

**Report**  
**Inter College 2021**  
**SHORT TERM CERTIFICATE COURSE**  
**on**  
**Preparation & Application of Magnetic Nanoparticles and Hands-on  
Software Training**

This is hereby reported that a 30 hour long Inter College ‘**Short Term Certificate Course**’ on ‘**Preparation & Application of Magnetic Nanoparticles and Hands-on Software Training**’ was organized by Shyam Lal College, University of Delhi during 20<sup>th</sup> Sep – 24<sup>th</sup> Sep 2021 under the aegis of DBT Star College Scheme in collaboration with IQAC (**Annexure 1**). A total of 30 students participated from various colleges of Delhi University and Amity University. The participants were given hands-on training on the preparation of magnetic nanoparticles using potato extract and their application in the degradation of dye which was studied using UV-Vis Spectrophotometer. This exercise gave a unique flavour of material synthesis using both nanotechnology and green chemistry. In addition to this, students also learnt the handling of one of the widely used instruments called UV-Vis Spectrophotometer. The students were also given hands-on training on various scientific softwares including ChemDraw, Mathematica, Latex and Origin which are an integral component of scientific research and development. With the help of these softwares, the students can now be able to draw molecular structures and reaction schemes, plot and analyse scientific data obtained from various analytical instruments and can also do mathematical computations using programming language. Hence, it is believed that the training workshop would have unquestionably helped the students in the development of their technical skills and made them stand apart from the rest. At the last, all the participants were felicitated by giving a certificate of participation. To evaluate the success of the event, a Google Form was circulated amongst the participants, where an overwhelming response was observed. 96.8% of the participants found the workshop to be very useful and stated that the ideas and the concepts the faculty members presented were very clear to everyone and all of them would like to attend such events in the near future as well (**Annexure 2**). Special thanks to Prof. Rabi Narayan Kar (Principal) and Prof. Kusha Tiwari (Coordinator IQAC) for their support and guidance throughout the course. Glimpses of the course are attached herewith as **Annexure 3**.

## Annexure 1



**SLC** (University of Delhi)  
**SHYAM LAL COLLEGE**



Department of  
BioTechnology,  
Government  
of India

सत्यमेव जयते

*under the aegis of DBT Star College Scheme  
in collaboration with IQAC  
Organizes*

**INTER COLLEGE 2021**

**SHORT TERM CERTIFICATE COURSE**  
on Preparation & Application of Magnetic  
Nanoparticles and Hands-on Software Training  
(30 h duration course during 20<sup>th</sup> Sep – 24<sup>th</sup> Sep 2021)

DATE	TIME SLOT & SKILLS	
	10:00 AM-01:00 PM	01:15 PM- 04:15 PM
20 <sup>th</sup> Sep '21	Preparation of Magnetic Nanoparticles	
21 <sup>st</sup> Sep '21	Latex	ChemDraw
22 <sup>nd</sup> Sep '21	ChemDraw	Origin
23 <sup>rd</sup> Sep '21	Mathematica	Origin
24 <sup>th</sup> Sep '21	Application of Magnetic Nanoparticles	
Venue: Day 1 & 5: Chemistry Lab, SLC		
Venue: Day 2, 3 & 4: Computer Lab, SLC		



**Limited seats for 30 students only!**  
Please email your names to  
[ashugupta@shyamlal.du.ac.in](mailto:ashugupta@shyamlal.du.ac.in)



**Certificate will be provided**  
to each participant upon  
course completion

### ORGANIZING COMMITTEE

**Dr. Ashu Gupta** Overall Coordinator DBT,  
Department of Chemistry  
**Prof. Kusha Tiwari** Coordinator IQAC  
**Prof. Rabi Narayan Kar** Principal, SLC

