

Assignment 1
 Study the given case and answer the assigned questions and submit it to your teacher at the end of the week.

Case Study: COVID-19
 The World Health Organization (WHO) has declared COVID-19 as a global health emergency. The disease is caused by the novel coronavirus SARS-CoV-2. The symptoms include fever, cough, and difficulty breathing. The disease is highly contagious and can spread from person to person through respiratory droplets. The disease is currently spreading rapidly across the world.

Questions:
 1. What is the cause of COVID-19?
 2. How is COVID-19 transmitted?
 3. What are the symptoms of COVID-19?
 4. How can COVID-19 be prevented?
 5. What are the treatments for COVID-19?

Assignment 2
 Study the given case and answer the assigned questions and submit it to your teacher at the end of the week.

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Questions:
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Assignment 3
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Assignment 4
 Study the given case and answer the assigned questions and submit it to your teacher at the end of the week.

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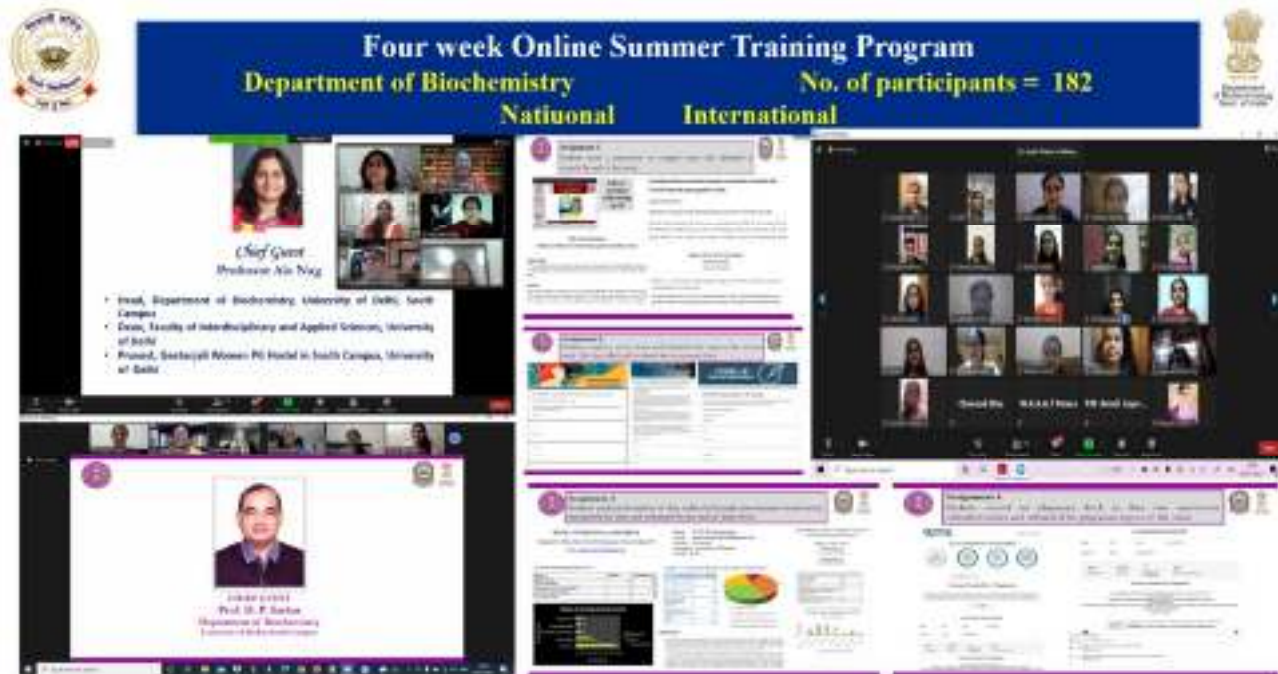
Questions:
 1. What is the cause of COVID-19?
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 5. What are the treatments for COVID-19?

Zoom Meeting

Recording

CHEF GUEST
Prof. D. P. Sarkar
 Department of Biochemistry
 University of Delhi, South Campus

10:49
 08-07-2021



Department of Biochemistry
Six Week Online Summer Training Program on
RESEARCH METHODOLOGY
June18 –July 30, 2020

Program Coordinators

Dr. Jayita Thakur, Dr. Renu Baweja, Dr. Sunita Singh, Dr. UshaYadav

Department of Biochemistry, Shivaji College organized an Inter-college six week Summer Training Program on RESEARCH METHODOLOGY through virtual platform. This summer training program is organized under the aegis of Department of Biotechnology, Government of India, Star College Scheme with the aim to familiarize undergraduate students with various aspects of research and research methodology.

Around 50 students from different colleges of University of Delhi and other universities or institution such as Amity University, Jamia Hamdard etc had actively participated in this program. The whole course was divided into four modules. The course modules of the program were designed to introduce the students about the basic concepts of aim, objectives, methodology and significance

of doing any kind of research. Through this program, students were also taught about the relevance of review of literature in writing any research proposal. They were also familiarized with the various components of research proposal. Further, students were also taught about the different types of research, sample design, sampling techniques, statistical analysis of the experimental data and the importance of the ethical clearance and plagiarism tools in publishing any data. After the completion of every module, students were assessed through assignments and at the end of course modules, they had also given a presentation on the chosen topic. Moreover, students were also encouraged to write a mini review on the proposed research plan.

