, B.Sc. (H) Physics Miranda House, Ist Year

Project 22:

Title of the Project: Constraining Parameters of a Model using Maximum Likelihood and Chi-Square Fitting

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Neetu Choudhary, B.Sc. (H) Physics Miranda House, Ist Year
2. Nikita Meena, B.Sc. (H) Physics Miranda House, Ist Year
3. Yogita Yadav, B.Sc. (H) Physics Miranda House, Ist Year
4. Saloni, B.Sc. (H) Physics Miranda House, Ist Year
5. Sapana Sharma, B.Sc. (H) Physics Miranda House, Ist Year

Project 23:

Title of the Project: Monte Carlo Stimulation

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Lakshmy Santhosh, B.Sc. (H) Physics Miranda House, Ist Year
2. Ishika Kumar, B.Sc. (H) Physics Miranda House, Ist Year
3. Akriti Srivastava, B.Sc. (H) Physics Miranda House, Ist Year
4. Muskan Goswami, B.Sc. (H) Physics Miranda House, Ist Year
5. Meenakshi Meena, B.Sc. (H) Physics Miranda House, Ist Year

Project 24:

Title of the Project: Python Programs for Monte Carlo Data Simulation

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Anju Sharma, B.Sc. (H) Physics Miranda House, Ist Year

2. Chhavi, B.Sc. (H) Physics Miranda House, Ist Year
3. Anjali, B.Sc. (H) Physics Miranda House, Ist Year
4. Ila Singh, B.Sc. (H) Physics Miranda House, Ist Year
5. Ankita, B.Sc. (H) Physics Miranda House, Ist Year

Project 25:

Title of the Project: Monte Carlo for Data Generation and Integration

Mentors: Dr. Abha Dev Habib and Dr. Nisha Rani

Students:

1. Anjali Kholi, B.Sc. (H) Physics Miranda House, IInd Year
2. Charu Mittal, B.Sc. (H) Physics Miranda House, IInd Year
3. Aditi Choudhary, B.Sc. (H) Physics Miranda House, IInd Year
4. Monika Pilaniya, B.Sc. (H) Physics Miranda House, IInd Year
5. Eeshita, B.Sc. (H) Physics Miranda House, IInd Year

Project 26:

Title of the Project: Biometric Security Systems

Mentor: Dr. Nirmala Saini

Students:

1. Vanshika, B.Sc. (H) Physics Miranda House, IInd Year
2. Tuhina Doley, B.Sc. (H) Physics Miranda House, IInd Year
3. Raksha Soni, B.Sc. (H) Physics Miranda House, IInd Year
4. Mukta Yadav, B.Sc. (H) Physics Miranda House, IInd Year

Project 27:

Title of the Project: Particle-size Analysis for MoS₂ and ZnO-GO nanomaterials

Mentors: Ms. Nidhi Puri and Ms. Sitakshi Gupta

Students:

1. Aarushi Sharma, Miranda House
2. Anita, Miranda House
3. Anjali Yadav, Miranda House
4. Eswari Lekhya Jarajapu, Miranda House

Project 28:

Title of the Project: Synthesis of Hydrophobic Protein

Mentors: Dr. Ambuja Jaiswal

Students:

1. Anshi Aggarwal, B.Sc. (H) Physics Miranda House, Ist Year
2. Meenakshi S Hari, B.Sc. (H) Physics Miranda House, Ist Year
3. Anushka Verma, B.Sc. (H) Physics Miranda House, Ist Year
4. Anjali Maurya, B.Sc. (H) Physics Miranda House, Ist Year
5. T M Malavika, B.Sc. (H) Physics Miranda House, Ist Year
6. Najidha Abdul Gafoor, B.Sc. (H) Physics Miranda House, Ist Year

Project 29:

Title of the Project: Biophysics in drug development - a study based on molecular docking

Mentors: Dr. Ambuja Jaiswal

Students:

1. Anagha Prakash, B.Sc. (H) Physics Miranda House, Ist Year
2. Aparna RVM, B.Sc. (H) Physics Miranda House, Ist Year

3. Farha K, B.Sc. (H) Physics Miranda House, Ist Year
4. Himani, B.Sc. (H) Physics Miranda House, Ist Year
5. Karthika Aravind, B.Sc. (H) Physics Miranda House, Ist Year
6. Sonnet Jose, B.Sc. (H) Physics Miranda House, Ist Year

Project 30:

Title of the Project: Hydrophilic protein simulation and applications

Mentors: Dr. Ambuja Jaiswal

Students:

1. Ankita, B. Sc. H Physics Miranda House, Ist Year
2. Anshi, B. Sc. H Physics Miranda House, Ist Year
3. Alka Yadav, B. Sc. H Physics Miranda House, Ist Year
4. Deepika, B. Sc. H Physics Miranda House, Ist Year
5. Durgam Yekapriya, B. Sc. H Physics Miranda House, Ist Year
6. Zainab Mohamed Firoz, B. Sc. H Physics Miranda House, Ist Year

DEPARTMENT OF ZOOLOGY

The Department of Zoology conducted the following student research projects under DSKC.

