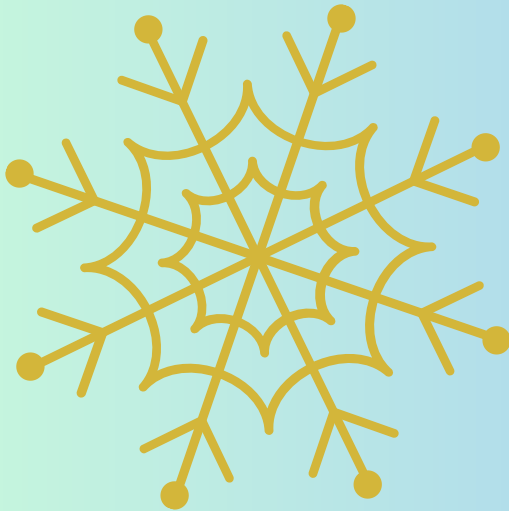


# DAULAT RAM COLLEGE UNIVERSITY OF DELHI

ACCREDITED GRADE 'A' BY NAAC

## IN HOUSE SKILL DEVELOPMENT PROGRAMME UNDER IQAC

**A REPORT  
(2022-23)**



**PROF. MEETU KHOSLA  
CONVENOR**

**PROF. SAVITA ROY  
PRINCIPAL**



# **PRINCIPAL MESSAGE**



**Prof. Savita Roy**  
**Principal**  
**Daulat Ram College**

The implementation of the National Education policy 2020 in the Academic session 2022-23 has revived the education system by providing the blueprint of a holistic, skill-based and multidisciplinary training for the twenty first century learner. In complete consonance with the vision of the NEP 2020, the Skill Development Program at Daulat Ram College aims to inculcate training in vocational & technical skills, foster innovative thinking through multidisciplinary learning & engagement and provide training for skill upgradation to the college students. It is a matter of great pride that multiple In-House Skill Development Programs were organised in our college to upgrade the students with ICT skills, and build cultural awareness under the theme of “Skills for Employability, Building Competence, Cultural Sensitization and Diversity Integration”.

I congratulate the entire teaching fraternity of Daulat Ram College who under the able guidance of Prof. Meetu Khosla, Convenor, SDP, organised a two-day ICT SDP from November 26-27, 2022. The aim of the SDP was to train the newly joined First Year students on different ICTs and digital platforms to empower the students to use technology for hybrid learning and research processes. In congruence with the G20 theme of ‘Vasudhaiva Kutumbakam’, the college departments also conducted SDPs to develop cultural awareness and diversity integration in the students of the college. The multidisciplinary SDPs have optimized the learning experience of students by providing a value based education which can be easily applied as life skills in various aspects of personal and professional development.

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# **CONVENOR MESSAGE**



**Prof. Meetu Khosla  
Convenor  
Skill Development Program  
Daulat Ram College**

Daulat Ram College is a pioneer in organizing In –house Skill Development Programs under the esteemed guidance of our Principal Prof. Savita Roy. The Skill development program was launched in 2015 with an intention to bring about constructive changes in paving the pathway to build a strong and progressive skill-based education, integrating knowledge with requisite skills to foster holistic development of the students at Daulat Ram College. Over the past 8 years more than 60 short term in-house skill development programs have been conducted successfully by the college training more than 2000 students of the college in various life skills. The vision behind the initiation of skill development programs has been to strengthen and optimize the capabilities of our students by providing them an educational environment fostering skill development that will make them not only more self-reliant but also enable them to create opportunities for others through entrepreneurship initiatives offering occupational choices and opening windows for economic growth and sustainability

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The theme of the Skill development program for the year 2022-2023 was “Skills for Employability, Building Competency, Cultural Sensitization and Diversity Integration”. Various skill development courses were launched under this theme. The approach of each course was interdisciplinary with two departments collaborating together. The courses were held only for students of Daulat Ram College, for a week during the summer, winter and mid-semester breaks. Various Skill Development Programs have been organized on various themes such as basic electronics and instrumentation for career advancement, Indian cultural tradition and diversity integration, science communication, bioinformatics, basic tools and application, business value development analysis with career perspectives, learning R-statistics, developing psychometry skills, yoga ananda and unveiling animal world in behavioral way.

All the departments of the college organized the two day In-House E-Skill Development Programme on Enhancing Learning Through ICT Tools on 26th and 27th November, 2022 to equip the new batch of first-year students with necessary skills for the hybrid teaching-learning process. Apart from the various Digital Platforms like Google meet, Google Classroom, Zoom etc. the SDP also trained the students in tools which utilize discipline specific digital resources. Around 1000 students benefited from the E-Skill Development Programme. The valedictory program will be organized in April 2023. I would like to extend my heartfelt gratitude to all my team members for their support and cooperation in successfully coordinating various programs under SDP. Skill Development Program Team Members:

Convener: Prof. Meetu Khosla

Co-Convener: Dr. Pooja Sharma

Members: Prof. Nidhi Gautam

Dr. Rakhi Singh

Dr. Jyoti Sharma

Ms. Richa Dawar

Ms. Renu Yadav

Ms. Soumya Sharma

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# **TEAM MEMBERS**



**Prof. Meetu Khosla**  
Convenor



**Dr. Pooja Sharma**  
Co-convenor



**Dr. Renu Yadav**  
Member



**Ms. Richa Dawar**  
Member



**Prof. Nidhi Gautam**  
Member



**Dr. Rakhi Singh**  
Member



**Ms. Soumya Sharma**  
Member



**Dr. Jyoti Sharma**  
Member

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# **ACKNOWLEDGEMENT**

I would like to express immense gratitude for our Principal Professor Savita Roy, under whose esteemed guidance this programme was possible. I would also like to thank our Vice Principal Professor Sarita Nanda for supporting us and all the course coordinators and co-coordinators of the various departments of the college, teacher -in charges, resource persons who contributed to make this programme a success. I would like to thank SDP senior most member Prof. Nidhi Gautam for her valuable advice and guidance pertaining to the smooth functioning of SDP and also extend my sincere thanks to the SDP co-convenor Dr. Pooja Sharma for coordinating the SDP on ICT tools. Thanks to Ms. Richa Dawar for the certificates and making proposals, and Ms. Soumya Sharma for coordinating with the departments. Thanks to Dr. Jyoti Sharma for maintaining stock register, accounts of SDP and coordinating with the departments in an efficient manner. I really appreciate the efforts of Dr. Renu Yadav and Dr. Rakhi Singh in compiling this report. This report would not have been possible without their sincere efforts and their editorial team who worked endless hours with sheer determination to compile all the reports of various departments together, a big thanks to them.

**Prof. Meetu Khosla**

**Convenor**

# **EDITORIAL TEAM**

## **Teacher Co-ordinators**

**Dr. Renu Yadav**

**Dr. Rakhi Singh**

## **Student**

**Khushi Vishwas**

**B.A (Hons) Psychology**

**Second Year**

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# **BIOCHEMISTRY**



**Report**

**Of**

**IN-HOUSE SKILL DEVELOPMENT PROGRAM**

**UNDER IQAC**

**Daulat Ram College**

**On**

**SCIENCE COMMUNICATION**





**PROGRAM SCHEDULE OF “SCIENCE COMMUNICATION” SDP (5th, 12th, 19th, 26th and 28th November 2022)**

**Department of Biochemistry,  
Daulat Ram College, University of Delhi**

<b>5<sup>th</sup> November 2022</b>			
<b>Inauguration 10:15 AM followed by Tea</b>			
<b>Session</b>	<b>Time</b>	<b>Topic</b>	<b>Resource Person</b>
I	11:00 AM–2:00 PM	Science Communication: Scope and Relevance	Prof. Padmshree Mudgal
II	2:15 PM–4:00 PM	Science Communication: Scope and Relevance.... continued.	Prof. Padmshree Mudgal
<b>12<sup>th</sup> November 2022</b>			
<b>Session</b>	<b>Time</b>	<b>Topic</b>	<b>Resource Person</b>
I	10:15 AM–1:30 PM	Research Methodology	Dr. Narendra Kumar
II	2:00 PM–4:00 PM	Information source	Dr. Radhika Gupta
<b>19<sup>th</sup> November 2022</b>			
<b>Session</b>	<b>Time</b>	<b>Topic</b>	<b>Resource Person</b>
I	10:15 AM–12:15 PM	Ethics in Science Communication	Dr. Radhika Gupta
II	12:15 PM–2:00 PM	Citation and Referencing	Dr. Neeraj Dohare
III	2:30 PM–4:00 PM	Intellectual Property Rights (IPR)	Dr. Narendra Kumar
<b>26<sup>th</sup> November 2022</b>			
<b>Session</b>	<b>Time</b>	<b>Topic</b>	<b>Resource Person</b>
I	10:15 AM–1:15 PM	Tools in Science Communication	Dr. Adita Joshi
II	12:15 PM–2:00 PM	Tools in Science Communication...continued	Dr. Adita Joshi
III	2.30 PM-4:00 PM	Tools in Science verbal Communication...continued	Dr. Adita Joshi
<b>28<sup>th</sup> November 2022</b>			
<b>Session</b>	<b>Time</b>	<b>Topic</b>	<b>Resource Person</b>
I	9:00 AM–11:00 AM	Career in Science Communication	Dr. Adita Joshi
II	11:30 PM–1:00 PM	Career in Science Communication..continued	Dr. Adita Joshi

**Convener Skill Development Program:**

**Prof. Meetu Khosla  
(Psychology Department)**

**Course Coordinator:**

**Prof. Padmshree Mudgal  
(Biochemistry Department)**

**Resource Persons:**

**Dr. Radhika Gupta  
(Asst. Professor, Biochemistry Dept.)**

**Dr. Neeraj Dohare  
(Asst. Professor, Biochemistry Dept.)**

**Dr. Narendra Kumar  
(Asst. Professor, Biochemistry Dept.)**

**Dr. Adita Joshi  
(Director, Sansriti Foundation  
Guest Speaker)**

**Number of Registered Student Participants:**

**30** (29 students of IInd yr BSc. (Hons)  
Biochemistry and 1 student of BSc.  
(Hons) Botany 3rd year)

**Duration of SDP:**

**30 hours ( 5 days 10am-4pm)**





The SDP on **Science Communication** was inaugurated on 5th November, 2022 by Vice Principal, Prof. Sarita Nanda by Lighting of the lamp. Special guest of Honour, Prof. Rajni Sahni, IQAC convener, Daulat Ram College, and Prof. Meetu Khosla, SDP Convener graced the occasion by their presence. Prof. Sarita Nanda in her address to the student participants emphasized on importance of Science communication and how students should make full use of the opportunity provided to them. Prof. Rajni Sahni highlighted the importance of skill based courses in enhancing employability and career enhancement. Prof. Meetu khosla informed the students about various SDPs conducted by DRC for upgrading skill sets of students.