Further, to enhance the knowledge of the participants and to provide them a platform to interact with the experts in the field of research, three webinars were also organized during this Summer Training Program where following speakers delivered their talk and interacted with the students and faculty members:

Professor Yogendra Singh, Department of Zoology, University of Delhi

Dr. Anita Aggarwal, Scientist E, DST, MoS&T, Government of India

Dr. Manish Kumar, Department of Biophysics, University of Delhi

The Valedictory session of the program was held on July 30, 2020. The chief guest of the session was Professor Alo Nag, Head, Department of Biochemistry, University of Delhi; who had motivated our participants and encouraged them to pursue higher studies in the field of science

Summer Training Program under the Star College Scheme
Microbiological techniques with special refernece to bacteria
20th June-17th July, 2019

Summer Training Supervisors
Dr. Renu Baweja and Dr. Usha Yadav

Participants of Summer Training Program 2019
Ankita Mehrol, Chetna, Juhi Bhan (Sem.III, B.Sc. (H) Biochemistry)
Utsav Kapoor, Deepika Bhola (Sem.I, B.Sc. (H) Biochemistry)
Ajay Maurya, Meenakshi Malik, Lucky Sehrawat (Sem III, B. Sc.(H) Zoology)

A summer training program titled “**Microbiological techniques with special reference to bacteria**” was organized in the Department of Biochemistry, Shivaji College from **20th June** **17th July, 2019**, under the Star College Scheme, DBT, Govt. of India.

During this training program students were familiarized with the basic concepts of microbiology which included chemical and physical methods of sterilization, culture transferring & maintenance and various types of staining.

Students gained hands on training in media preparation for bacterial growth, bacterial culture transfer techniques, *E. coli* growth curve, effect of ultra-violet light and chemical agents on bacterial growth. Students also learned and performed various bacterial staining methods such as acid fast staining, gram staining and negative staining to study the morphology and different characteristics of bacteria

Students were also taken for an educational trip to University of Delhi South Campus (UDSC) where they also attended a talk by Dr. Malathi Lakshmikumaran on “Inventions and Intellectual Property Protection: India and Abroad”, held in the Department of Biochemistry, UDSC.



Students working in the Lab, Department of Biochemistry, Shivaji College



Students along with their supervisors

Summer Training Program under the Star College Scheme

Maintenance and culturing of *Drosophila melanogaster* to carry out experimentation based on food preference and its effect on their life cycle 7th June - 19th July 2019

Summer Training Program Supervisors

Dr. Jayita Thakur, Dr. Sunita Singh

Participants of Summer Training Program 2019

Vinayak Joshi, Pallavi Dutta, Ritika Kukreja, Ronit, Anushka, Simran (Sem. I, B.Sc. (H) Biochemistry)

Riya (Sem III, B. Sc. Life Sciences)

A summer training program titled “**Maintenance and culturing of *Drosophila melanogaster* to carry out experimentation based on food preference and its effect on their life cycle**” was organized in the Department of Biochemistry, Shivaji College from **7th June - 19th July 2019**, under the Star College Scheme, DBT, Govt. of India.

During this training, students were given hands-on training in maintaining and culturing of *Drosophila melanogaster*. They learnt the methodology of drosophila food preparation and the role of the various reagents that were added. The students observed the various stages of the life cycle of *drosophila* under the stereo microscope and learnt differentiate them on the basis of gender and stage of development. They observed the effect of various food ingredients to the life cycle of the model system. They also explored the fruit preference and preferred sugar concentration of *Drosophila melanogaster* and investigated if there is a gender based preference. They also learnt to do sequence analysis using tools like BLAST, and compared homologous genes of humans and drosophila. The students were introduced to various reputed journals and allotted separate study sessions to study interesting scientific articles introduce them to scientific literature and inspire them to plan their own experiments. They were taken for an educational trip to Neurobiology and Genetic Development Lab, University of Delhi South Campus (UDSC) and Botanical Garden of the Indian Republic, (BGIR). They also attended a talk by Dr. Malathi

Lakshmikumaran on “Inventions and Intellectual Property Protection: India and Abroad”, held in the Department of Biochemistry, UDSC.



Students working in the Lab, Department of Biochemistry, Shivaji College



Educational trip to the Department of Neurobiology and Genetic Development, UDSC



Educational trip to the Botanical Garden of the Indian Republic, (BGIR)

Department of Botany
Four Week Online Summer Training Program on
Tools and Techniques In Plant Sciences: Morphology To Metabolome
June 21-July 19, 2021

Approximately a month long summer training programme was organised by Department of Botany, Shivaji College, University of Delhi under the aegis of DBT Star College Scheme from June 21 to July 19, 2021 on the topic, “Tools and Techniques in Plant Sciences: Morphology to Metabolome”. With social distancing still in place, the programme was conducted virtually via Zoom Platform. It was a National level programme open for universities all across India.

Overall 280+ students participated in the training from different states of the country.

The main motive of the internship was to introduce participants to existing tools and techniques used in plant sciences like microscopy, herbarium techniques, wood sciences, HPLC, GLC, metabolic engineering etc. Additionally, the training gave insights in the related fields of biology like biostatistics, bioinformatics and forensic sciences.