### Teacher Coordinators

**Ms. Radhika Gupta, Dr. Yukti Monga, Dr. Ajay Pratap Singh,  
Mr. Rahul Tomar, Dr. Anuj Sharma**



**MAGNETIC  
NANOPARTICLES**



**ChemDraw**

**LAT<sub>E</sub>X**



**ORIGIN**  
Data Analysis and Graphing Software



**Wolfram  
Mathematica 8**



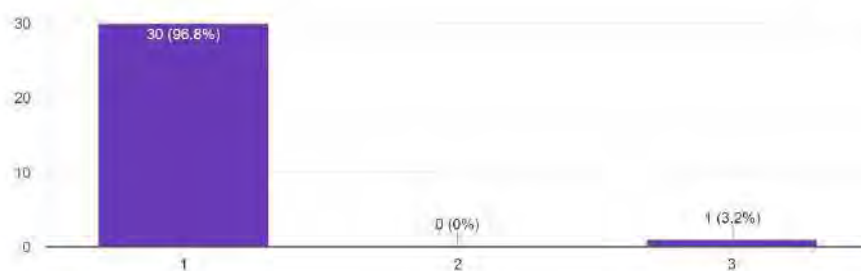
**WATER  
REMEDATION**

## Annexure 2

How useful did you find the workshop?



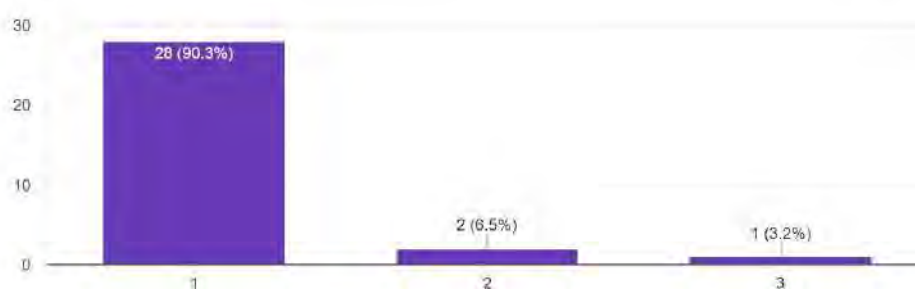
31 responses



How clear were the ideas and concepts we presented?



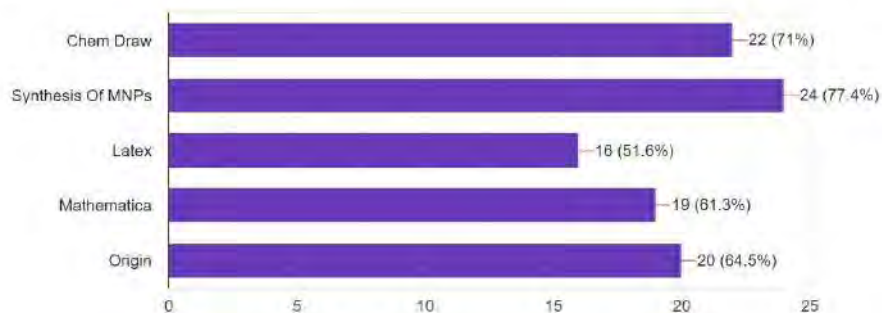
31 responses



Which activity did you enjoy the most? \*

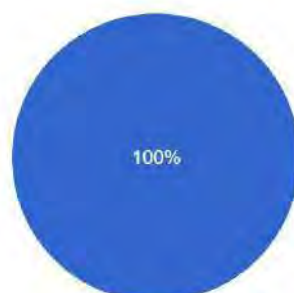


31 responses



Would you like to attend such workshops in the near future?

30 responses



● Yes  
● No  
● Maybe

## Your remarks regarding this workshop<sup>31</sup> responses

Good

The workshop was a helpful and a great opportunity for us students to have explored the realms of science and technology. A great initiative by Shyam Lal College.

