

Hindu College

Project Title: Development of Thin Films/ Nano materials for their Electronic and Biomedical Applications

Project Code: HC-104

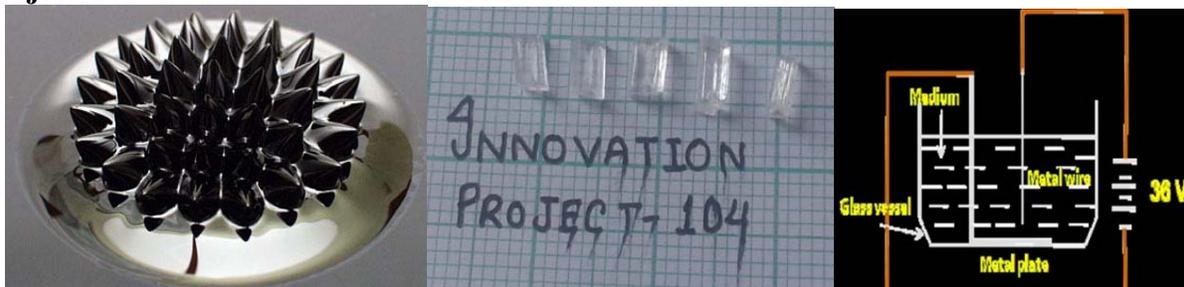


Figure: Response of the ferrofluid in the presence of the external magnetic, TGS Single Crystals and Schematic diagram of wire exploding technique

Findings (4-5 lines):

- Characterization and Applications of metal Nanoparticles Prepared through wire explosion Technique.
- Preparation of Ferrofluids, its Characterization and Applications.
- Preparation, Characterization and Applications of Iron Oxide Nano-particles using Sol-gel Technique.
- Preparation, Characterization and Applications of Single Crystals (KDP, TGS).

Faculty: Dr. Vivek Kr. Verma (Physics), Dr. Adarsh Singh (Physics), Dr. Anju Srivastava (Chemistry), Dr. Reena Jain (Chemistry), Dr. Devanshi Magoo (Chemistry)

Mentor: Dr. S. Annapoorni
Deptt. of Physics & Astrophysics, University of Delhi.
Ph: 9871521718, 27315329, Email: annapoornis@yahoo.co.in

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Shahil	Physics	6	Mushin Mubarak	Physics
2	Simran	Physics	7	Anshika Goel	Chemistry
3	Arjun	Physics	8	Taranpreet Kaur	Chemistry
4	Kalpak	Physics	9	Priyanka	Chemistry
5	Pradhi	Physics	10	Kriti Seth	Chemistry

Institute of Home Economics

Project Title: Ensuring Access to Safe Street Food

Project Code: IHE-101



Reaching new horizons (Some of the students conducting research project)

Findings (4-5 lines): The study analyzes the safety aspects of street food sold on Delhi streets. A survey of 500 consumers (students studying in higher education institutions in Delhi) and 250 vendors outside these institutions has been completed. Laboratory tests for quality of fat used for frying were found rancid and unfit for consumption and spices used in preparation were found adulterated. Most of the food samples were highly contaminated with disease causing pathogens. The study is in the process of designing ICTs (Information Communication Technologies) (documentary, educational games, etc.) to spread awareness about food safety to promote good health among the consumers.

Faculty: Dr. Praveen Pannu (Communication & Extension), Dr. Sunita Aggarwal (Microbiology), Dr. Deepshikha Kataria (Food & Nutrition)

Mentor: Dr. Amalan Majumdar
Joint Director I.E.C, Ministry of Rural Development & Sanitation
Email: ajmdm2@yahoo.co.in, Ph: 9810224854

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Megha Garg	Comm & Ext.	6	Anjali	Food & Nutrition
2	Deepti Sharma	Comm & Ext.	7	Vasundhra	Food & Nutrition
3	Megha Gupta	Comm & Ext.	8	Pratima Verma	Microbiology
4	Poonam Sharma	Comm & Ext.	9	Shubhangi Kansal	Microbiology
5	Nidhi Rawat	Food & Nutrition	10	Salwa Naushin	Microbiology

Institute of Home Economics

Project Title: Isolation and identification of pigment producing fungi for using as textiles dyes

Project Code: IHE-102



Cravat dyed with microbial dye

Findings (4-5 lines): 56 sample isolates were cultured on different media to obtain the color pigments, of which 12 produced both intra and extra cellular pigment, 35 only produced extra cellular and 9 only produced intra – cellular color pigment.

Microbes producing colorant in broth were tested for dyeing on different fabrics (silk, wool, cotton and Nylon). Various extraction techniques were employed such as boiling, solvent (acetone, ethanol) extraction, microwave technology, autoclaving etc. for maximizing the colour production.

Faculty: Dr. Charu Gupta (Fabric & Apparel Science), Dr.Sunita Aggarwal (Microbiology), Ms.Nikita Nagpal (Microbiology)

Mentor: Dr M.L. Gulrajani
(Professor Emeritus) Department of Textile Technology, IIT New Delhi.
Ph. +91-11-26514033, 9818253979, Email-mohan.gulrajani@gmail.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Aprajita Sharma	Microbiology	6	Rashmi Kiran	Microbiology
2	Charvee Asnani	Microbiology	7	Priya Gupta	Microbiology
3	Lijy K Babu	Microbiology	8	Gunjan Kaushik	Microbiology
4	Aakriti Dhawan	Microbiology	9	Versha	Fabric & Apparel Science
5	Jigayasa Verma	Microbiology	10	Anita	Fabric & Apparel Science

Indraprastha College for Women

Project Title: To Prepare a Glossary of Technical Terms in Yoga Philosophy

Project Code: IP-101



Innovation Project related meeting of students and faculty with Mentor

Findings (4-5 lines): The Innovation Project aims to prepare a glossary of technical terms in Yoga Philosophy and to present them in trilingual from i.e. Sanskrit, Hindi and English. The other important aspect of this project is to present *Yogic* technical terms with modern psychological interpretation wherever and whenever it is required. The glossary will be designed to aid academicians and practitioners who seek the deeper meaning of yoga's symbols and metaphoric language.

- a) *Identification of technical terms and their meaning* – 100 technical terms in Yoga philosophy have been identified from original Sanskrit texts. Their explanations in Sanskrit as per original thought have been compiled. Transliteration work, on these, has been completed. Parallels have been drawn between some of the important terms as understood in Yoga philosophy and Western psychology literature.
- b) *Enhancement of students' knowledge on Yoga philosophy* – Students have been given a set of references to enhance their understanding of Yoga philosophy. Several lectures and sessions were held with the students to ensure that they engage in an appreciative and meaningful enquiry into the subject of the innovation project.
- c) *Training of students on transliteration work* – Students have been trained on transliteration work. Transliteration helps in converting a text from one script to another. Since the glossary is meant for easy readability in three languages, it is an essential part of the project work. Transliteration also equips a person to pronounce a Sanskrit word as it is. In this way a world-class research standard can be maintained and this glossary can go a long way to benefit researches worldwide.

Faculty: Dr. Anita Swami (Sanskrit), Dr. Nidhi Malik (Psychology), Dr. Suman Mahendru (Sanskrit)

Mentor: Dr. Ram Nath Jha, Special Centre for Sanskrit Studies, JNU, New Delhi
Ph: 01126704131, Mob.: 9810652760, Email: rj12@hotmail.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Shikha	Sanskrit	6	Saniya Bedi	Psychology
2	Sweety	Sanskrit	7	Nikita Jain	Psychology
3	Ritika Pal	Sanskrit	8	Pallavi Gulati	Psychology
4	Vaishali	Sanskrit	9	Sakshi Anandam	Psychology
5	Akansha	Sanskrit	10	Priyambada Mohanty	Psychology

Jesus & Mary College

Project Title: Solid Waste Management

Project Code: JMC-101



Unattended waste on road side.

Findings (4-5 lines): Delhi has absence of a organized waste disposal system to regulate waste.

Absence of segregation.

A successful waste composting plant generating 50 lacs per annum worth manure.

Shaft system for segregation of waste at the source.

Compaction technique to reduce the volume of waste.