The inaugural function was held on June 21, 2021 at 11:30 AM. The event was graced by Prof. Shiv Kumar Sahdev (Principal, Shivaji College, University of Delhi), Dr. Darshan Malik (Coordinator, DBT Star College Scheme, Shivaji College), Dr. Anuradha Mal (Organising Secretary), Dr. Pratima Rani Sardar (Programme Coordinator). The teaching faculty of this internship included Dr. Anuradha Mal, Dr. Anita Kapur, Dr. Vijay Kumar, Dr. Pratima Rani Sardar, Dr. Prabhavati, Dr. Smita Tripathi, Dr. Kiran Bamel, Dr. Misha Yadav, Dr. Seema Talwar, Dr. Nupur Mondal, Dr. Divya Mohanty, Dr. Anurag Maurya, Dr. Devender Singh Meena from Department of Botany, Shivaji College along with invited speakers from external institutes that is Dr V. Vishnuprasad (Assistant Professor of Botany, Mumbai), Mr. Arjun Adit, (Research Scholar, Dept. of Botany, University of Delhi), Ms. Shanika Bafna (M. Sc. Forensic Science, NICFS; Protective Intelligence Analyst for an Israel Based Company), Dr. Vineet Kumar Singh (Assistant Professor of Botany, Acharya Narendra Dev College, University of Delhi), Ms. Banisha Phukela (Research Scholar, Dept. of Botany, University of Delhi), Ms. Vandna Singh (Research Scholar, School of Environmental Sciences, Jawaharlal Nehru University). The sessions were conducted 5 days a week i.e from Monday to Friday at 2 PM as per schedule. This included a Q & A session every day at the end of the session where students cleared their doubts on a one on one basis with the speaker. Apart from this a 45 minutes MCQs based test was conducted every Saturday at 4 PM to mark the progress of participants. The valedictory session was held on July 19, 2021 which marked the end of the summer training programme.

No. of beneficiaries: 315





DEPARTMENT OF BOTANY
SHIVAJI COLLEGE
 UNIVERSITY OF DELHI
 NAAC ACCREDITED GRADE 'B'

UNDER THE AEGIS OF 100 STAR COLLEGE SCHEME
 (Regular)

**"TOOLS AND TECHNIQUES IN PLANT SCIENCES :
 MORPHOLOGY TO METABOLOMICS"**

Online Summer Training Internship
 (June 21 - July 19, 2021)
 (For Undergraduate Students)

For Registration, click on the link below
 or scan the QR code
<http://forms.gle/pamsh22aYfu2ZXB9>


Online platform:
 Google Meet / Zoom / Meeting Application

Last date of registration
 June 17, 2021 by 23:59 hours

*Students enrolled and will be given "First Come First Serve" basis.
 *Those who participated in Summer Training Internship organized by Department of Botany in 2020
 shall not be entertained.

Coordinator Dr. Parvinder Malik Dr. Pooja Sharma	Organizing Secretary Dr. Anamika Mehta Dr. Shikha Sharma	Program Coordinator Dr. Parvinder Malik Dr. Pooja Sharma	Chair Prof. Dr. Kumar Anand Dr. Anamika Mehta
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Department of Botany
Four Week Online Summer Training Program on
Tools and Techniques in Plant Sciences: Morphology to Metabolome
July 6 to 31, 2020

With the support of DBT, even current times were turned into an opportunity. The Department of Botany, Shivaji College, University of Delhi, successfully organized an Online Summer Training Internship from July 6 to 31, 2020. The Program Coordinator, Dr. Pratima Rani Sardar and Organizing Secretary, Dr. Anuradha Mal along with other Resource Persons conducted this Summer Internship for four weeks. The Principal, Shivaji College, welcome all the dignitaries, faculties, students and participants during the Inauguration of this training program.

The training modules had been designed to be taught online via presentations and videos. We received an enthusiastic response with over 600 registrations from **undergraduates, graduates and those pursuing Ph.D. across India and abroad** and had admitted 150 students. The objective of the programme is to give an overview to students of the state of art techniques that the scientific community uses to study plants, entitled “**Tools and Techniques in Plant Sciences: Morphology to Metabolome**”. The program ensured better understanding of the plant world, digital herbarium, staining along with it types and applications of various microscopes, genome organization and its isolation, bioinformatics, metabolome and related techniques like HPLC and GC to study secondary metabolites, etc. It encompassed journey from classical to contemporary botany, providing exposure to studying plants at macroscopic and microscopic level to genomic analysis in silico and techniques employed to study interactions between molecules. Lectures were conducted daily by the faculty members on Zoom Meeting App for two hours, including doubt sessions. Mr. Sandeep Kaushik, from ICGEB, was also invited as a Guest Faculty, who delivered his lecture on the topic “Studying Metabolites and the Applications of Metabolomics”. Participants submitted a study report on July 31, 2020 and a quiz was also conducted to evaluate them.

No. of beneficiaries: 162

DEPARTMENT OF BOTANY
SHIVAJI COLLEGE
UNIVERSITY OF DELHI
under the aegis of
DBT Star College Scheme
organizer

**"Tools and Techniques in Plant Sciences:
Morphology to Metabolome"**
Online Summer Training Internship
(July 6 - July 31, 2020)
(For Undergraduate/Postgraduate Students)

For registration:
Scan the QR code

Link:
<https://home.sgc.edu.in/2020/07/06/2020/>

Last date to register:
June 19, 2020 by 23:59 hours

Virtual meeting will be held on:
Google Meet/Zoom

Organizing Secretary:
Dr. Anuradha Mal

Program Coordinator:
Dr. Pratima Rani Sardar

Faculty:
Dr. Sandeep Kaushik



Department of Botany
Four Week Online Summer Training Program on
Microscopy and Herbarium Techniques
June 21 to July 19, 2019

A 4-week long summer training program on “Microscopy and Herbarium Techniques” from June 21 to July 19, 2019.



A Summer Training Programme was organized by Department of Botany, Shivaji College under DBT Star College Scheme. The theme of the programme was “Microscopy and Herbarium Techniques”, which was scheduled from June 21, 2019 to July 19, 2019. The summer training programme saw a wide range of participation from students of Bachelors’ as well as Masters’ degree of University of Delhi.