Project 1:

Title of the Project: Gene Polymorphism and TB Susceptibility-a Meta-analysis

Mentor: Dr. Sadhna Sharma

Students:

1. Srishti Shah - Integrated MSc. (1st year), National Institute of Science Education and Research (NISER), Jatni, Odisha.
2. Debarpita- B.Sc. Biomedical Sciences, Bhaskaracharya College of Applied Science, DU
3. Noor Madeeha- B.Sc. Biomedical Sciences, Bhaskaracharya College of Applied Science, DU

Project 2:

Title of the Project: Vaccine design using reverse vaccinology approach

Mentors: Dr Monika Sharma and Dr Sadhna Sharma

Students:

1. Mehul Chabri, B.Sc. Life Sciences Miranda House, IInd Year
2. Vaibhav Chouhan, B.Sc. (H) Zoology Hansraj College, IInd Year
3. Neha kumari, B.Sc. (H) Zoology Hansraj College, IInd Year
4. Neha Singh, B.Sc. (H) Zoology Hansraj College, IInd Year
5. Monika Kataria, B.Sc. Life Sciences Miranda House, IInd Year

Project 3:

Title of the Project: Science of Bird-watching

Students:

1. Arukshita, B.Sc. (H) Zoology Miranda House, IInd Year
2. Ayushi, B.Sc. (H) Zoology Miranda House, IInd Year
3. Aruna, B.Sc. (H) Zoology Miranda House, IInd Year
4. Nitul, B.Sc. (H) Zoology Miranda House, IInd Year
5. Bidisha, B.Sc. (H) Zoology Miranda House, IInd Year

6. Parul Shehjar, B.Sc. (H) Zoology Miranda House, IInd Year
7. Shivangi, B.Sc. (H) Zoology Miranda House, IInd Year
8. Sanyogita, B.Sc. (H) Zoology Miranda House, IInd Year
9. Poonam, B.Sc. (H) Zoology Miranda House, IInd Year
10. Neha Sharma, B.Sc. (H) Zoology Miranda House, IInd Year
11. Abigail, B.Sc. (H) Zoology Miranda House, IInd Year
12. Sakshi, B.Sc. (H) Zoology Miranda House, IInd Year
13. Neha Yadav, B.Sc. (H) Zoology Miranda House, IInd Year
14. Deepa, B.Sc. (H) Zoology Miranda House, IInd Year
15. Shikha, B.Sc. (H) Zoology Miranda House, IInd Year
16. Sameeksha, B.Sc. (H) Zoology Miranda House, IInd Year
17. Aarzo, B.Sc. (H) Zoology Miranda House, IInd Year
18. Monika Devi, B.Sc. (H) Zoology Miranda House, IInd Year

Project 4:

Title of the Project: Science communication and review writing on ‘New frontiers in *Drosophila* research’

Mentors: Dr. Yasha Yadav and Dr. Pooja Suman

Students:

1. Arukshita Tyagi, B.Sc. (H) Zoology Miranda House, IInd Year
2. Ayushi Das, B.Sc. (H) Zoology Miranda House, IInd Year
3. Disha Chaudhary, B.Sc. Life Sciences Miranda House, IInd Year
4. Gunjan Goyal, B.Sc. Life Sciences Miranda House, IInd Year
5. Lavina Mulani, B.Sc. Life Sciences Miranda House, IInd Year
6. Nitika Chandra, B.Sc. Life Sciences Miranda House, IInd Year
7. Pragya Tiwary, B.Sc. Life Sciences Miranda House, IInd Year

Project 5:

Title of the Project: Communicating Science through Reviews

Mentors: Dr. Jyoti Arora and Dr. Yasha Yadav

Students:

1. Kritika Arora, B.Sc. (H) Zoology, Miranda House, Ist year
2. Atheena Abhayakumar, B.Sc. (H) Zoology, Miranda House, Ist year
3. Km Dakshta Tiwari, B.Sc. (H) Zoology, Miranda House, Ist year
4. Ritika Mukherji, B.Sc. (H) Zoology, Miranda house, Ist year
5. Kamakshi Singh, B.Sc. (H) Zoology, Miranda House, Ist year
6. Samridhi, B.Sc. (H) Zoology, Miranda House, Ist year
7. Haripriya Malviya, B.Sc. (H) Zoology, Miranda House, IInd year

Teacher Mentors

Botany Department

Dr. Janaki Subramanyan
Dr. Neetu Chaudhary
Dr. Madhu Bajaj
Dr. Renuka Agrawal
Dr. Saloni Bahri
Dr. Somdutta Sinha Roy
Dr. Deepali
Dr. Rajeshwari

Mathematics Department

Ms. Apeksha
Dr. Rekha Gupta
Mr. Sarikidrisi
Mr. Mohammad Sarik Idrisi
Mr. Mohit Kumar Macchal
Mr. Naveen Gupta

Zoology Department

Dr. Sadhna Sharma
Dr. Monika Sharma
Dr. Jyoti Arora
Dr. Pooja Suman
Dr. Yasha Yadav

Chemistry Department

Dr. Amrita T Sheikh
Dr. Bani Roy
Dr. Mallika Pathak
Dr. Sharda M. Sonkar
Dr. Malti Sharma
Dr. Kalawati Saini
Dr. Smriti Sharma Bhatia
Dr. Sujata Sengupta
Dr. Shivani
Dr. Mamta Bhandari
Dr. Lata Rana
Ms. P Lishinai Paoteimai

Physics Department

Dr. Mallika Verma
Dr. Monika Tomar
Dr. Sunita Singh
Dr. Sonam Singh
Dr. Divakar Pathak
Dr. Geeta Rani
Dr. Abha Dev Habib
Dr. Nisha Rani
Dr. Nirmala Saini
Dr. Ambuja Jaiswal
Ms Sitakshi Gupta
Ms. Nidhi Puri

Support Staff

Mr Khem Raj

Mr. Jay Prakash

Professor Bijayalaxmi Nanda
DSKC Coordinator / PI

Dr. Mallika Verma
Programme Coordinator