First session was taken by Prof. Padmshree Mudgal on '**Scope and Relevance of Science Communication**'. She talked about different modes of communication, both verbal and written. She highlighted on the importance of Science Communication. During the Covid 19 pandemic, Communication, both verbal and written was used very effectively in educating the general public about the Covid 19 virus, about strategies to prevent spread of infection and about vaccines and vaccination schedules. It is very important that general Public has to be made Science literate. They have to be informed about latest discoveries and how it impacts our lives. Science has to be communicated to policy makers to make informed policy decisions. Covid 19 vaccine development, project MOM, project Cheetah are examples of Government funded projects which were possible only because scientists were able to communicate the importance and relevance of these endeavours.

Scientific community also need to communicate to fellow scientists about their research findings for others to benefit from the new findings and take it forward.

**Student Activity in Ist session: Role playing**

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Students were divided into groups of 5 and told to develop script and enact roles in any one of the following briefs provided:

1. A non-science dignitary is visiting your lab. Explain to him/ her an experiment you are performing / or a science concept.
2. A group of school students are visiting your department explain working of an instrument and its use.
3. You have learnt a new and exciting topic in class, communicate it to your mother / grandmother who does not know anything about science.
4. Convince your elder family members to get vaccinated against COVID-19.
5. Convince farmers to stop stubble burning.
6. You are Scientific Advisor to Govt. of India, give a brief to the Prime Minister on a recent significant science topic.



Students very enthusiastically participated in the activity. They learnt that skills are required to convey science concepts and topics to the general public.

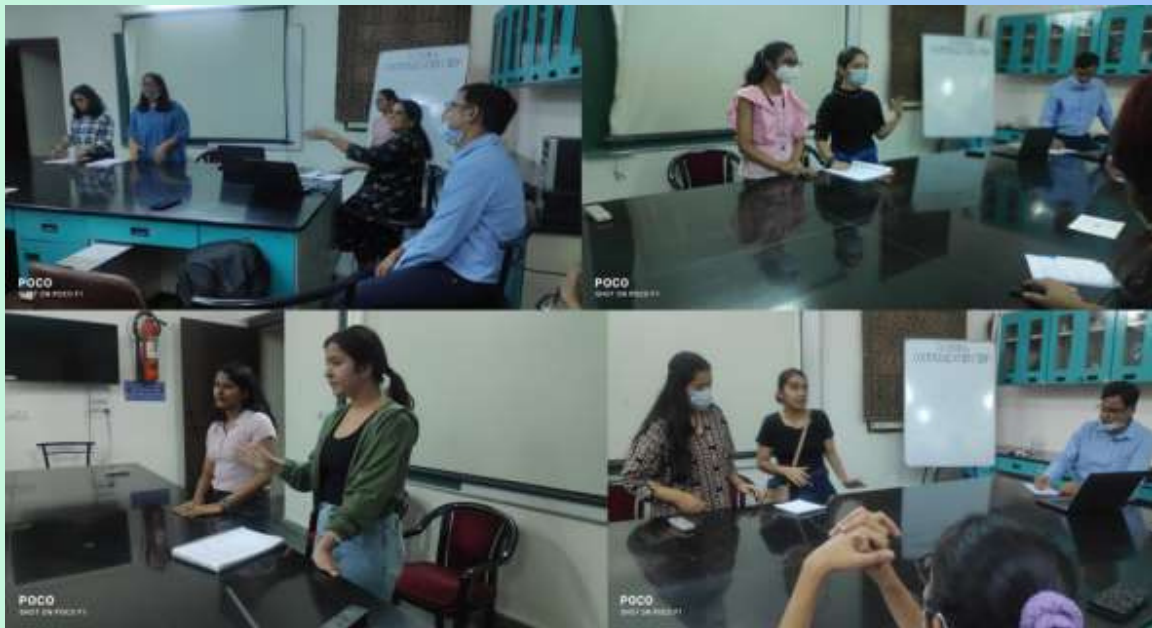
The afternoon session on 5th Nov., Prof. Mudgal focussed on the outcomes of the activity conducted in the morning. In verbal communication it is very important to have knowledge of the target audience, their background and education level. Science verbal communication should be in a very simple and relatable language. It should be explained in contexts of their background and in a language they understand. Play acting of Rajeshwari who enacted grandmother who was being convinced to take Covid 19 vaccine was appreciated by all.



## Student Activity in IInd session: Analyze the Newspaper reports on Science Topics

Student groups were given a science newspaper report and they had to analyse it in terms of

- Ease of understanding the Topic
- Interesting or boring
- Presentation
- Gain of knowledge.



Students learnt many important points that have to be kept in mind while writing a scientific report.

The Headline should be catchy and relatable to attract the audience. The audience will read an article if they think it will impact them in a certain way. Difficult words and scientific jargon puts off a reader, if they don't understand the initial few lines, they would not read it further. Activities helped the students to self-discover the important aspects of scientific writing skills.

On 12th Nov.22, in the morning session Dr. Narendra Kumar took a session on '**Research Methodologies**'.

Dr. Kumar taught the students about research design and methodology. He talked about the importance of research before writing an article. Students learned about the importance and need

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of basic research and applied research. Basic or fundamental research is mainly concerned with generalizations and formulation of a theory. Research concerning human behavior, natural phenomena or relating to pure mathematics are examples of fundamental research. Applied research focuses on finding a solution for an immediate problem facing public/society or industry. Applied research aims at certain conclusions facing a concrete social or business problem is an example of applied research. Development of Corona vaccine is an example of applied research. The research design describes how the researcher will investigate the central problem of the research and is, thus part of the research proposal. Dr. Kumar taught about characteristics of a good research design.