The programme started with an introductory lecture followed by details of compound, fluorescence, confocal, differential interference contrast, scanning electron and transmission electron microscopes. Students learnt the principle, working, applications, advantages and disadvantages of all the microscopes in the training sessions. In the initial two weeks, students got hands on training and proper knowledge of how to handle the simplest to most advanced microscopes for the purpose of studying biological tissues. They also learnt how to prepare and fix sample for microscopy before learning about different types of stains. A very positive response was received from students when they were successful in preparing double stained slides. To give an insight into the depths of microscopic world, two charismatic speakers were invited, Dr. Vineet Singh and Dr. Yash Mangla, Assistant Professors, Department of Botany, Acharya Narendra Dev College (ANDC). The training to microscopy ended with its applications, where epidermis, different types of stomata, trichomes, placentation and pollen-pistil interactions were discussed. Two very knowledge providing visits were conducted to University of Delhi, North and South Campus to show students Scanning and Transmission Electron microscopes. In these visits they also had a first-hand training on how to prepare the samples for electron microscopy leading to successful completion of training of microscopes.

In the next two weeks, the subject of training was herbarium as it is the most crucial answer to plant systematics and evolution. During the training, students got to learn how to identify a plant, their selection and collection from various environments. The instruments used during the process of procuring and preparing herbarium was taught in details along with the advanced techniques like digital herbarium. The young brains were given the idea of how herbarium is prepared, how samples are preserved and pressed so that they can be used in future for various studies. It was a matter of immense pride that, Prof. Chirashree Ghosh, Professor, Department of Environmental Studies, University of Delhi, could be present in one of the sessions to give an insight of herbarium and its applications. Dr. Amber Srivastav, BSI was also invited for providing information to students regarding herbarium making. The students went for field exploration tour to Kamla Nehru Ridge, to get a first-hand experience of collecting and preparing herbarium.

Successful valedictory and encouraging feedbacks gave a meaningful end to the month-long summer training programme.

No. of beneficiaries: 19

 <p style="text-align: center;">SHIVAJI COLLEGE NAAC Accredited 'A' Grade (University of Delhi) Department of Botany (Under DBT Star College Scheme) Organizes</p> <p style="text-align: center;">SUMMER TRAINING PROGRAMME ON MICROSCOPY AND HERBARIUM TECHNIQUES</p> <p style="text-align: center;">June 21- July 19, 2019</p> 	<p style="text-align: center;">Organizing Committee</p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">Principal</td> <td style="text-align: center;">Co-ordinator</td> </tr> <tr> <td style="text-align: center;">Dr. Shashi Nigam</td> <td style="text-align: center;">Dr. Darshan Malik</td> </tr> <tr> <td style="text-align: center;">Courseur</td> <td style="text-align: center;">Co-courseur</td> </tr> <tr> <td style="text-align: center;">Dr. Anuradha Mal</td> <td style="text-align: center;">Dr. Pratima Rani Sardar</td> </tr> <tr> <td colspan="2" style="text-align: center;">Resource Persons</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Anuradha Mal</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Anra Kapur</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Pratima Rani Sardar</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Vijay Kumar</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Prabhavathi</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Smita Tripathi</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Kiran Boudal</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Mitika Yadav</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Sonam Talwar</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Divya Mohanty</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Anurag Maniya</td> </tr> <tr> <td colspan="2" style="text-align: center;">Dr. Devender Singh Meena</td> </tr> </table>	Principal	Co-ordinator	Dr. Shashi Nigam	Dr. Darshan Malik	Courseur	Co-courseur	Dr. Anuradha Mal	Dr. Pratima Rani Sardar	Resource Persons		Dr. Anuradha Mal		Dr. Anra Kapur		Dr. Pratima Rani Sardar		Dr. Vijay Kumar		Dr. Prabhavathi		Dr. Smita Tripathi		Dr. Kiran Boudal		Dr. Mitika Yadav		Dr. Sonam Talwar		Dr. Divya Mohanty		Dr. Anurag Maniya		Dr. Devender Singh Meena	
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Students visiting herbaria at Department of Botany, University of Delhi.



Students at the herbal garden, Shivaji College, University of Delhi.



Students visiting CIF at Department of Botany, University of Delhi.



Students visiting Confocal Microscopy facility at Department of Genetics, University of Delhi, South campus.



Report submitted by students

Department of Chemistry

Summer Training on “Distillation, Solvent Extraction and Column Chromatography”

No. of Beneficiaries: 44

In the intra-college summer training spanning four weeks (June 20-July 17, 2019), around 44 students of B.Sc (H) Chemistry, Zoology, Biochemistry, B.Sc (P) Life Sciences and B.Sc (P) Physical Sciences with Chemistry participated. Students learnt some of the analytical techniques like distillation, solvent extraction and column chromatography and performed short exercises using these techniques and submitted reports at the end of training.



Online summer training program on “Virtual World of Chemistry” from 1st-28th July, 2020

No. of Beneficiaries: 130

Due to the ongoing Covid-19 pandemic, the Department of Chemistry, Shivaji college under the aegis of DBT sponsored star college scheme organized four week online summer training program on “Virtual World of Chemistry” from 1st-28th July, 2020. The aim of this virtual training was to acquaint the students with the free and online tools and softwares of Chemistry. All the sessions were taken on Zoom platform. The program was inaugurated on 01.07.2020 at 10.00 a.m. by Dr. Shiv Kumar Sahdev, Principal, Shivaji College. Over 130 participants were present from different science courses of various colleges/institutes/universities.