Faculty: Dr. Alka Marwah (Mathematics), Dr. Anu Saxsena (Mathematics),
Ms.Jacinta Lobo (Sociology)

Mentor: Dr Shiva Dhar,
Senior Scientist, Division of Agronomy, IARI, New Delhi-110 012
Ph: 09868354933, (Email: drsdmisra@gmail.com ; misras@lycos.com)

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Nikita Mullick	Mathematics	6	Ashima Bangia	Mathematics
2	Deepakshi Madan	Mathematics	7	Deepa Thomas	Mathematics
3	Ankita Singh	Mathematics	8	Shreya Das	Sociology
4	Shivani Mathur	Mathematics	9	Sonal Talwar	Sociology
5	Rashi Gupta	Mathematics	10	Sneha Talwar	Sociology

Jesus & Mary College

Project Title: Preserving our Common Heritage – The Monuments of Delhi

Project Code: JMC-102



The Ruined Interiors of Zafar Mahal, a late Mughal structure in Mehrauli

Findings (4-5 lines): The aim of this project is to work towards preparing a road-map that would set in clear terms, the possible ways and means of conserving Late Mughal architecture in Mehrauli, belonging to the late eighteenth and the first half of the nineteenth centuries. Following this objective, students visited these buildings several times during the course of the project and prepared a plan of action, to arouse consciousness within the communities that live in close proximity to the monument and in many cases have encroached on the monuments, knowingly or unknowingly. The idea is to make them aware of the importance of these monuments as a collective heritage of all of us and hence of the utmost need to protect them from further destruction. Towards this end, the students of sociology prepared a questionnaire concerning settlement patterns close to these buildings and how the people in those areas perceive the monuments around them, and interviews based on this questionnaire were successfully conducted in Mehrauli.

Faculty: Dr. Visalakshi Menon (History), Dr.Sudha Jha (History)

Mentor: Prof. Nalini Thakur,
School of Planning and Architecture
Ph: 9891271705, Email: nalinitthakur2003@yahoo.co.in

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Divvya Mishra	History	6	Varuni Kaushal	Sociology
2	Iqra Khalid	History	7	Sneha Ganguly	History
3	Prerna Anantharam	B.A. Prog	8	Rittuporna Chatterjee	History
4	Vidya Viswanathan	Sociology	9	Amina Sohail Razzack	History
5	Shrutika Sharma	Sociology	10	Aditi Singh	History

Jesus & Mary College

Project Title: Street Vendors: Service Providers or Traffic Hazards

Project Code: JMC-103



Street Vendors: The God of Small Sellers

Findings (4-5 lines): Our project analyses the contribution of street vendors to the economic and social life of the city of Delhi and aims to suggest innovative revenue generating economic model that incentivises all participating stakeholders to incorporate street vendors into the system without evident harm in the development of the city. Our findings include estimation of the amount of bribes paid monthly, the level of financial deepening, the level of economic activity generated by street vendors and the degree to which the existence of street vendors subsidizes the cost of living for urban poor. Concomitantly, we have examined the legal difficulties that underlie this economically profitable venture and have come across several conflicting laws in the existing system making street vending a difficult profession to pursue. According to a preliminary estimate, street vendors pay a bribe amount of over INR 10 crore monthly for the state of Delhi as a whole. Moreover, we have discussed and found out the flaws in the current Street Vendors (Protection of Livelihood and Regulation of Street Vending) Bill, 2012 and plan to propose viable changes in the same. Administrative hurdles in the incorporation of street vendors into society are many and the lack of existence of proper identification renders nameless and faceless thousands of such vendors.

Faculty: Ms. Rajni Singh (Economics), Dr. Daisy Sales (Economics), Dr. Renu Gupta (Commerce)

Mentor: Dr. Jacob John, Development Economics, Director, Kerala Devl. Society
Ph: 9811204487, Email: jacob305@rediffmail.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Sakshi Kapur	Economics	6	Amrita Goel	Economics
2	Srishti Chauhan	Economics	7	Sonia Patel	Economics
3	Bhavya Arora	Economics	8	Sonia Dagar	Economics
4	Kanika Gupta	Economics	9	Mitali Seth	Economics
5	Niharika Khatana	Economics	10	Easha Guha	Economics

Jesus & Mary College

Project Title: Delhi – The city as text

Project Code: JMC-104



Unraveling Delhi: The past in the present

Findings (4-5 lines): Reading Delhi as a multi-layered text has offered valuable insights and enabled us to creatively imagine and access the diverse experiences of living in the city. The project identified a few spaces of research which revealed various socio-cultural and historical facets of the city. The synthesis of history and modernity in the city has been captured by the students through oral and visual narratives that reveal the varied layers and textures of Delhi.

Faculty: Ms. Dolly Kapoor (English), Ms. Amrita Bhalla (English), Ms. Sona Andrew (Education), Ms. Sukhpreet Kahlon (English)

Mentor: Mr. Shuddhabrata Sengupta
Artist, Writer, Member of Raqs, Co-founder SARAI.
Ph: 9811897499, Email: Shuddha68@gmail.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Reva Malhotra	English	6	Shivangi Naithani	History
2	Arushi Gupta	English	7	Khushy Sobti	English
3	Nikita Phyllis	English	8	Zeba Rizwan	English
4	Anindita Misra	English	9	Sanya Taneja	English
5	Aanchal Vij	English	10	Aakriti Gupta	History

Jesus & Mary College

Project Title: Understanding the lives of the working poor in Delhi

Project Code: JMC-105



Project students Tanya Chatwal and Yoshita Patney with a construction worker they interviewed

Findings (4-5 lines): The lives of the working class in Delhi are generally perceived as ordinary, dull and deprived but their life stories as recorded by the project students reveal that it is not so; not only are these individuals hard working and courageous but they too have dreams and aspirations of their own many of which are surprisingly similar to that of the middle class. These stories and interactions have impacted the thinking of the project students in a significant way.

Faculty: Dr. Ameeta Motwani (Commerce), Dr. Renu Gupta (Commerce),
Ms. Tanuja Sachdev (Political Science)

Mentor: Dr. Ravinder Kaur, Prof. Sociology & Social Anthropology,
Deptt. of Humanities & Social Services IIT, New Delhi.
Ph: 9899000699, Email: ravinder.iitd@gmail.com, ravinder_iitd@yahoo.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Archi Gupta	Commerce	6	Tanya Chatwal	Commerce
2	Divya Sharma	Commerce	7	Tessy Simon	Commerce
3	Linnet	Commerce	8	Trisha Chowdhry	Commerce
4	Shefali Goyal	Commerce	9	Yoshita Patney	Commerce
5	Stuti Immanuel	Commerce			

Jesus & Mary College

Project Title: Beyond Relocation: Experiences from the Urban Fringes

Project Code: JMC-106



A Home away from Home

Findings (4-5 lines): The research aims to examine the socio-economic profile of the people of the resettlement colonies of Delhi and also how displacement affects the social and cultural capital of these people to analyze the state policies pertaining to land acquisition, resettlement and rehabilitation is also one of the objectives of the study.

Faculty: Ms.T. Raha (Sociology), Ms.Amrita Sastry (Sociology), Dr. Sachi Chakravorty (History)

Mentor: Dr. Joseph Marianus Kujur
Asst. Research Head of Deptt, Deptt. of Tribal Welfare,
Indian Social Institute, Lodi Road, New Delhi
Ph: 249534145, 9968115911, Email: marianuskujur@gmail.com,
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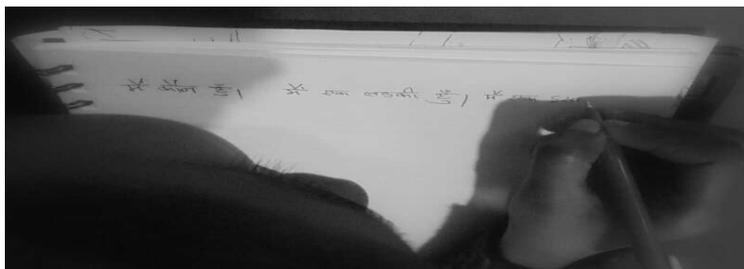
Students:

S.No.	Name	Department	S.No.	Name	Department
1	Bincy	Sociology	6	Parakh	Sociology
2	Remya	Sociology	7	Aanchal	Sociology
3	Kamakshi	Sociology	8	Priyanka Jain	Sociology
4	Swaranjali	Sociology	9	Safoora	Sociology
5	Shreya	Sociology	10	Shikha	Sociology

Jesus and Mary College

Project Title: A cultural and contextual understanding of resilience and the role of voluntary organizations in its development: A study of marginalized urban girls in Delhi.