Students need more workshops like this especially for chemistry based experiments as the hands-on approach is extremely useful for students

10/10

The workshop was very beneficial, got introduced to many softwares which are very useful for my further studies. Also, the preparation of MNPs included lab work which would help me in my further research. The workshop did sharpen my critical thinking in some areas and I'm glad I attended this workshop.

EXCELLENT

It was very interesting

This workshop was totally worthwhile. Had a great experience in these 4 days. Really learned so many things in such a short period of time & the credit goes to the faculty who was amazing and extremely helpful, taught each & everything with patience & enthusiasm. Looking for more workshop like this in future.

This Workshop has helped me to focus on writing in computers, using software and increased my confidence. Provided me with the valuable information and improve my skills so that I can move forward in my ambitions. And the best thing about this Workshop is "Teachers", I have learned so much in classes with teachers. They provide both a great of mix of listening, speaking and practical learning and an very safe, supportive learning environment.

This workshop is very useful for me because from it ,I learnt some useful softwares which will definitely reproductive for me in future.

This workshop very useful for me In this workshop i learn about Synthesis of MNPs And Very useful Softwares like ChemDraw,Origin etc

This workshop is very useful to understand concept of MNPs and How to synthesize it and I also learn about some very useful softwares like ChemDraw,Origin,mathmatica and latex.

Extremely satisfied. Thanks to all teachers

All the faculty were very good. Lectures were so interactive that i want to attend more workshops like this though i was not very willing to attend this one priorly.

Staff was very cooperative, Every concept was explained very clearly and effectively. I learned a lot from this workshop. Hope I get more chances in future for enhancement of my skills.

The workshop was very useful, got introduced to softwares which would help me in my further studies. The workshop also included lab work which did inprove my laboratory experience.

This course did sharpen my critical thinking. Thanks a lot for this course.

Thanks for the opportunity. Get to learn a lot of things which i have never gone through before. It was a very effective and brilliant workshop.

Very nice workshop wish to attend such workshop in future.

Excellent

Nice 😊

Such a wonderful experience and so much useful things for us

Teachers are very supportive and my overall experience was excellent.

It was a great experience to attend the workshop. This workshop was very useful.

It was really Useful and friendly one.