Hands-on training was given to the participants on various tools which includes virtual lab i.e. praxilab, MS Excel for graph plotting, MS Word, Plagiarism checker tools, Research Collaboratory for Structural Bioinformatics (RCSB) Protein Data Bank (PDB), softwares like ChemDraw, Diamond for crystal structures, Origin and molecular modelling softwares, MolView and Avogadro.

The screenshot displays a chemistry software window with a menu bar (MyView, Tools, Model, Process, Grid) and a toolbar. On the left, the chemical structure of caffeine is shown with atom labels: C, H, N, O, P, S, F, Cl, Br. On the right, a ball-and-stick model of the same molecule is shown. Below the main window, there are four video thumbnails: a man in a red shirt, a woman with a nameplate for 'Department of Chemistry Shree College', and two empty slots with user icons labeled 'nashid kumar' and 'sathya pandey'.

This collage consists of several images. The top-left image shows a student looking at a laptop screen. The top-right image shows a student in a white cap pointing at a laptop screen. The bottom-left image is a presentation slide titled '4. Trigonometry' with sub-sections 'Trigonometric Functions' and 'Trigonometric Identities'. It includes diagrams of a right-angled triangle and a ladder leaning against a wall. The bottom-right image shows a student sitting at a desk with a computer. On the right side of the collage, there is a vertical strip of video thumbnails from a meeting, including the same man in the red shirt and woman from the first image.

Online summer training program on “Virtual World of Chemistry 2.0” from 15th June-12th July, 2021

No. of Beneficiaries: 250

The Department of Chemistry, Shivaji college under the aegis of DBT star college scheme organized four weeks online summer training program on “Virtual World of Chemistry 2.0” from 15th June- 12th July, 2021. The program was inaugurated on Zoom platform on 15th June 2020 at 10.00 a.m. Over 250 participants were present including all the faculty members of Department of chemistry, Shivaji College, and students from different science courses of different colleges in India. Subsequent sessions after the inauguration were featured on Zoom platform only. Participants were divided into two groups, *i.e.* Group A & Group B to make teaching learning process more efficacious. Dr. Manjula Singh, Dr. Neena Khanna, Dr. Bhaskar Mohan Kandpal and Dr. N.G Giri were the mentors; Mr. Deepesh Singh and Dr. Pooja Saluja were the Resource persons for the sessions of the first week of the training; two learning sessions and one doubt session for each group. Group A had their learning session on 15 & 16th June; Group B had their learning session on 17 & 18th June, followed by one common doubt session for both Group A and Group B on 19th June 2021. The sessions of the first week were based upon introducing virtual lab *i.e.* praxilab, labsters and Chem Draw software to students.

On 22nd July 2021, second week of the training started with Inorganic Chemistry session. Inorganic sessions were hosted by Dr. Pallavi Agarwal and Dr. Priyanka Kumari on “Diamond software for X-ray crystallography” and “Plotting of graph via Excel and Origin software. Topics described here briefly. Mentors of Inorganic session were Mr. Mahendra Kumar Meena and Dr. Rahul Singhal.

In the third week of the training, the participants were taught how to use Molecular Modeling softwares, *viz.*, MolView and Avogadro by Dr. Richa Arora. The mentors for the thrd week were Dr. Anil Krishan Aggarwal and Dr. Vandana Katoch. Two core sessions for each group and one common doubt session for both groups were conducted on Zoom platform. After every session, a fun quiz on Mentimeter was conducted. The training of the third week ended with a short quiz on the softwares learned.

The fourth week of online summer training was dedicated for the final report writing and final report submission of the participants. The mentors of this week were: Dr. P. K. Sahu and Dr. Rajni Kanojia and the resource persons were: Dr. Shilpa Jain and Mr. Narinder Kumar. The training includes sessions on Plagiarism and hands-on sessions on MS Word and MS Excel.

The training concluded on 12th July, 2021 with a Valedictory session at 10:00 AM on Zoom platform, which witnessed a positive and fruitful interactions between the participants and the resource persons and mentors. The participants expressed their gratitude for such a knowledgeable and fruitful training.



SHIVAJI COLLEGE

NAAC ACCREDITED GRADE 'A'



DEPARTMENT OF CHEMISTRY

under the aegis of DBT sponsored Star College Scheme

Organizes

Online Summer Training on

Virtual World of Chemistry 2.0



15th June – 12th July, 2021

Last date of registration: 10-06-2021, 5 p.m.

Link for registration:

<https://docs.google.com/forms/d/1ursBDV7yuiUq5Zg7lecjUpDPtoXFjmJbfmQzsWoZKI/edit>

Virtual training will be held on: Zoom

Under-graduate and post-graduate science students can apply.

No Registration Fee.

E-Certificate to all the participants on completion of training.

Participants must have a good internet connection and a laptop/PC.