He assigned some small research **Activity** to student on current environmental issues like Air Pollution in Delhi other topics like college canteen food and health issues etc. All the students participated in the research activities. Students made very good research hypothesis with proper research design. Students learned about the importance and need of basic research and applied research. They also learned the importance and scope of clinical research and vaccine development.

Dr. Kumar explained how to implement research from laboratory bench to bedside.

Afternoon session was taken by **Dr. Radhika Gupta** on **Sources of Information**.

In this session students were given insight into the methods used to obtain scientific information. These included the literature survey required to build up hypothesis on any topic. Students were taught about the various kind of scientific literature and the primary and secondary sources of information. The major example of primary sources of data is original articles published in reputed journals. The secondary source of data includes review articles, where there is compilation or analysis of primary data. As an example she explained the methods used to write a chapter on 'History of CRISPR methodology'. Students were further given information about google scholar and NCBI/ PubMed and procedure to use these databases. In the NCBI database students were taught the methods to search for a topic. They were taught ways by which year wise and author wise searches can be done.

#### **Student Activity in IVth session:**

As an exercise students were asked to write a paragraph on any scientific topic by doing literature survey from PubMed. The students were divided into groups five and were given topics such as Covid vaccines, E. coli, H. pylori, Hemoglobin, Vitamin D and hypothyroidism. One set of students explained vitamin Ds role as an intracellular hormone.

On 19th Nov.22, in the morning session Dr. Radhika Gupta took a session on '**Ethics and plagiarism in science**'.

In this session students were given information about scientific misconduct and ethics. Four key concepts responsibility, accountability, liability and due diligence of ethics were explained. 6

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principles of ethics scientific honesty, carefulness, Intellectual freedom, Openness, Attribution of credit, Public responsibility were also elaborated to the students.

Further students were introduced to plagiarism. Plagiarism word is inspired from greek literature where it means to kidnap. In scientific community violation of academic integrity by not acknowledging information obtained from a particular source or exactly copying someone else's work or idea or article is considered an act of plagiarism. It is a serious ethical offence and can be punishable. Students were given details regarding the kind of plagiarism and methods to prevent plagiarism. They were taught methods to check plagiarism by using online tools such as small seotools, grammarly, dupllichecker and plagiarism checker.

#### **Student Activity in IVth session:**

As an exercise students, checked the paragraph they had written in sources of information session for plagiarism by using online tools. Most of the students had about 50% plagiarism in their original drafts. They were further taught methods to rephrase sentences such that plagiarism can be prevented. Finally students could obtain 100% plagiarism free scripts.



Mid morning session on 19th Nov, 2022 was taken by **Dr. Neeraj Dohare** on '**Citation and Referencing**'.

Students were given information about principle, importance and applications of citation and referencing and the importance of bibliography in scientific communication.

Students were given the knowledge of different formats of references as well as different components of references such author information, title of book, research paper, review paper, patent etc., journal or publishers, volume, page number and ISSN.

In this session, all students learnt about the different softwares which are utilized for referencing such as Endnote, Mendeley, Zotero etc. Students were also given the knowledge for preparing reference library with the help of these software.

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In end of this session all students preformed one **Activity** which was based on the identification of reference style from given examples. Another home assignment was given to students where they had to prepare a reference library from given research paper in an hands on mode.

### Afternoon session on 19th Nov, 2022 was taken by **Dr Narendra Kumar** on '**Intellectual Property Rights**'.

Dr. Kumar taught and explained about Intellectual Property Rights (IPR). What are exactly intellectual property rights and why are they important?

Intellectual property is several distinct types of creations of the mind for which property rights are given in the corresponding fields of law. Examples of intellectual property include an author's copyright on a book or article, a distinctive logo design representing a soft drink company and its products, unique design elements of a web site, or a patent on the process to manufacture chewing gum etc.

First time grad students learned about IPR. Students learned about patent law and international IPR court. Dr. Kumar gave many examples of Indian traditional components patenting file and international issues like Curcumin. He also explained about the Database and their uses. In the time of internet, Database is very important Intellectual property. Dr. Kumar explained how to use the database for gene sequences. He also assigned some activities related to the IPR. For example, Activity: "Give some examples of patents and copyrights controversies in India or world?" He also explained about the Database and their uses. In the time of internet, Database is very important Intellectual property. Dr. Kumar explained how to use the database for gene sequences. He also assigned some activities related to the IPR. **For example, Activity:** "Give some examples of patents and copyrights controversies in India or world?"





On 26th Nov. sessions were taken by our Guest speaker **Dr. Adita Joshi** on **‘Tools in Science Communication’**.

Dr. Adita Joshi was welcomed and introduced by Dr. Radhika Gupta. In the morning session she focussed on written Communication skills. The participants were told to work in a group and write bring an article of around 300 words on any science Topic.

Dr. Adita outlined the main points that should be kept in mind while writing an article. Write up should be written keeping audience in mind. Article should be well planned and should be complete in itself. The title and body should hook on the audience. Long sentences should be avoided. A clear message should be conveyed. Closure should be made with specific outcomes.

In the afternoon session Dr. Adita talked about different types of written content for example twitter, blogs, article, abstract, full feature article, small article, review etc. It is very important to keep word limit in mind. Message should be conveyed with clarity, completeness and accuracy with in the word limit. First collect and write the information, then edit.