Project Code: JMC - 107



'HOPE WHERE NONE MIGHT BE EXPECTED IS WHERE COMES RESILIENCE A MECHANISM WHICH ALLOWS US TO BOUNCE BACK WHEN FATE KNOCKS US DOWN.'

Findings (4-5 lines): The study attempts to understand the concept of Resilience and how it unfolds in the Indian context. The study has been planned in three stages.

Stage I:

The literature was reviewed for the project to identify the existing work done in this area. The team was exposed to multiple libraries and various experts besides the organizations working in this area.

Stage II:

The team visited various organizations (16), studied their models and then identified the organization that met our criteria. We planned and completed organizational case study and are looking at the success stories.

Stage III:

This phase aims at integrating Resiliency as a concept in the school curriculum.

Faculty: Dr. Alka Sehgal(Education), Sr. (Dr.) Rosily(Education), Dr. Kavita Vasudev(Psychology)

Mentor: Prof. Namita Ranganathan
Faculty of Education, University of Delhi.

Ph: 9811438706, Email: namita.ranganathan@gmail.com

Students:

S. No.	Name	Department	S. No	Name	Department
1	Anuradha Sharma	B.El.Ed	6	Mandeep Kaur Gabhi	B.El.Ed
2	Ikjot Kaur	B.El.Ed	7	Akansha Gupta	B.El.Ed
3	Sonal Sharma	B.El.Ed	8	Akansha Sehrawat	B.El.Ed
4	Yamini Yadav	B.El.Ed	9	Sanya Narang	B.El.Ed
5	Isha Verma	B.El.Ed	10	Shefali Ahlawat	B.El.Ed

Kalindi College

Project Title: Conversion of mechanical energy to electrical energy on metro tracks

Project Code: KC-101



Fig: Prof. H.J. Butt workshop chair & Director of Max Planck Institute, Mainz, Germany giving motivational prize to students of innovation project at INDO-GERMAN Workshop (WAMFER – 2012), held at DU.

Findings (4-5 lines): The wind energy generated by fast moving metro trains can be converted to electrical energy. The high velocity of air will move the blades which in turn will move a rotor. The rotor is connected to turbine which will generate electricity. The generated electrical energy can be stored in batteries to be used at suitable places. The initial calculations reveal that power ranging from 2KWh to 50KWh can be generated all along the track per day. This idea has the potential to bring about not only substantial reduction in costs of fuels and carbon emission but also cut down on the electricity bills thereby revolutionizing the concept of green energy as something tangible and beyond a niche of green-minded environmentalists.

Faculty: Dr. Savita Roy (Physics), Dr. Punita Verma (Physics)

Mentor: Mr. S.A. Verma,
Addnl. General Manager, DMRC
Ph: 011-224832171, Email: saverma@dmrc.org

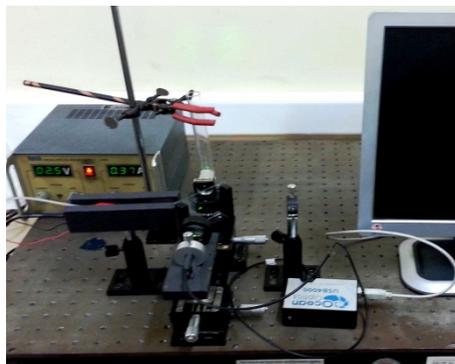
Students:

S.No.	Name	Department	S.No.	Name	Department
1	Abha Sharma	Physics	6	Karishma Thakran	Physics
2	Charul Goel	Physics	7	Madhuri Ganguly	Physics
3	Geeta	Physics	8	Rashmi Jha	Physics
4	Himanshi Bansal	Physics	9	Ruchika Gupta	Physics
5	Kanika Tyagi	Physics	10	Tulika Sharma	Physics

Keshav Mahavidyalaya

Project Title: Design and development of a low cost computerized laser Raman spectrometer indigenously for DU student laboratories.

Project Code: KM-101



Setup for Raman Spectrometer

Findings(4-5 lines): Raman spectroscopy provides key information about the structure of molecules and gives a characteristic fingerprint for chemical analysis. A low cost Raman spectrometer is designed in the present work. Raman analysis of benzene has been done with our designed Raman spectrometer. Image processing and fuzzy technique are used to remove the additive noise to extract the pure signal.

Faculty: Dr. Ajay Arora (Physics), Dr. Priti Sehgal (Computer Science), Dr. Divya Haridas (Physics)

Mentor: Prof. K. Sreenivas
(Professor, Department of Physics and Astrophysics & Director,
University Science Instrumentation Center (USIC), University of Delhi)
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Akansha Kapoor	Physics	6	Akhilshwar Mishra	Physics
2	Meenal Gupta	Physics	7	Ankur	Physics
3	Abhishek Pandey	Physics	8	Salim Ali	Computer Science
4	Sachin Pandey	Physics	9	Anshul Aggarwal	Computer Science
5	Jewel Aggarwal	Physics	10	Vishakha Kashyap	Computer Science

Kirori Mal College (University of Delhi)

Project Title: Study on Quark Gluon Plasma (QGP) and Neutrino Physics

Project Code: KMC-101



Innovation Project Team (KMC-101) ponders over the new work.

Findings(4-5 lines): Rudimentary ideas about Quark Gluon Plasma (QGP), a de-confined hadronic states, and Neutrino Physics have been inculcated. A new density of states for quarks and gluons has been coined to characterize the QGP. CPT Violation and Matter Effect in Neutrino oscillations have been incorporated.

Faculty: Dr. Agam Kumar Jha (Physics), Dr. Bipin Singh Koanga (Physics), Dr. Dinesh Khattar (Mathematics)

Mentor: Dr. R. Ramanathan
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Luv Kumar	Physics	6	Sameer Kumar	Physics
2	Gopal Praksah Rai	Physics	7	Syed Umair	Physics
3	Prince Khurana	Physics	8	Guru Prakash Pandey	Computer Science
4	Supriya Arora	Physics	9	Tanya Malhotra	Mathematics
5	Charu Ahuja	Physics	10	Manu Rohilla	Mathematics

Kirorimal College

Project Title: Phytoremediation of Lead and Zinc polluted soils using Helianthus plant species:
A new green technology

Project Code: KMC-102



Green Pot Experiment

Growth of *Helianthus annuus* in first and fifth month

Findings(4-5 lines): **Phytoremediation** is a green, innovative, economical and environment friendly technique which uses green plants to clean up hazardous waste sites. Green Pot Experiment was setup to study the distribution of lead in *Helianthus annuus* (sun flower) every month using soil samples collected from Yamuna bank. As a result of phytoextraction, the amount of lead in soil decreases while it increases in plant as it grows. The microwave digestion of soil and plant was done using EPA Digestion method-3051A with scientific microwave (Anton Paar). The digested samples were analyzed for their lead content by Flame Atomic Absorption Spectrometer (Perkin Elmer).

Faculty: Dr. Rakesh Kumar (Chemistry), Dr. Reena Saxsena (Chemistry), Dr. Rajni Gupta (Botany)

Mentor: Prof. Ashok Prasad
Deptt. of Chemistry, University of Delhi.
Email: ashokenzyme@yahoo.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Gaurav Chugh	Botany	6	Vikaram Kumar	Chemistry
2	Ishaan Khanna	Botany	7	Rajeev Kr. Rai	Chemistry
3	Anchal	Botany	8	Krishna Yadav	Chemistry
4	Arpit Bharadwaj	Chemistry	9	Swati Priya Singh	Chemistry
5	Sanjhal Jain	Chemistry	10	Abhinav Gupta	Chemistry

Kirorimal College

Project Title: Understanding the Chemical Metamorphosis caused due to Industrial Pollution in the Shiwalik region of the Himalayan Belt

Project Code: KMC-103



Project Team with the villagers

Findings (4-5 lines): Pollution due to industries has manifested itself in many ways.

- Physicochemical parameters of soil and water near the industries indicate Chemical metamorphosis triggering high levels of pollution.
- As corroborated by the villagers, decreasing groundwater level due to excessive utilization in industries and contaminated surface water due to hazardous industrial waste disposal are major reasons for these high levels
- People living near industries have experienced increasing degree of pulmonary and other health disorders in recent years
- Already ecologically vulnerable, the study area is also experiencing adverse effects of climate change such as increased incidence of heavy rainfall, landslides and soil erosion
- There is a gross violation of existing environmental laws.