### Annexure 3

#### Lab Training: Synthesis of Magnetic Nanoparticles and Dye Degradation







GPS Map Camera



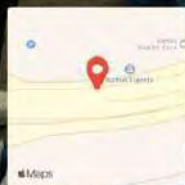
**New Delhi, DL, India**

Shyam Lal College Flyover, Naveen  
Shahdara, New Delhi, 110032, DL,  
India

Lat 28.673019°, Long 77.281784°  
09/24/2021 11:50 AM



GPS Map Camera



**New Delhi, DL, India**

Shyam Lal College Flyover, Naveen  
Shahdara, New Delhi, 110032, DL,  
India

Lat 28.673080°, Long 77.281570°  
09/24/2021 12:44 PM



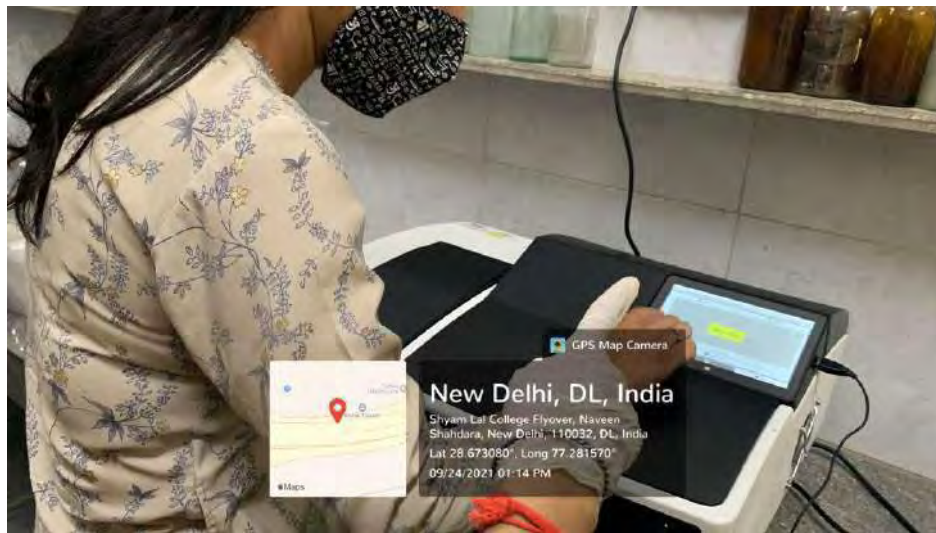
GPS Map Camera



**New Delhi, DL, India**

Hardari Lal Goyal Marg, Naveen  
Shahdara, New Delhi, 110032, DL,  
India

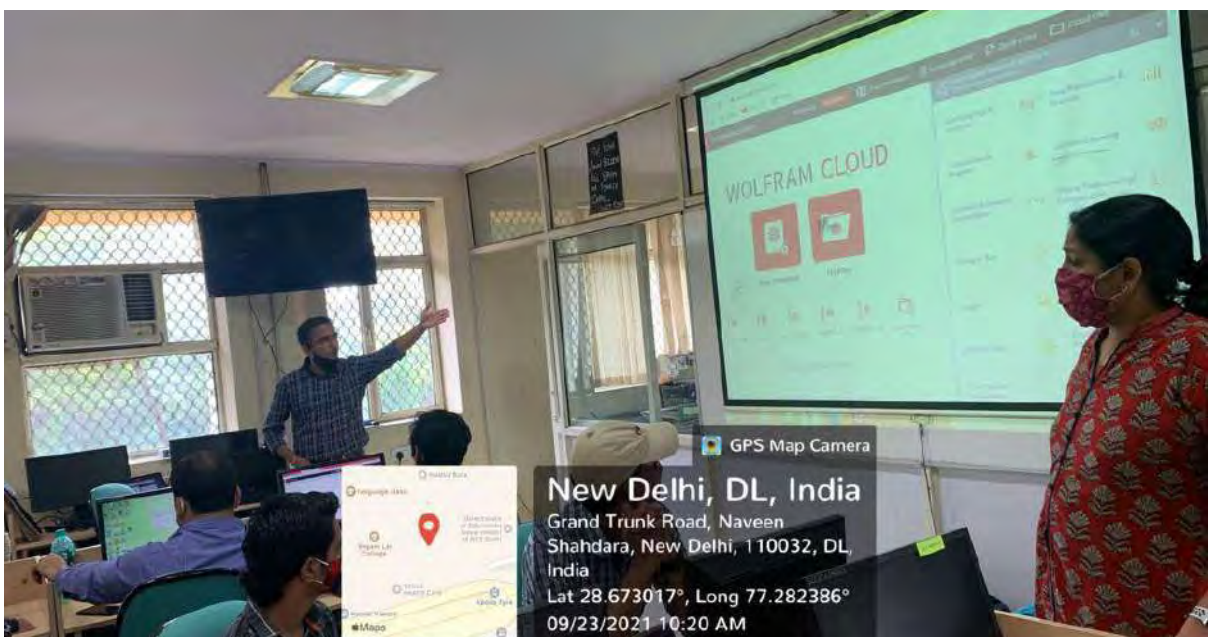
Lat 28.674172°, Long 77.282293°  
09/24/2021 11:53 AM





## Software Training: Latex, ChemDraw, Mathematica, Origin







## Group Photographs and Distribution of Certificates





## Feedback of Students Captured from the Social Media Platform



10:18

Yashvardhan Singh

Yashvardhan Singh is with Aayushi Jain and Kanhaiya Tiwari at Shyam Lal College, University of Delhi.  
Just now • Delhi, India

So I recently attended this short term course at Shyam Lal College, University of Delhi, which was in my opinion, one of the best classes I've ever attended. The college staff was very friendly and the snack box in between was cherry on top. Thank you everyone for this lovely experience. 😊



Write a comment...