**Student Activity:** Articles written by students were discussed and improved on.

On 28th Nov. **Dr. Adita Joshi** gave an overview of career opportunities in Science Communication. All scientific Institutions, Pharma, Biotech, and technology based Industry require Science Communicators to convey to the General Public, press and Government about their latest research outcomes, discoveries, drugs, or products. All Science Museums, Centers, require science Communicators. Job opportunities are available with Publishing houses, media-both visual and written, and social media. Students can also become illustrators. Opportunities are plenty.



## Feedback

Most students felt that the SDP was very well organized and they learnt a lot. They learned new skills and have got an idea about a new job scope and opportunities in the field of Sciences. Many found all the presenters and resource persons were exceptional. Incorporating tons of activities was also really helpful, interesting and gave them more clarity of the subject.

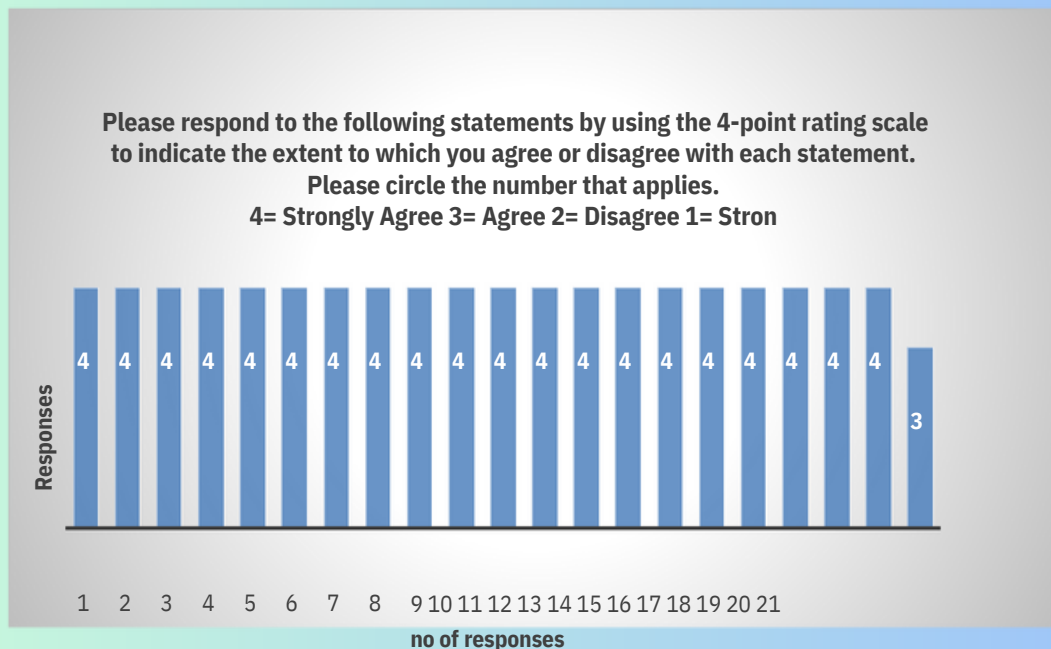
Most students felt they got to learn multiple skills besides development of their scientific communication like team work and speaking skills. Each day activities helped them to broaden their thinking from science in books to science in everyday life. Overall it was an experience that would help greatly in their future career goals.

Many students felt it would really help those who want to pursue masters and PhD in sciences. It was a knowledge enhancing workshop that made us aware about Science Communication & how can we apply it in future.

All students were extremely satisfied with the SDP and would recommend other students to attend such SDPs. 95% students felt the workshop delivered and fulfilled its objectives as promised.

4= Strongly Agree 3= Agree 2= Disagree 1= Strongly Disagree

22 responses **Question : SDP objectives were stated clearly and met**





### Details of Students:

Name	Email ID	Course and semester
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Nandini Singh	21221934@dr.du.ac.in	Bsc. (Hons.) Biochemistry; Second Year
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Parnika Joshi	parnikajsh25@gmail.com	Third semester; bsc. (hons.) biochemistry
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Gorika	20175534@dr.du.ac.in,	Botany (Hons) IIIyr
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Vanshika raina	Rainavanshika705@gmail.com	Biochemistry 2nd yr
Ayushi Malik	ayushimalik004@gmail.com	Biochemistry 2nd yr

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# **PHYSICAL EDUCATION**



**Report**

**Of**

**IN-HOUSE SKILL DEVELOPMENT PROGRAM**

**UNDER IQAC**

**Daulat Ram College**

**On**

**YOGA ANANDA**

**9-17th November, 2022**



**Report for Skill Development Programs Daulat  
Ram College  
2022-23**

Names of the Collaborating Departments: Department of Physical Education

Title of the Course: YOGA ANANDA

Sub-theme: Yog Se Nirog

Course Coordinators: Dr. KAVITA SHARMA

Duration with dates: 30 hour 9th Nov 2022 to 17th Nov 2022

Sr. no	Date	Time	Module/topic title	Name of the Speaker	Affiliation of the Speaker
1.	09Nov./2022	3:00-5:00 pm	Introduction Suryanamaskar	D.r Kavita Sharma Dr. Kaushambi Tyagi Dr. Azad Singh	Associate Professor Assistant Professor Assistant Professor
2	10Nov./2022	1:00-2:00 pm	Lecture on Yoga, Ashtanga Yoga and Benefits of Yoga	D.r Kavita Sharma	Associate Professor
		2:00-4:00 pm	Warming up, Suryanamaskar	Dr. Azad Singh	Assistant Professor
		4:00-5:00 pm	Meditation Session	Dr. Kaushambi Tyagi	Assistant Professor
3	11Nov./2022	1:00-2:00 pm	Lecture on Types of Asanas and their benefits	D.r Kavita Sharma	Associate Professor
		2:00-4:00 pm	Learning of Sitting and Standing Asana	Dr. Azad Singh	Assistant Professor
		4:00-5:00 pm	Practice Session	Dr. Kaushambi Tyagi	Assistant Professor