Faculty: Dr. Mamta Sharma (Chemistry), Dr. Shalini Baxi (Chemistry), Dr. Kaushal K Sharma (Geography)

Mentor: Prof. Gurdip Singh Head, Faculty of Law University of Delhi
Email: gurdipsingh_bahri@yahoo.com

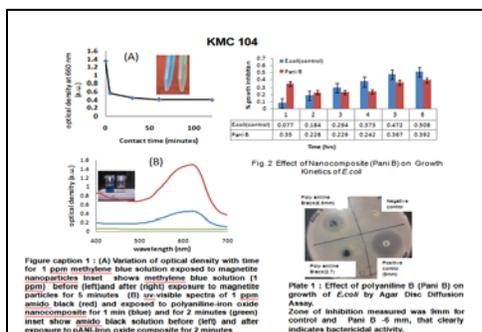
Students:

S.No.	Name	Department	S.No.	Name	Department
1	Bikesh	Chemistry	6	Manisha Handa	Chemistry
2	Lavesh Kr. Sisodia	Chemistry	7	Rakesh Yadav	Chemistry
3	Shashank Patel	Geography	8	Surya Bansi Mani	Chemistry
4	Sunil Prasad	Geography	9	Kirtima	Chemistry
5	Aayushi Goel	Chemistry	10	Aditya Gupta	Chemistry
			11	Manpreet*(without internship)	

Kirorimal College

Project Title: Novel Strategies involving Nanomaterials/Nanocomposites and Biosorption for Removal of toxic metals from water

Project Code: KMC-104



Effect of contact time on adsorption of Dye by nanoparticles/nanocomposites and its Anti-microbial activity

Findings (4-5 lines): Nanoparticles (NP) of iron oxide by sol gel and coprecipitation method have been prepared for purifying water containing dyes. Particles were characterized by X-ray diffraction studies. NP were further modified by making their nanocomposites (NC) with polyaniline. Nanoparticles and nanocomposites were tested for Methylene Blue (MB), Amido Black (AB) and Rhodamine B. Adsorption efficiency of NP and NC was calculated to be ~75%-95% for MB and AB. Effect of contact time, temperature and ph on adsorption was studied. It was observed that NC purifies water by ~80% in few (1-3) minutes. PANI composites show good antibacterial activity too.

Faculty: Dr. Raksha Sharma (Physics), Dr. Sumitra Mohanty (Physics), Dr. Anita Kamra verma (Zoology)

Mentor: Professor S. Annapoorni, Deptt .of Physics and Astrophysics, University of Delhi
E-mail: annapoorni@physics.du.ac.in, annapoornis@yahoo.co.in

Students:

S.No.	Name	Department	S.No	Name	Department
1	Utkarsh Shashank	Physics	6	Pooja Rai	Zoology
2	Yogesh Kumar	Physics	7	Maushmi Das	Zoology
3	Mansi Budola	Physics	8	Gul Zabain	Zoology
4	Basundhra Ghosh	Physics	9	Pratibha Fuloria	Zoology
5	Vishal	Physics	10	Mehreen Fatima	Zoology

Kirorimal College

Project Title: Mapping the Spatial Topology of two sub- glacier basins of NW Himalayan for multi class change detection using MODIS, Landsat and IRS data

Project Code: KMC-105



Exhilarated and little tired after 18 hours of difficult climb (on June 17, 2012) just outside the Khatling glacier cave is a team of seven members of KMC-105 project, who successfully collected many GCP's and GPS points in and around the glacier (R-L : Dhananjay, Porter, Dr Seema Mehra Parihar, Nipun, Guide, Mahashweta, Vishwanath, Praffulit and Akash clicking the photograph)

Findings (4-5 lines): The analysis is still under progress and the final results cannot be written on a key question of the research that is whether the two glaciers studied in the Bhagirathi basin in NW Himalayas are melting, retreating, advancing or not altering? The research is under progress using High resolution remote Sensing data. However, the finding till now in terms of change detection depicts a change in the spatial topology. Articulations documented during the three field visits and numerous interactions with the scanty seasonal population including Gaddis, Guides, Porters, etc it seems that the glaciers are receding. But, it is only after completing the analysis we can share the final results.

Faculty: Dr. Seema Mehra Parihar (Geography), Dr. Satya Prakash Tripathi (Mathematics),
Dr. Vandana Sarin Walia (Statistics)

Mentor: Dr. R. Siva Kumar (NRDMS)
DST and Head National Spatial Data Infrastructure (NSDI), Govt. of India.
Email: siva_k@nic.in

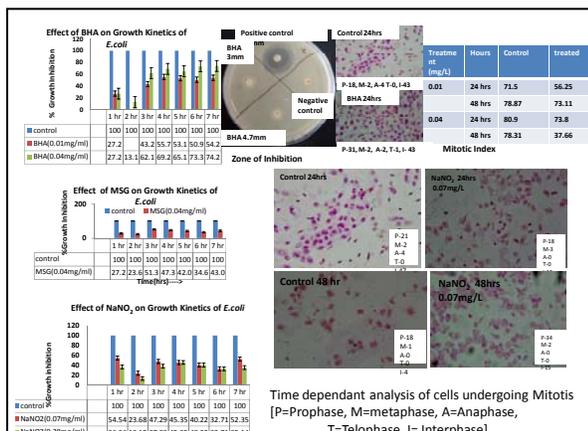
Students:

S.No.	Name	Department	S.No.	Name	Department
1	Akash Sharma	Geography	6	Arvind Kumar	Mathematics
2	Dhananjay Kumar	Geography	7	Harsha Jain	Mathematics
3	Mahashweta Mukherjee	Geography	8	Vishvnath Kumar	Statistics
4	Praffulit Bisht	Geography	9	Pulkit Arora	Statistics
5	Nipun Malhotra	Mathematics	10	Mayank Jain	Statistics

Kirorimal College

Project Title: To assess the mutagenic potentials of some commonly encountered environmental pollutants and therapeutic agents

Project Code: KMC-106



Effect of Food Additives-BHA, NaNO₂ and MSG on the growth of *E. coli* and Onion Root Tip.

Findings (4-5 lines): The effect of Food Additives, Analgesics and Pesticides on the growth kinetics of experimental models - *E. coli* and Onion root tip were evaluated in terms of Growth Inhibition and Mitotic Index. It was concluded that the recommended dose of the above do not seem to have any adverse effect but time dependant increase in cells undergoing mitosis by some food additives like Butylated Hydroxy Anisole [BHA] changed the mitotic index Table 1. The Zone of Inhibition was assessed by Agar Disc Diffusion assay in BHA treatment, clearly indicated that the effect was bacteriostatic and not bacteriocidal.

Faculty: Dr. Manju A Lal (Botany), Dr.Renu Kathpalia (Botany), Dr. Anita Kamra Verma (Zoology)

Mentor: Dr. Rajni Rani
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Srishti Chitranshi	Botany	6	Largee Biswas	Zoology
2	Anamika Arpan	Botany	7	K M Sartaj	Zoology
3	Rahul Sain	Botany	8	Nikita Raj	Zoology
4	Niharika	Botany	9	Nidhi Nautiyal	Zoology
5	Ilyas Khan	Botany	10	Niharika Azad	Zoology

Kirorimal College

Project Title: A comparative study of phytoremediation of stagnant water by free floating plants and making it potable with the use of various plant sources

Project Code: KMC-107



Duckweed being grown in glass containers, inside the shed constructed under the project

Findings (4-5 lines): Protocols for the estimation of ammonium, nitrate and phosphate in the water samples were standardized. Phytoremediation of water samples, collected from Delhi ridge and Model Town lake was done by growing duckweeds in them. A reduction was found in nitrate, ammonium, phosphate and turbidity by growing duckweeds in the water samples during the initial 4 days of their growth. After 4th day of growing duckweeds, water samples were treated with extracts of various seeds such as those of Rajma (*Phaseolus vulgaris*), Soybean (*Glycine max*), Nirmali (*Strychnos potatorum*), and drumstick (*Moringa oleifera*). A further reduction in phosphates, nitrates could be observed along with reduction in turbidity in some of the cases.