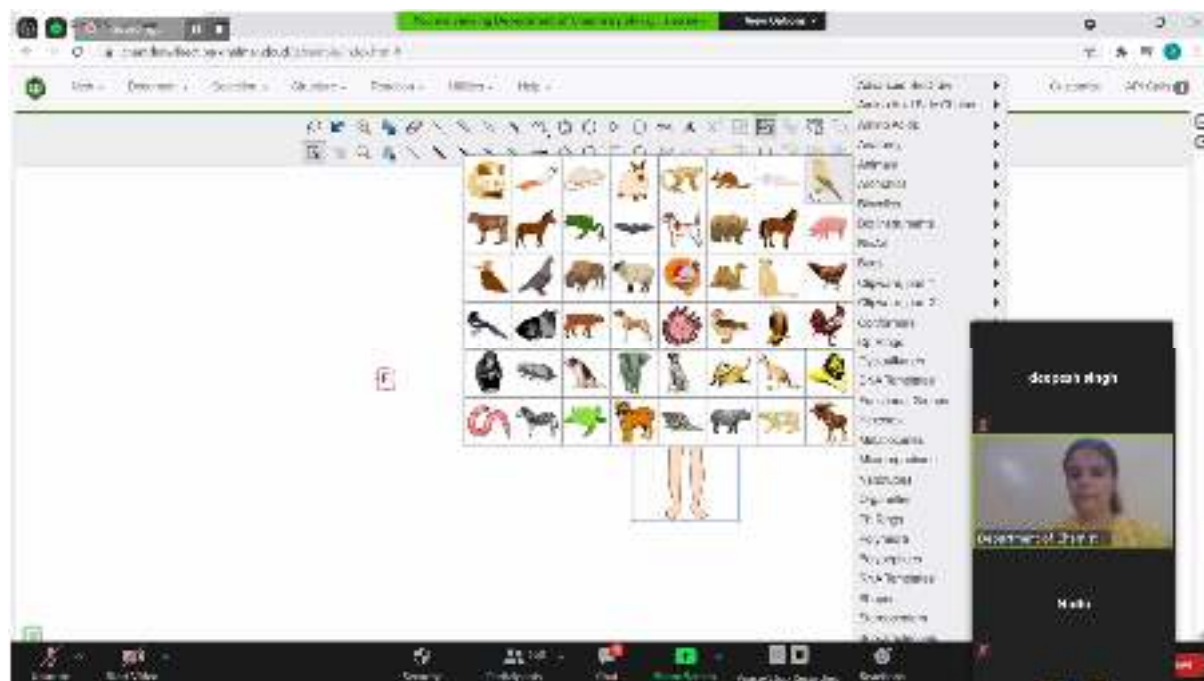
Convenor
Dr. P. K. Sahu

Co-Convenor
Dr. Richa Arora

Coordinator
Dr. Darshan Malik

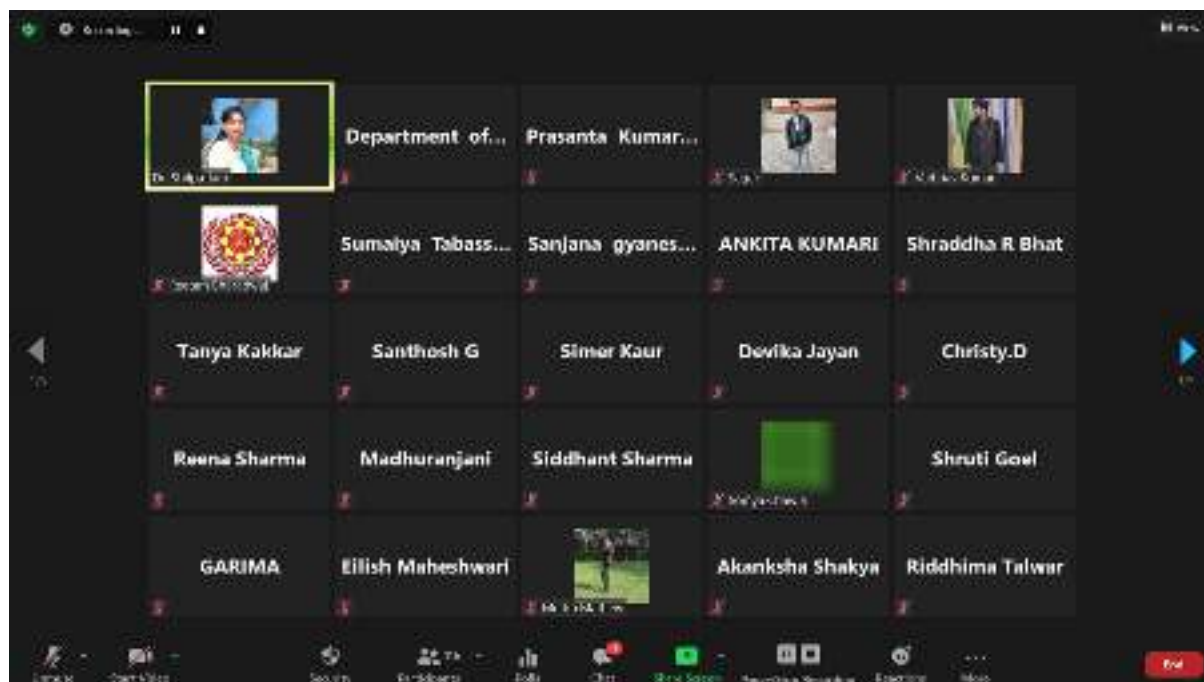
Principal
Prof. Shiv Kumar Sahdev

For any query, drop in a mail at starcollegechemshc@gmail.com



The image shows a Windows desktop environment. The main window is a graph titled "Absorbance As a Function of Wavelength". The y-axis is labeled "Absorbance" and ranges from 0.00 to 0.20. The x-axis is labeled "Wavelength (nm)" and ranges from 300 to 600. The graph shows a bell-shaped curve peaking at approximately 450 nm with an absorbance of about 0.18. A red box highlights the peak of the curve. To the right of the graph is a video call window showing a woman's face. The Windows taskbar is visible at the bottom, showing icons for Start, Task View, Edge, File Explorer, and other applications.