4	12Nov./ 2022	1:00-2:00 pm	Lecture on Yoga for women	Dr. Kavita Sharma	Associate Professor
		2:00-4:00 pm	Practice of Prone Position Asana	Dr. Kaushambi Tyagi an	Assistant Professor
		4:00-5:00 pm	Q &A Session	Dr. Azad Singh	Assistant Professor
5	14 Nov./ 2022	1:00-2:00 pm	Lecture on Yoga for Well- Being	Dr. Azad Singh	Assistant Professor
		2:00-4:00 pm	Practice of Meditative Asanas	Dr. Kaushambi Tyagi	Assistant Professor
		4:00-5:00 pm	Meditation Session	Dr. Kavita Sharma	Associate Professor
6	15 Nov./ 2022	1:00-2:00 pm	Lecture on Pranayam & Shatkarmas	Dr. Kaushambi Tyagi	Assistant Professor
		2:00-4:00 pm	Practice of Pranayam	Dr. Azad Singh	Assistant Professor
		4:00-5:00 pm	Discussion Session	Dr. Kavita Sharma	Associate Professor
7	16 Nov./ 2022	1:00-2:00 pm	Lecture on NETI and Trataka	Dr. Kavita Sharma	Associate Professor
		2:00-4:00 pm	Practice of Neti and Trataka	Dr. Kaushambi Tyagi	Assistant Professor
		4:00-5:00 pm	Feedback Session	Dr. Azad Singh	Assistant Professor
8	17 Nov./ 2022	1:00-5:00 pm	Closing of Programme and Presentation of Asanas, Suryanamaskar, Pranayam	Dr. Kavita Sharma  Dr. Kaushambi Tyagi  Dr. Azad Singh	Associate Professor  Assistant Professor  Assistant Professor



Details of the course:

Description of the course: Yoga is a path towards total harmony of body, mind and spirit. Yoga is not merely a form of exercise for the body. It is an ancient wisdom- for healthier, happier and more peaceful way of living- which ultimately leads to union with the self.

Yoga helps in releasing toxins from the body. It channelizes energy flow. It improves the flexibility of muscles, range of motion of joints. It corrects the posture and alignment of the body. It regulates the digestive, endocrine, and circulatory systems. It also strengthens and revitalizes the internal organs, leading to a healthy and youthful body. It helps to lose weight, cure asthma, diabetes, heart problems and many chronic diseases.

1) Objectives:

- A. To Maintain and promote the Indian Yoga Tradition.
- B. To Enable students to have good health.
- C. To possess emotional stability.
- D. To attain higher level of consciousness.

2) Topics covered:

- A. Steps of Suryanamaskar
- B. Asanas and Types of Asanas
- C. Pranayam and types of Pranayam
- D. Shatkriyas and types of shatkriyas

Speakers in the course:

Sr. no.	Name	Designation	Department/Affiliation
1.	Dr. Kavita Sharma	Associate Professor	Department of Physical Education, Daulat Ram College
2.	Dr. Kaushambi Tyagi	Assistant Professor	Department of Physical Education, Daulat Ram College
2.	Dr. Azad Singh	Assistant Professor	Department of Physical Education, Daulat Ram College

Number and Profile of Participants: Total Participants- 43

No. of Students	Department	Year
8	BA Prog	Third year

1	Political Science Hons.	Third year
13	BA Prog	Second Year
1	Biochemistry Hons	Second Year
1	Mathematics Hons	Second Year
1	English Hons	Second Year
3	History Hons	Second Year
3	BA Prog	First year
2	BCom Hons	First year
2	BCom Prog	First year
2	Economics Hons.	First year
3	English Hons	First year
3	Political Science Hons	First year

Methods of Assessment of Participants: (Test/Assignment/Project/Quiz/Presentation etc.)

(Kindly provide a copy of the pre-imposed measures/instruments/scales/questionnaires used for assessment of the learning outcomes):

- 1.
- 2.

Detailed Learning Outcomes of the Course:

1. To know about Suryanamaskar
2. Knowledge about Ashtang Yoga.
3. Knowledge about Asanas.
4. To Know about Pranayam.
5. To know about Shatkriyas.

Feedback from Participants Regarding the Program:

(No certificates will be provided till the feedback is submitted by the participants.

Committee will provide the link for the feedback form.)

Positive feedback was given by students. They want more skill development program to promote

their health and wellness.