Faculty: Dr. Manju A Lal (Botany), Dr. Renu Kathpalia (Botany), Dr. Tazeen Mehmood (Chemistry)

Mentor: Dr. Rita Kumar
Office: Chief Scientist, Lab # 506, IGIB
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Raveena Palli	Botany	6	Pallavi Singh	Analytical Chem.
2	Sakshi Sharma	Botany	7	Harsha Sewani	Analytical Chem.
3	Nibedita Mukherjee	Botany	8	Ansh Choudhary	Analytical Chem.
4	Riyazuddin	Botany	9	Pankaj Agrahari	Analytical Chem.
5	Shambhavi Jha	Botany			

Kirorimal College

Project Title: Analysis of Heavy metal content in soils and plants present near the road side and suggest the plants to be grown in and around Delhi - NCR

Project Code: KMC-108



The collection of the soil sample on road side of Gurgaon (Delhi-NCR)

Findings (4-5 lines): The pH of the soil of the East, North, Central, West and South Zones in Delhi-NCR, are found to vary from 5 to 7. And in the analysis of soil by using AAS- Perkin Elmer AA 400 Spectrophotometer, the Pb metal presence in the soils are found to be very less in comparison to reference sample whereas the Cd metal presence are found to be more in same soil sample. With this finding upto this stage, we come up with the conclusion that there is some contamination of Cd metal in the soils of the chosen zones and negligible contamination of Pb metal in the same soil sample. We also found that the concentration of Cd metal varied with distance from the road.

Faculty: Dr.Ram Sunil Kumar L. (Chemistry), Dr.M. Ramnanda Singh (Chemistry),
Dr. K. K. Halder (Physics)

Mentor: Dr. Jaiswar Gautam L. Asst. Professor
Deptt. Of Chemistry, Dr. B.R.Ambedkar University, Agra-282002

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Amit Kumar	B.Sc Hons.	6	Preeti Goswami	B.Sc. Phy. Science
2	Bikram Bhattacharya	B.Sc Hons.	7	Rishika	B.Sc Hons.
3	Gargi Joshi	Analytical Chem.	8	T. Clinton	B.Sc Hons.
4	Garima Kushwaha	B.Sc. Phy. Science	9	Vaibhav Luthra	B.Sc Hons.
5	Pragat Singh	B.Sc Hons.	10	Zahir Ali Siddiqui	B.Sc Hons.

Kirorimal College

Project Title: Public funds and private responsibilities: An analysis of Cash Transfers as a viable alternative to PDS

Project Code: KMC-109



Interviewing Female Head of Household at Kot Kasim, Alwar

Findings (4-5 lines): Surveys of FPS in Delhi, BPL households in Raghbir Nagar, Delhi and Kotkasim in Alwar has revealed the following

1. Most BPL households did not receive their full entitlements and the quality of food grains received was not up to the mark.
2. Most respondents are unaware about their correct entitlements. Also it was observed that people are either unaware of procedures to complain or actions have not been taken on their complaints.
3. Prima facie a majority of people in Kot Kasim, Alwar, preferred PDS to cash transfers. However mixed responses were obtained in Raghbir Nagar, as some of them felt that they could purchase better quality food grains from CTS.
4. A pilot project of providing kerosene subsidy to BPL households in bank accounts was carried out in Kot Kasim. BPL respondents complained of either not receiving even a single payment or irregular payments in their accounts.
5. There has been a lack of awareness about bank procedures among the respondents. Moreover most of the women were accompanied to banks by male members to withdraw cash.
6. Number of BPL households complained about the non-inclusion of their names in BPL list making them ineligible to avail CTS.

Faculty: Dr. Gopa Karmakar (Statistics), Dr. Anshu (Geography), Mr. Ajay Ranjan Singh (Economics)

Mentor: Dr. Pinaki Chakraborty, Professor, National Institute of Public Finance and Policy New Delhi. Email: pinaki@nipfp.org.in

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Ankit Singh	Economics	6	Tushar Shrivastva	Economics
2	Kriti Arora	Economics	7	Vaishali Singh	Geography
3	Mohd. Rizwan	Economics	8	Vridhi Kapani	Economics
4	Shobhit Kulshreshtha	Economics	9	Yamini Aggarwal	Geography
5	Tarishi Khanna	Statistics	10	Sumedha Kamboj	Economics

Lady Shri Ram College For Women

Project Title: The Study of Corporate Social Responsibility Practices of MNCs in India

Project Code: LSR-101



CSR – Touching Lives Through Education?

Findings (4-5 lines): The project examined the practices adopted by Indian MNCs under their CSR portfolios with regard to education for the upliftment of the under-privileged. While their initiatives in the field of computer education for poor students is laudable, there is a tendency to provide short-term responses without a deeper understanding of substantive engagement especially in terms of rights and capabilities in the context of access and equity. Our findings found a large gap between precepts and practices. This gap can be filled with a better understanding and sensitivity to locating best practices within the larger framework of the Millennium Development Goals (MDGs).

Faculty: Dr. Savita Gopal (Commerce), Mrs. Jyotsana Arora (Commerce), Dr. Arvind Kumar (Commerce), Dr. Kailash Kumar (Commerce)

Mentor: Dr. Meenakshi Gopinath, Principal, Lady ShriRam College for Women, Delhi.

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Aakriti Singh Arora	B.Com. Hon.	6	Rakhi Sharma	B.Sc. Hon.Stat.
2	Ruchika Rani	B.Com. Hon.	7	Ananya Jain	B.Com. Hon.
3	Prerena Chadha	B.Com. Hon.	8	Shaloma Jacob	B.Com. Hon.
4	Neha Trivedi	B.Com. Hon.	9	Niharika	B.Com. Hon.
5	Tanu Aggarwal	B.Sc. Hon. Stat.	10	Shailaja Taparia	B.Sc. Hon. Stat.

Lady Shri Ram College For Women

Project Title: The Imprisoned Dove: Transcending Conflict and Building Cultures of Peace

Project Code: LSR-102



The Innovation Project Research Team at the Seminar entitled ‘The Flight of the Dove: Building Cultures of Peace in the Classroom’ 12 Jan 2013

Findings (4-5 lines): This interdisciplinary project explored how conjectures of identity, nation state and schools facilitate or inhibit cultures of peace in classrooms. For this a comparative quantitative and qualitative analysis of data from a conflict region (Kashmir) and a non-conflict region (Delhi) was done using questionnaires, drawings and interviews. The sample constituted 320 students, 35 teachers and 13 principals. A stronger sense of regional and religious identity was found in Kashmiri adolescents as compared to adolescents in Delhi. The study also found that schools, curricula and pedagogy have a potential role to play in promoting or inhibiting peace in the classroom.

Faculty: Dr. Kanika Khandelwal (Psychology), Dr. Kalyani A (Elementary Education), Ms. Deepika Papneja (Elementary Education), Ms. Megha Dhillon (Psychology)

Mentor: Ms. Seema Kakran
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Aditi Dhyani	B.El.Ed.	6	Donna Susan Mathew	Political Science
2	Naincy	B.El.Ed.	7	Tanushree Sarkar	Psychology
3	Himani Saini	B.El.Ed.	8	Vasudha Dhawan	Psychology
4	Shweta Shandilya	B.El.Ed.	9	Himani Singh	Psychology
5	Neha Jagtiani	Psychology	10	Pooja Bhatia	Political Science

Lady Irwin College

Project Title: Multi-Criteria Framework for Sustainability Design Audit

Project Code: LI-101



Project team deliberating on evaluation criteria for sustainability during a workshop

Findings (4-5 lines): Survey of electronic household goods and the lifestyle products indicated that most users complained of problems soon after six months to one year of purchase. The reasons revealed in the research were that some parts of these products were found to be of inferior quality (for example, defrost timer in a frost free refrigerator leads to inefficient cooling) due to which problems were experienced. This lead consumer's to change their products much earlier than their end life thereby entering the disposal cycle prematurely. Based on this, criteria for evaluation of products for their sustainability have been developed.

Faculty: Dr. Sushma Goel (Resource Management & Design Application),
Dr. Bhawana Chanana (Fabric & Apparel Science)

Mentor: Prof. Lalit Das
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Students:

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1	Tania Sethi	RMDA	6	Nandini Singhal	FAS
2	Mansi Nagpal	RMDA	7	Apporva Dhingra	FAS
3	Isha Raheja	RMDA	8	Sonalika Rawat	F & N
4	Megha Nair	RMDA	9	Sukirti Nag	DCE
5	Pallavi Gulati	RMDA	10	Surbhi Bhalla	DCE

Lady Irwin College

Project Title: Generating Energy Consciousness among Rural Household

Project Code: LI-102



Project Coordinators meeting to discuss survey findings concerning practices for energy use

Findings (4-5 lines): Survey on energy use practices in villages revealed that the reasons for poor adoption of renewable energy resources were many. Significant ones were - poor involvement of residents during initial introduction of renewable devices, inadequate knowledge, inadequate training for use, maintenance and repair, inefficient functioning of repair shops, high initial cost, inadequate financial assistance/loan available for purchase, lack of product standardisation and certification. The primary motivating force was saving in electricity bills. Energy consciousness programme was designed towards these aspects.