Tap to tag friends

**By: Yashvardhan Singh, B.Sc. (H) Chem, 2<sup>nd</sup> Year, Hans Raj College, University of Delhi**



11:28 AM | 15.6KB/s

Kanhaiya Tiwari

Kanhaiya Tiwari added a new photo to the album: Activity — 😊 feeling grateful at Shyam Lal College, University of Delhi.  
22h • Delhi, India

Recently attended a 5-days long workshop programme at Shyam Lal College, Delhi university Organized under the aegis of Department of Biotechnology, Gov of India.

This small but useful workshop was really an enriching experience with practical knowledge of the Nanoparticles synthesis and some basic Softwares programmed to aid scientists, researchers as well as Students for writing Chemistry & Maths papers on computer. The faculties teaching us were very proficient & amicable which made this efficient workshop a real fun programme for us. So happy to be a part of this. Sharing a glimpse with you all.



Like Comment Share

Write a comment...

**By: Kanhaiya Tiwari, B.Sc. Physical Sciences (Electronics) 3<sup>rd</sup> Year, Ramjas College, University of Delhi**

Devanshi Gupta



Devanshi Gupta is at Shyam Lal College, University of Delhi.

Just now · Delhi ·

From 20th to 24th of September, under the careful supervision of Shyam Lal College, a Short Term Certificate Course on Preparation and Application of Magnetic NanoParticles and Software Training was successfully conducted.

The 30-hour course was indeed a very helpful tool for any student who wanted to broaden their spectrum of knowledge. With Helpful and loving teachers, to great resources supplied and of course the delicious lunch, the workshop course was indeed a success. Looking forward to attend such more programmes in the future. Kudos!



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By: Devanshi Gupta, B.Sc. (H) Chem, 2nd Year, Dyal Singh College, University of Delhi

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Aayushi Jain is at Shyam Lal College, University of Delhi.

1m · Delhi, India ·

Yesterday I Completed my Short Term Certificate Course on 'Preparation & Application Of Magnetic Nanoparticles And Hands-On Software Training' organised By Shyam Lal College, DU, during 20Sept2021 to 24Sept2021.

My experience was absolutely Amazing, I learned a lot from that course. Staff at Shyam Lal college was very cooperative. The Lab practical we performed was successful as we prepared perfect Nanoparticles in guidance of Teachers.

Also, the basics of many software are cleared. In just one week, I got a boost towards my program. Waiting for more opportunities like this. At last, the refreshment provided by College was Super tasty.)



Like Comment Share

By: Aayushi Jain, B.Sc. (H) Chem, 2nd Year, Hans Raj College, University of Delhi

12:36 [notification icons] [battery icon] LTE LTE+ [signal strength icon] 35%



**Lipika Sehgal** is with **Ashu Gupta** at **Shyam Lal College, University of Delhi.**

Sep 28 • Delhi, India • [location icon]

A short term 30h duration course organized by Shyam Lal College on "Preparation & Application of Magnetic Nanoparticles & Hands-on Software training" during 20th-24th Sep'21.

It was a wonderful experience being a part of this 5 day workshop. It really helped students to learn about the basics of softwares like ChemDraw, Orgin, Latex & Mathematica in just one week. Being a Chemistry student I know how important it is for us to have a hands-on practice on the experiments. We successfully synthesized perfect Magnetic NPs in the laboratory & learned how to work with instruments like UV-Vis Spectrophotometer under the guidance of teachers.

The... See More

[like icon] [heart icon] 75

8 Comments

[like icon] Like

[comment icon] Comment



**By: Lipika Sehgal, M.Sc. Chem, 2<sup>nd</sup> Year, Amity University, Noida**