The image shows a chemistry software interface. The main window displays a 3D ball-and-stick model of a molecule, likely water (H2O), with blue spheres representing hydrogen atoms and a red sphere representing an oxygen atom. The interface includes a menu bar at the top with options like File, View, Edit, Select, Display, Development, Settings, and Help. On the left side, there are panels for "Display Tools" and "Display Settings". The "Display Tools" panel has checkboxes for various display options, and the "Display Settings" panel has sliders for "Color Depth" and "Color of Molecules". A video call window is visible in the top right corner, showing a woman's face. The Windows taskbar is visible at the bottom.



Summer Training Program under DBT Star College Scheme : Zoology Department

Four week Summer Training Program, “ Disease & Diagnostics” organised by Department of Zoology, Shivaji College, University of Delhi under DBT Star College Scheme from 17 June -12 July, 2019.





SHIVAJI COLLEGE

NAAC ACCREDITED GRADE "A"
(UNIVERSITY OF DELHI)



DEPARTMENT OF ZOOLOGY
(UNDER THE AEGIS OF DBT STAR COLLEGE SCHEME)
Organizes

“COVID-19 : Epidemiology and Impacts” ONLINE SUMMER TRAINING INTERNSHIP (15th June – 26th July, 2020) (For Undergraduate Students)



For registration :
Scan the QR code



Or on the link: https://docs.google.com/forms/d/e/1FAIpQLSfxyQoeu4hDG_dO9Nm-Oyt-lx22QMaJLiuiPkSAz0GL0wU7CQ/viewform?usp=sf_link

Last Date: 14th June 2020 (12 :00 pm)

Convener
Dr. Deepika Yadav
Co-Convener
Ms. Nimita Kant

Coordinator
Dr. Darshan Malik

Virtual training will be held
on: Google Meet/ Zoom

Patron
Dr. Shiv Kumar Sahdev
Principal (Acting)

A six-week Online Summer Training Internship entitled “COVID-19: Epidemiology & Impacts” was conducted by the Department of Zoology, Shivaji College under the aegis of DBT Star College Scheme from 15th June -25th July, 2020. The topic was chosen to impart knowledge about the grave pandemic that has enveloped the globe in an unprecedented situation today. In-depth comprehensive teaching modules about various aspects of COVID-19 were taught with hands-on activities that highlighted the following:

- Biology of COVID-19
- Public Health & Epidemiological studies with respect to COVID-19 ☑
- Laboratory diagnosis of infections caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
- Reverse Vaccinology : a relevant technique for vaccine generation in the post- pandemic era
- Impact of COVID-19 on wildlife- its study and scope ☑
- COVID-19 & Environment

There were more than 180 participants from all over the country from various Universities such as Aligarh Muslim University, Govt. P. G College for Women, Udai pratap Autonomous college Varanasi, Indira Gandhi National Open University (IGNOU) and many Delhi University

Colleges such as Sri Venkateswara College, Ramjas College, Deen Dyal Upadhyaya College, Gargi, Kalindi, Rajdhani, Acharya Narendra Dev College, Zakir Husain Delhi College, Bhaskaracharya College of Applied Sciences and Daulat Ram College. Total 107 participants successfully completed the 6 weeks long rigorous training. The feedback obtained from the participants was overwhelming and we hope to conduct many such events in the future.



The screenshot shows a Zoom meeting interface. At the top, there are video thumbnails for participants and a red 'S' icon. Below this is a dashboard with several components:

- Left Panel:** A navigation menu with options like 'Home', 'Meetings', 'Calendar', 'Profile', 'Settings', and 'Help'.
- Center Panel:** A dashboard titled 'ONE VUE' containing two bar charts and a table.

Category	USA	IN	Other
USA	~4500	~3000	~1500
IN	~3500	~2500	~1000
Other	~2500	~1500	~500
- Right Panel:** A chat window with messages from participants. One message reads: "It is a bit weird, give me some idea as to how the research is going on the energy? How is it different from other industries?"

This screenshot shows a Zoom meeting with a presentation slide and a participant list. The slide content is as follows:

NEWER BUSES ARE BEING TAKE UP BY NEW IEP

- Transport solution is coming with a new bus stop service
- Fully digital board ticket and fare system is expected to be implemented
- System Based approach to develop a bus system that is user centric

The slide features a flowchart on the left with four main categories:

- 1. Digital ticketing
- 2. System based
- 3. Transport solution
- 4. Transport system

 Each category has arrows pointing to a central point, which then branches out into multiple smaller arrows pointing to a vertical list of sub-topics on the right:

- Digital ticketing
- System based
- Transport solution
- Transport system
- Digital ticketing
- System based
- Transport solution
- Transport system
- Digital ticketing
- System based
- Transport solution
- Transport system
- Digital ticketing
- System based
- Transport solution
- Transport system

On the right side of the Zoom window, a 'Participants' list is visible, showing names such as 'Dr. Deepika...' and 'Dr. Anand...' with their respective status icons.