Faculty: Dr. Sushma Goel (Resource Management & Design Application), Dr. Anjali Capila (Development Communication & Extension)

Mentor: Dr. Pradeep Chandra Pant, (Director, Ministry of New and Renewable Energy)
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Students:

S.No.	Name	Department	S.No.	Name	Department
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2	Subodhika Vohra	RMDA	7	Rishita Jhugaroo	HDCS
3	Kakul Tiwari	HDCS	8	Sanya Pahwa	FN
4	Saamyeta Sumangalam	HDCS	9	Mahima Bhalla	HDCS
5	Arushi Khanna	HDCS	10	Kanika Chopra	FAS

Mata Sundari College

Project Title: Working conditions of BPO employees: Social and Ethical dimensions

Project Code: MSC-101



Harva A Rural BPO

Findings (4-5 lines): The title of the project is ‘the working conditions of BPO employees: Social and Ethical dimensions’. The research is based on the data collected from 200 employees of various ITES/BPO companies. The responses were collected through questionnaire and personal interviews. The preliminary observations support the view that people working in night shifts in BPOs face serious emotional and physical problems. Viable suggestions would be provided to counter these problems. Recommendations would also be given for the safety of women employees working in the night shift. Besides these, a case study on HarVa has been undertaken to understand the working pattern of women employed in rural BPOs.

Faculty: Dr. Sharda Garg (Commerce), Mrs. Prabhasharan Kaur (Commerce),
Dr. Hemlata Krishnani (Philosophy)

Mentor: Dr. Sushma Yadav
Professor of Public Policy and Governance & Chair Professor,
Dr. B.R. Ambedkar Chair in Social Justice, Indian Institute of Public
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Students:

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1	Akansha Juneja	Commerce	6	Pawanjeet Kaur	Philosophy
2	Kasturi Mukherjee	Commerce	7	Manisha Paul	Commerce
3	Namneet Kaur	Commerce	8	Lakshita Sachdeva	Commerce
4	Harjot Kaur	Commerce	9	Harpreet Kaur	Commerce
5	Charu	Philosophy	10	Manpreet Kaur	Commerce

Maitrevi College

Project Title: Study of Surface Tension in the action of soaps, detergents, germicides, cosmetics and in the field of pharmaceuticals

Project Code: MT-101



Apparatus designed and fabricated by our team

Findings (4-5 lines): Effects of temperature and concentration on the surface tension of surfactant solutions were studied. The CMC values were determined for SDS, CTAB and LABSA by measuring the surface tension and conductivity. Krafft temperatures of SDS in presence of a salt at different concentrations have been determined by conductivity measurements.

During investigation it was found that the polymer-coated ZnO in the presence of surfactant acts as a very good anti-static agent. Hence, the polyaniline-coated ZnO with SDS has been synthesized at different concentrations of ZnO. These polymers are being characterized by SEM, TEM, DLS and XRD techniques.

Faculty: Dr. Amirtha Anand (Chemistry), Dr. Neelima Rani (Physics),
Lt. Dr. Padma Saxena (Chemistry)

Mentor: Dr. A. Ramanan, Deptt. of Chemistry, IIT, New Delhi-16
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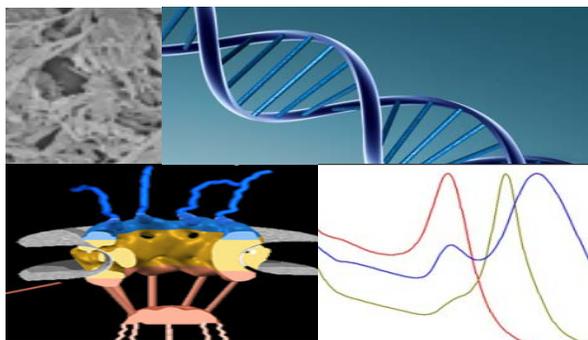
Students:

S.No.	Name	Department	S.No.	Name	Department
1	Arunima Singh	Physics	6	Aayushi Sinha	Chemistry
2	Nikita Kalra	Physics	7	Nidhi Singh	Chemistry
3	Garima Daniya	Physics	8	Deepa P	Chemistry
4	Deepika Yadav	Physics	9	Priyanka Baweja	Phy. Science
5	Tanvi Mehra	Chemistry			

Maitrevi College

Project Title: Biocompatibility of Nanomaterials

Project Code: MTC-102



Nanobio Futures

Findings (4-5 lines): Experimental evidence shows that commonly used nanoparticles have variable compatibility with different biological systems. In our experiments, zinc oxide nanoparticles are toxic to all biological systems tested. The extent of toxicity varies with the system. Unicellular prokaryotic systems are more susceptible as compared to multicellular plants in cultures. Iron oxide nanoparticles were less toxic as compared to zinc oxide in certain cases. In conclusion our effort to generate focus and interest in students for interdisciplinary research has yielded fruitful results.

Faculty: Dr. Atika Chandra (Biology), Dr. Kiran Sehrawat (Physics),
Dr. Ritu Dhingra (Physics)

Mentor: Dr. Souvik Maiti
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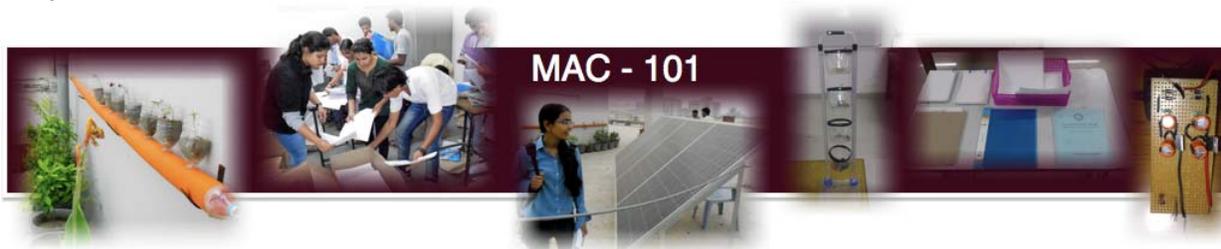
Students:

S.No.	Name	Department	S.No.	Name	Department
1	Arunima Dutta	Biology	6	Neha Gupta	Biology
2	Swecha Pal	Biology	7	Kanika Sharma	Physics
3	Bhavya	Biology	8	R Padma Kanya	Physics
4	Soumika Mukherjee	Biology	9	Nikita Bali	Physics
5	Priyanka Yadav	Biology	10	Mohana Basu	Physics

Maharaja Agrasen College

Project Title: Measuring Environmental Footprint of University of Delhi and Transforming it into a Zero-Impact University

Project Code: MAC-101



Student activities under Innovation Project MAC-101

Findings(4-5 lines): The project is an effort to assess the damage that the routine activities of educational institutions can do to the environment in terms of their carbon emissions. Maharaja Agrasen College is ready with its carbon map. Its total carbon footprint as per study's preliminary estimates comes out to be 1047.28 tonne CO₂ emissions. The per capita carbon emission is 534.32 kg CO₂. The footprint calculation is based on primary data collected from stratified sample of teachers, students and non-teaching staff. The activities of the college covered are transport, energy consumption, paper consumption, food consumption and waste disposal. Transport is the major contributor to MAC's carbon footprint followed by electricity. Similar data collection is underway in other colleges so that an estimate of the university's footprint can be measured.

Faculty: Dr. Vijeta Pundir (Business Economics), Dr. Maneesha (Electronics), Dr. Amit Pundir (Electronics), Dr. Pratibha Rai (Business Economics),

Mentor: Dr. Alok Mukherjee
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Divya Negi	Electronics	6	Disha Kalia	Political Science
2	Tushar Tyagi	Electronics	7	Mohit Goel	Business Economics
3	Priyanka Mishra	Electronics	8	Daksh Puri	Business Economics
4	Rakesh Rai	Electronics	9	Aditya Kr. Gupta	Business Economics
5	Mridul	Electronics	10	Anshika Dhiman	Electronics

Maharaja Agrasen College

Project Title: Redefining Curriculum: Integrating ICT for Innovation Eco-System

Project Code: MAC-102



Students and faculty engaged in product development under Innovation Project MAC-102

Findings (4-5 lines): Under this research project, the students are engaged in the development of few science practical designs for use in real time situations by experimenting, investigating and analyzing the problems they face in regular laboratory sessions. The students were encouraged to think beyond the curriculum and find ways to improve the efficiency and accuracy of the lab experiments carried out in various science courses.