A Few Photographs (student activity oriented photographs only/activity photos):

Dr Kavita Sharma

Convenor/Coordinator

Yoga Ananda (SDP)

Department of Physical Education

Daulat Ram College, DU

















# **PHYSICAL EDUCATION**



**Report**

**Of**

**IN-HOUSE SKILL DEVELOPMENT PROGRAM**

**UNDER IQAC**

**Daulat Ram College**

**On**

**FITNESS FOR ALL**

**5-15th April, 2023**



Report for Skill Development Programs Daulat  
Ram College  
2022-23

Names of the Collaborating Departments: Physical Education

Title of the Course: Fitness for All

Sub-theme: FIT DRC

Course Coordinators: Dr. Kavita Sharma

Duration with dates: 30 hour 5th April 2023 to 15th April 2023

Sr. no	Date	Time	Module/topic title	Name of the Speaker	Affiliation of the Speaker
Eg. 1.	5 <sup>th</sup> April, 2023	03:00- 05:00 pm	Cardiovascular Fitness (Harvard Step Test)	Dr. Kavita Sharma	Associate Professor
2	6 <sup>th</sup> April, 2023	03:00- 05:00 pm	Cardiovascular Fitness (Cooper's run/walk Test)	Dr. Azad Singh	Assistant Professor
3	7 <sup>th</sup> April, 2023	09:00 am - 03:00 pm	Muscular Strength (Standing Broad Test, Push-Ups/Modified Push Ups)	Dr Kavita Sharma Dr. Azad Singh Dr. .Kaushambi Tyagi	Associate Professor Assistant Professor Assistant Professor
4	8 <sup>th</sup> April, 2023	03:00- 05:00 pm	Body Composition (BMI)	Dr. Kaushambi Tyagi	Assistant Professor
5	10 <sup>th</sup> April, 2023	03:00- 05:00 pm	Flexibility (Sit and Reach Test)	Dr. Kavita Sharma	Associate Professor
6	11 <sup>th</sup> April, 2023	03:00- 05:00 pm	Muscular Endurance (One minute situps test)	Dr. Azad Singh	Assistant Professor



7	12 <sup>th</sup> April, 2023	03:00- 05:00 pm	lectured on the development and maintenance of cardiovascular fitness	Dr. Kavita Sharma	Associate Professor
8	13 <sup>th</sup> April, 2023	03:00- 05:00 pm	The skin fold test was conducted for assessing the body fat.	Dr. Azad Singh	Assistant Professor
9	14 <sup>th</sup> April, 2023	09:00 am - 03:00 pm	All participants completed 3km Mini-Marathon for Improvement of cardiovascular efficiency.	Dr. Kavita Sharma Dr Azad Singh	Associate Professor Assistant Professor
10	15 <sup>th</sup> April, 2023	01:00- 05:00 pm	<b>On the last</b> (10 <sup>th</sup> Day) of program the students perform push ups, sit ups, squats and calisthenics exercises	Dr. Kavita Sharma Dr. Azad Singh Dr. Kaushambi Tyagi	Associate Professor Assistant Professor Assistant Professor

#### Details of the course:

The five factors of fitness of SDP (FITNESS FOR ALL) contribute to physical fitness and help guide the process of getting fit. You already know that benefits come when you prioritize physical activity. The trick understands what "fitness" is and how you can achieve it.

- Maintain or improve the efficient delivery and uptake of oxygen to your body's systems
- Enhance cellular metabolism
- Ease the physical challenges of everyday life.

#### Description of the course:

The aim of skill development program is to make every Student physically, mentally and emotionally fit and also to develop in her such personal and social qualities as will help her to live happily with others and build her up a good citizen. It improved the Health of the heart and lungs. It increased the muscular strength, endurance and motor fitness. It increased the aerobic fitness. It improved the muscle tone and strength.

1) Objectives:

- A. All round development of Personality of the students
- B. To understand how to improve physical fitness.
- C. To understand the importance of physical fitness.

2) Topics covered:

- A. Cardiovascular Fitness
- B. Muscular Strength
- C. Body Composition
- D. Muscular Endurance
- E. Flexibility

Speakers in the course:

Sr. no.	Name	Designation	Department/Affiliation
1	Dr Kavita Sharma	Associate Professor	Department of Physical Education, Daulat Ram College
2	Dr. Azad Singh	Assistant Professor	Department of Physical Education, Daulat Ram College
3	Dr. Kaushambi Tyagi	Assistant Professor	Department of Physical Education, Daulat Ram College

Number and Profile of Participants: Total Participants - 42

No. of Students	Department	Year
8	BA Prog.	3 <sup>rd</sup> Year
3	BSc Life Sci.	3 <sup>rd</sup> Year



1	Pol Sci. (H)	3 <sup>rd</sup> Year
20	BA Prog	2 <sup>nd</sup> Year
2	B. Com (H)	2 <sup>nd</sup> Year
4	BA Prog	1 <sup>st</sup> Year
1	B. Com (H)	1 <sup>st</sup> Year
1	Hindi (H)	1 <sup>st</sup> Year
1	Eco (H)	1 <sup>st</sup> Year
1	Zoology (H)	1 <sup>st</sup> Year

Methods of Assessment of Participants: (Test/Assignment/Project/Quiz/Presentation

etc.)

(Kindly provide a copy of the pre-imposed measures/instruments/scales/questionnaires used for assessment of the learning outcomes):

1. Lecture
2. Practical (Fitness Test, Warming up, cool down)
3. Interaction Session
4. Group Discussion
4. Assignments
5. Posture Making

Detailed Learning Outcomes of the Course:

1. To know about Health Related Physical Fitness.
2. Proper Warming up Procedure.
3. Knowledge about Cardiovascular Fitness and Procedure How to Develop it.
4. Muscular Strength and Procedure How to Develop it.
5. Muscular Endurance and Procedure How to Develop it.
6. Body Composition and Procedure How to Develop it.
7. Flexibility and Procedure How to Develop it.
8. Proper Cooling Down

Feedback from Participants Regarding the Program:

(No certificates will be provided till the feedback is submitted by the participants.  
Committee will provide the link for the feedback form.)