Two-week online Summer Training Programme, “Current Diagnostic & Therapeutic Modalities for COVID-19” conducted by the Department of Zoology from 28th June 2021- 10th July 2021

SHIVAJI COLLEGE
NAAC ACCREDITED GRADE "A"
(UNIVERSITY OF DELHI)

DEPARTMENT OF ZOOLOGY
(UNDER THE AEGIS OF DST STAR COLLEGE SCHEME)
Organizer

“Current Diagnostic & Therapeutic Modalities For COVID-19”
ONLINE SUMMER TRAINING INTERNSHIP
(28th June – 10th July, 2021)
(For Undergraduate Students)

For registration :
Scan the QR code

Or on the link:
https://docs.google.com/forms/d/e/1FAIpQLSerrZ0f0uZIDD7auvBKPzqBwLteJlW0Bnd7g-WwZz8lo-1Ug/viewform?usp=cf_hnk
Last Date: 27th June 2021 (12 :00 pm)

Virtual training will be held on: Google Meet/ Zoom

Convener: Dr. Deepika Yadav
Co-Convener: Ms. Nimita Kant
Coordinator: Dr. Darchan Malik
Patron: Dr. Shiv Kumar Sahdev
Principal

Total 211 PAN India under graduate, post graduate and Ph.D. students from various Life Science disciplines registered from 20 colleges/institutes (Hansraj College, DDU college, Bhaskaracharya College of Applied Sciences, Deshbandhu College, Maitreyi College, Dyal Singh College, Acharya Narendra Dev College, Sri Venkateswara College, Gargi College, Ramjas College, Hindu College, Kalindi College, Shivaji College from Delhi University and Amity University Noida, Scottish Church College, Kolkata, Bharath University, IIT Kharagpur, IIT Rorkee, BHU, AMU, HLM Group of Institution, BJP College, Dr. DY Patil Medical College & Hospital Pune etc.). Total 118 students successfully completed the internship.

Topics covered during the training:

- Genomic Databases for COVID-19 and their Implications
- Looking into mutations/SNPs which cause a change in infectivity of SARS-CoV-2 & Phylogeny of SARS-CoV-2 using spike protein sequences
- Reverse Vaccinology
- Monoclonal antibody and Nanobody as therapeutic molecules for COVID-19
- ABO blood groups and COVID-19 susceptibility
- Epidemiological study of vaccine trial
- Current perspectives of COVID-19 Vaccination
- Is RT-PCR still a relevant technique for detecting COVID-19 infection
- Mesenchymal Stem Cells Therapy for COVID-19
- Combating COVID-19 through Yoga, Meditation and Alternative Medicine Systems

Teachers involved: Dr. Deepika Yadav, Ms. Nimita Kant, Mr. Manish K. Sachdeva, Dr. Aeshna Nigam, Dr. Jitendra K Chaudhary, Dr. Parul Kulshreshtha, Dr. Ankita Dua, Dr. Tarun K Vats, Dr. Nidhi Garg, Dr. Rakesh Roshan.

The screenshot shows a Zoom meeting in progress. The main window displays a presentation slide with the following content:

- Title:** Monoclonal antibody and Nanobody as Therapeutic Molecules for COVID-19
- Diagram:** A central grey sphere with red spots is surrounded by several Y-shaped antibody molecules in various colors (blue, red, yellow, green).
- Text:** Presented by: Dr. Jitendra K. Chaudhary; PhD, Department of Zoology, Shivaji College, BH.

At the bottom of the Zoom window, there is a chat box with the message: "Good morning to everyone Good morning sir". The Zoom control bar at the bottom includes icons for Mute, Video, Participants, Chat, Share Screen, Screen, and Meeting, along with a 'Leave' button.

The screenshot shows a Zoom meeting in progress. The main window displays a presentation slide with the following content:

- Text:** "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."
- Well-being:** Presence of more positive aspects than negative ones.
- Social well-being:** Ability of the people to be free from want of basic necessities and coexist peacefully in communities with opportunities for advancement.
- Mental/Psychological Health:** Integral part of health and more than the absence of mental illnesses. It refers to a broad array of activities directly or indirectly related to the mental well-being, prevention of mental disorders, and treatment and rehabilitation of people affected by mental disorders.

At the bottom of the slide, there is a Venn diagram with three overlapping circles labeled 'Body', 'Mind', and 'Soul', with the word 'Health' in the center. The World Health Organization logo is visible in the bottom right corner of the slide.

On the right side of the Zoom window, there is a video feed of a participant. Below the video feed, there is a list of participants:

Participant Name	Status
Shivaji College (Shivaji College)	1/1
Shivaji College (Shivaji College)	1/1
2021/21079	1/1
2021/21080 - Rishi Sethi	1/1
2021/21081	1/1

Recording

Participants (20)

View

Zoom Meeting

Participants (20)

Search

Participants (20)

PRASHANT

WIKAS KUMAR DASH

SHARAD KUMAR SINGH

DR. KUNAL SINGH

SHRIKANT KUMAR SINGH

DR. VIKAS ANAND

YASH SINGH

TANU SINGH

VAISHALI CHAKRAVARTY

ADITYA

ADITYA

RISHI THAKUR

Leave

Join

Unmute All

Genomic databases for COVID-19 and their applications

Dr. Anand K. Choudhary, PhD

Professor of Biology

Dr. B. P. Jaiswal College

The image shows a Zoom meeting interface. The main window displays a presentation slide titled "Genomic databases for COVID-19 and their applications" by Dr. Anand K. Choudhary, PhD, Professor of Biology at Dr. B. P. Jaiswal College. The slide features a central diagram of a coronavirus particle. To the right of the slide, a smaller window shows the logo of Dr. B. P. Jaiswal College. On the right side of the Zoom window, a list of participants is visible, including PRASHANT, WIKAS KUMAR DASH, SHARAD KUMAR SINGH, DR. KUNAL SINGH, SHRIKANT KUMAR SINGH, DR. VIKAS ANAND, YASH SINGH, TANU SINGH, VAISHALI CHAKRAVARTY, ADITYA, ADITYA, and RISHI THAKUR. The Zoom control bar at the bottom includes options for Mute, Video Off, Participants, Chat, Screen Sharing, Remote Control, and a red Leave button.

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