Various products developed during the project are:

1. **'Student e-kit'** comprising of **power supplies** and **pulsars** of moderate specifications, but are highly cost effective and good for practice.
2. Solar training kit
3. **Automation of Searles' Experiment, Maxwell's Needle, Bar Pendulum and Kater's Pendulum** using **Programmable Event Counter – cum – Timer Circuit**
4. **Weekly-n-Yearly Programmable Scheduler**
5. **Event Triggerable Time Interval Counter**
6. **'Magic Box for Schools'** designed to diffuse the sharp boundaries between the class and laboratory based on 'LIC', the Lab in Class room approach.

Faculty: Dr. Amit Pundir (Electronics), Dr. Maneesha (Electronics), Dr. Praveen Kant Pandey (Electronics), Dr. Vijeta Pundir (Business Economics),

Mentor: Dr. Sanjeev Singh, Institute of Informatics & Communication, Univ. of Delhi
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Students:

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1	Anirudh Rana	Electronics	6	Gopal Bhardawaj	Electronics
2	Nupur Gupta	Electronics	7	Rohit Mewar	Electronics
3	Aakash	Electronics	8	Vipul Lal	Business Economics
4	Prashant Bhartendu	Electronics	9	Eshan Gupta	Business Economics
5	Kashish Goswami	Electronics	10	Smirti Pandey	Electronics

Miranda House

Project Title: Inheriting Land, Endangering The Girl Child: Interrogating Land Productivity, Property Rights and Family Planning in Western Uttar Pradesh and Punjab

Project Code: MH-101



Student Researcher conducting interview at Gauripur village in Baghpat

Findings (4-5 lines): Our findings suggest that there is a difference in how the girl child and the boy child is treated in the family. The female offspring rarely inherits any part of the family property, be it land or a portion of the house where the family lives. Her only right to property is when she becomes a widow, where in many cases she is forced to give away her share of the property. The higher land productivity value in Western Uttar Pradesh has really not done anything to ensure care for the girl child in the family. Women also have very little say over the family planning issues. In Baghpat, a district that shows consistently low child sex ratios there is little dignity for the girl child. There are multiple cases of female foeticide and infanticide occurring in that region. In Bareilly district which show higher child sex ratios over time, there are fewer cases of female foeticide and infanticide. Here there is also evidence of women receiving land as property though mostly as widows. The property of the natal family if inherited is most certainly given back to the brothers due to the fear that to do otherwise would brand them as ‘bad’ women who would not receive any support from the natal family in any form throughout her life.

Faculty: Dr. Bashabi Gupta (Geography), Dr. Anindita Sarkar (Geography),
Dr. Mahuya Bandhopadhyaya (Sociology)

Mentor: Prof. Saraswati Raju
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Sushmita Neog	Geography	6	Dipanshi Rathore	Geography
2	Sweta Borthakur	Geography	7	Diksha	Geography
3	Ritu	Geography	8	Jayati Narain	Sociology
4	Jyostna Mishra	Sociology	9	Sakshi Sinsinwar	Sociology
5	Deeksha	B.A. Prog.	10	Indira	B.A. Prog.

Miranda House

Project Title: Computational Modelling of Phyto regulatory Profile of some Nanoparticles

Project Code: MH-102



Fig.1: *Polypleurum stylosum*, 26-day old seedlings (MS control).



Fig.2: *Polypleurum stylosum*, 26-day old seedlings at MS + 10^{-4} M ZnO (nanoparticles).



Fig.3: *Polypleurum stylosum*, 26-day old seedlings at MS + 10^{-6} M ZnO (nanoparticles).

Findings(4-5 lines): Effect of two nanoparticles, namely ZnO and SiO₂, at concentrations of 10^{-4} M, 10^{-5} M, 10^{-6} M and 10^{-7} M each were studied on the seed germination and seedling biology of *Vigna radiata* (typical dicot), *Sorghum bicolor* (a monocot) and *Polypleurum stylosum* (atypical dicot) under *in vitro* conditions. Our findings clearly depict **for the first time** that incorporation of nanoparticles in the culture medium considerably enhances growth and development of seedlings of all the species as compared to their controls. Therefore, the use of nanoparticles can be envisioned to increase the productivity of these plants.

Faculty: Dr. Sushma Moitra (Botany), Dr. Saloni Bahri (Botany), Dr. Smirti Sharma Bhatia (Chemistry), Dr. Anita Sehgal (Botany)

Mentor: Dr. Rakesh Kumar
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Students:

S.No.	Name	Department	S.No.	Name	Department
1	Tripti Sharma	Botany	6	Roopam	Life Science
2	Priya Pathak	Botany	7	Shivali Banarjee	Chemistry
3	Amrita Raj	Botany	8	Neelakshi	Chemistry
4	T. Changloi	Botany	9	Shamasree Ghosh	Chemistry
5	Richa Pant	Life Science	10	Jyoti	Chemistry

Miranda House

Project Title: Miles on the Yamuna, Team-A

Project Code: MH-103



Mile on the Yamuna: Local Solutions, Global Perspectives

Findings (4-5 lines): We explore the dynamics of these two sets of forces: the need to preserve past practices of land-holding and land-use, and the pressures and opportunities generated by a burgeoning Delhi, both on the village and on the river. We have discovered in Jagatpur, the village that we are analyzing, an amazingly complex set of riparian practices. There is a system of coparcenary land-holding, designed to mitigate the risk of an unpredictable river, as well as optimize equity in land use among the cultivating community. Social relations in the village have emerged to preserve this system of land-holding. We have also found a social distancing between the river and the village community brought about by urbanization. Our ultimate goal is to find sustainable solutions to keep the Yamuna clean.

Faculty: Dr. Reema Bhatia (Sociology), Dr.Meeta Kumar (Economics), Dr.Rakhi Parijat (Economics)

Mentor: Mr. Ravi Agarwal, Director, Toxic Links,
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Students:

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2	Priyanka Das	Sociology	7	Kirti Sharma	Geography
3	Priyakshi Pandey	Sociology	8	Rebati Sinam	Geography
4	Shunyo Dang	Sociology	9	Shreya Banarjee	Geography
5	Bhavyaa Sharma	Economics			

Miranda House

Project Title: Miles on the Yamuna, Team-B

Project Code: MH-104



Getting to know the Yamuna

Findings(4-5 lines): Yamuna is a highly polluted river with high conductivity, chloride ion concentration and salinity, low dissolved oxygen, relatively high turbidity and high coliform content. The study shows wide variations in water and soil quality at five marker points spanning the length of the river from *Palla Village* to *Majnu ka Tila*. Many factors contribute to the pollution such as release of untreated sewage from colonies unconnected to the sewerage system, certain local practices, industrial effluents (difficult to locate point source), agricultural chemicals, etc. Despite the pollution of the river there is still rich biodiversity, particularly in vegetation and bird species all along the river bank.

Faculty: Dr. Pratibha Jolly (Physics), Dr. Mallika Verma (Physics), Dr. Bani Roy (Chemistry), Dr. Janaki Subramnayan (Botany)

Mentor: Professor Mihir Deb, INSA Senior Scientist, Deptt. of Geology, DU, Delhi 7
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Students:

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2	Anisha Kalra	Physics	7	H Jaishree Subramanyan	Botany
3	Ritu Rani	Physics	8	Kavya Aggarwal	Botany
4	Pooja Baghel	Chemistry	9	Parnasha Banarjee	Botany
5	Sandhya Bhatia	Chemistry	10	Shruti Gupta	Zoology

Motilal Nehru College

Project Title: Mining in National Capital Region: A Socio-economic and Environmental Study

Project Code: MNC-101



Student Researchers Interviewing the Villagers in Mewat

Findings (4-5 lines): Our field investigations have revealed that mining in majority of the cases is being promoted in the name of growth and development, although they have huge implication on society and environment, specially at the local level. Mines although have created direct and indirect employment opportunities, but the mining projects rarely provide basic facilities like roads, schools and health clinics to remote areas. Our two major areas of study have been Mewat and Manjawali. Mewat is a Muslim dominated area and Manjawali a Hindu. In Mewat, people at least some voiced their concern about livelihood and the positive and negative impact of mining. But in Manjawali people were just negligent about it.

Faculty: Dr. Vipul Singh (History), Dr. Seema Vats (Physics), Dr.O P Gusai (Commerce)

Mentor: Dr. Sangit Ragi
Associate Professor, Maharaja Agarsen College, University of Delhi, Delhi

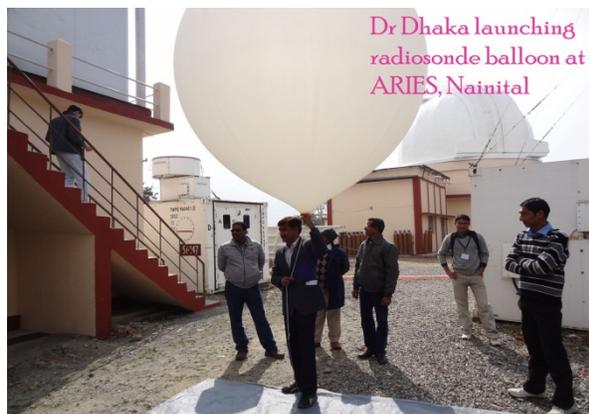
Students:

S.No.	Name	Department	S.No.	Name	Department
1	Anshu Rawat	History	6	Rakesh Negi	Physics
2	Prakash Dubey	History	7	Priyanka Shrivastva	Physics
3	M Kennedy Singh	History	8	Sunil Kr. Mishra	B.A. Prog.
4	Aanchal Chalana	B.Com Prog.	9	Mohd. Yaseer Ansari	History
5	Gourika	B.Com Hons.	10	Nitin Anand	History

Rajdhani College

Project Title: Study on the crucial changes in the Earth's atmospheric system during solar maxima phase using interdisciplinary approach

Project Code: RD-101



Findings (4-5 lines):

1. Investigated the temperature changes in the troposphere and stratosphere in coordination with the sun spot numbers (measure of sun activity)
2. We have identified the regions of both increasing and decreasing changes in temperature around the globe over the period of 33 years (1980-2012). Overall, an increase is found in temperature (1-2 K) in the troposphere while a decrease (1-2 K) is observed in the stratosphere.
3. Solar cycle seems to have a strong association with temperature in the stratosphere around 25-30 km altitude

Faculty: Dr. S K Dhaka (Physics & Electronics), Dr. Arun Chaudhary (Mathematics),
Dr. Amit Jain (Physics & Electronics)

Mentor: Dr. S. K. Dash
Professor and Head Centre for Atmospheric Sciences IIT Delhi,
Ph: +91 11-26591301, Fax: 26591386, Email: skdash@casiitd.ernet.in

Students:

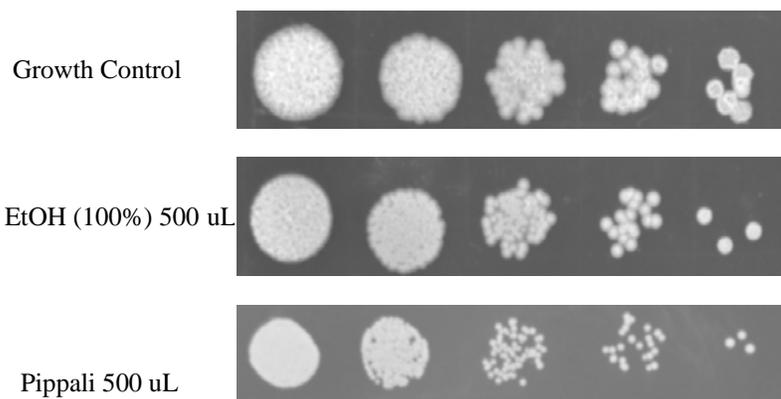
S.No.	Name	Department	S.No.	Name	Department
1	Shama Sharma	Physics	6	Ujjwal Sidhant	Electronics
2	Harendra Singh	Electronics	7	Sagar	Electronics
3	Sushil Kumar	Electronics	8	Dhvani Singhal	Electronics
4	Shivani Sharma	Maths	9	Devesh Barshila	Electronics
5	Parul Yadav	Electronics	10	Kunika Sharma	Electronics

Ramjas College

Project Title: *In vitro* effect of medicinal plant extracts against human fungal pathogen
Candida albicans

Project Code: RC-101

Results



Spot Assay Analysis

Findings (4-5 lines): In this project, the fruit of *Piper longum* or Pippali, the leaves of *Aloe vera* as well as roots of Ashwagandha- *Withania somnifera* have shown anti-fungicidal activity against *Candida albicans*. The above data supports our hypothesis that medicinal plants can indeed be employed as a rich source of antimicrobial agents and may form an attractive alternative to conventional drugs. Further, the students have been trained in the basic methods of microbial culture, preparation of plant extracts and drug susceptibility testing by three different methodologies, namely toxicological end point determination by MIC, spot assays and filter disc diffusion assay along with NMR analysis of the plant extracts.

Faculty: Dr. Hardeep Kaur (Zoology) (PI), Dr. R R Goyal (Chemistry), Dr. Renu Gupta (Zoology)

Mentor: Dr. Tulika Prasad
Assistant Professor, Advanced Instrumentation Research Facility, JNU.
Email: prasadtulika@mail.jnu.ac.in, prasadtulika@hotmail.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Nirmalendu Kuanr	Chemistry	6	Agneesh Barua	Zoology
2	Megha Balha	Chemistry	7	Diksha Dhawan	Chemistry
3	Garima Sharma	Life Science	8	Reena Yadav	Zoology
4	Bharti Arora	Zoology	9	Nidhi Chahal	Life Science
5	Rananmay Bharadwaj	Chemistry	10	Khushboo Sharma	Life Science

Ram Lal Anand College

Project Title: Deconstructing farmers' suicide, unraveling paradoxes: whispers from below

Project Code: RLA-101



Tracing the roots of a crisis

Findings (4-5 lines): While rural distress has been deepened by the policy mismatch and inability of the state to deliver on its schemes, the causal dynamics of the phenomenon of farmers committing suicide can be fundamentally located in the asymmetrical agrarian structures coupled with hostile market pressures and influences.

Faculty: Dr. N K Pandey (History), Dr. M S Verma (Commerce), Mr. S.C. Gupta (Economics)

Mentor: Mr. Bharat Dogra
Freelance Journalist, Author, Researcher, Activist.
Ph- 011-25255303, Email: me@bharatdogra.in

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Neel Parmar	History	6	Ritu Bhatt	B.Com prog.
2	Preeti Kumari	English	7	Abhishek Gahlyan	Geology
3	Abhishek Srivastava	B.Com Prog	8	Archit Nanda	English
4	Harman Preet Kaur	English	9	Richa Sharma	English
5	Jitendara Kumar Deo	B.A. Prog	10	Surya Soman	History

Ram Lal Anand College

Project Title: Delineation of Groundwater Potential and potable quality in and around South Campus (University of Delhi) ridge area

Project Code: RLA-102



Water resistivity survey is being done in the RLAC Playground. Date 21.06.2012

Findings (4-5 lines): The accumulation and movement of water in Quartzite hard rock terrain are governed by secondary porosity developed due to weathering, jointing and fracturing. Field observations have revealed that groundwater potential is very high in this area because of moderate thickness of soil and intense fracturing and joints in the exposed quartzite rocks. Physico-chemical quality of all water samples collected from this area met both BIS and WHO drinking water standards. However, few samples failed on account of their microbiological quality due to high coliform count. Based on these studies a model is being constructed to predict aquifer configuration and its recharge potential.

Faculty: Dr. Rakesh Kumar Gupta (Microbiology), Dr. Prabhas Pandey (Geology),
Dr. Vandana Gupta (Microbiology)

Mentor: Professor A M Bholra
Department of Geology, University of Delhi, Delhi – 110007
Ph: 09810489440, Email: ambhola52@gmail.com

Students:

S.No.	Name	Department	S.No.	Name	Department
1	Santanu Misra	Geology	6	Kush Kumar	Geology
2	Avrinder Singh	Geology	7	Ritu Rana	Microbiology
3	Ashutosh Venkatesh Prasad	Geology	8	Aditya Bajaj	Microbiology
4	Christy Tom	Geology	9	Rahul Sanwani	Microbiology
5	Abhinay Anand	Geology	10	Vaishali Uniyal	Microbiology