A Few Photographs (student activity oriented photographs only/activity photos):

Photograph Attached

Dr. Kavita Sharma  
Convenor/Coordinator  
Fitness For All (SDP)  
Dept. Of Physical  
Education Daulat Ram  
College DU

Feedback Form:-

FEEDBACK FORM

Event Name:- Fitness For All (SDP)

Students Name:- Pooja Jain

Course:- B.com (Hons)

Semester:- IV

Ph. no:- 9811192265

Comments

It was an energetic and lively session. We learned about different components <sup>of fitness</sup> and our level in it. We learned ways to improve our capacity with continuous exercise.

Students Name:- Anushi Sharma

Course:- B.Sc (H) Zoology.

Semester:- Ist

Ph. no:- 9354059209

Comments

It was really amazing. I got to know about myself that how much can I perform & what I have to improve. We learned & gained knowledge about fitness & its components that help us to do better in our life.

Students Name:- Chhavi Nain

Course:- Hindi + Physical Education

Semester:- 4

Ph. no:- 7818965008

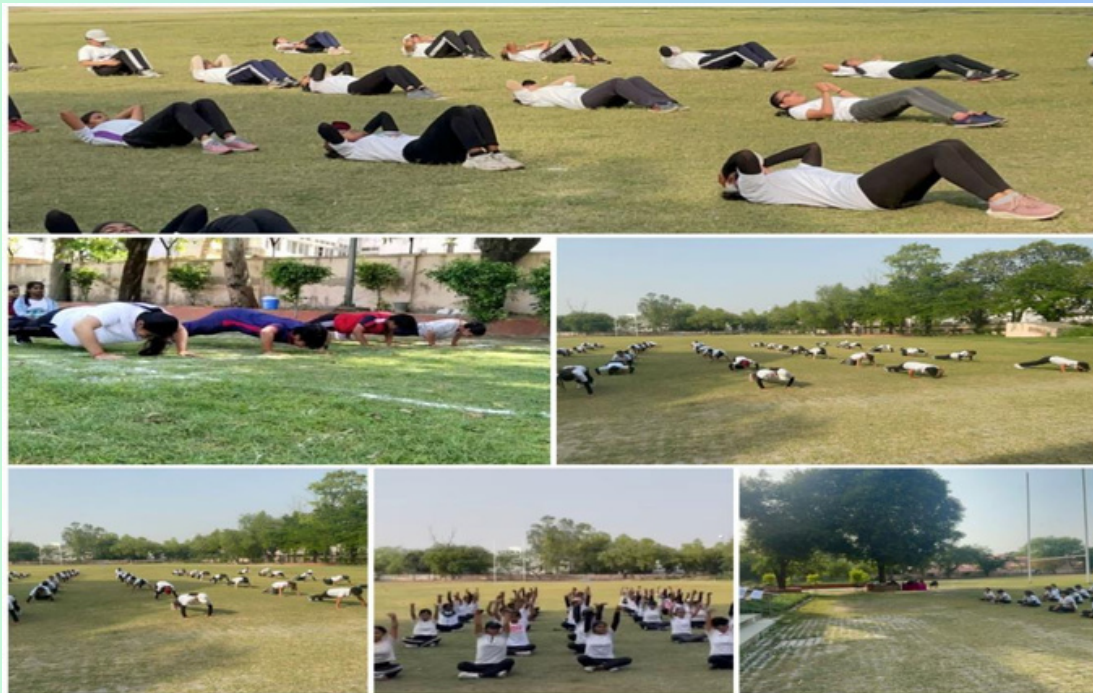
Comments

It's very great opportunity to me. I got to know about my fitness level in comparison of normal person. I learned the methods for developing my strength, flexibility, cardiovascular strength etc.

SDP Fitness For All Photos:-



SDP Photos:-











# **PSYCHOLOGY**



**Report**

**Of**

**IN-HOUSE SKILL DEVELOPMENT PROGRAM**

**UNDER IQAC**

**Daulat Ram College**

**On**

**DEVELOPING PSYCHOMETRIC  
SKILLS**



## SCHEDULE OF THE SESSIONS, RESOURCE PERSONS AND TOPICS

DAY	SESSION & TIME	TOPIC	SPEAKER/ RESOURCE PERSON
11 July Monday	I (10am-1.30am)	Inaugural Function & overview of psychometry.	Prof. Raini Sahni
11 July	II (12pm-1.30pm)	Ethics in Psychological Testing	Dr Kshitija Wason
11 July	III (2.30pm-4pm)	Uses & Applications of Psychometry in educational setting & clinical setting	Dr Kshitija Wason
12 July Tuesday	I (9.30am -11am)	Characteristics of Psychological Test.	Dr Rakhi Singh
12 July	II (11.30am--1pm)	Standardization of Psychological Test.	Prof. Rajni Sahni.
12 July	III (2pm-4pm)	Meaning/ types/ measuring Reliability of Psychological Test.	Prof. Raini Sahni.
13 July Wednesday	I (9.30am-11pm)	Validity & item Analysis	Dr. Deepesh Rathore.
13 July	II (11.30am-1pm) III (2pm-4pm)	Measuring Validity	Dr. Deepesh Rathore.
14 July Thursday	I (9.30am-11am) II (11.30am-1pm) III (2pm-4pm)	Scoring of test problems	Dr. Deepesh Rathore
15 July Friday	I (9.30am-11am) II (11.30am-1pm)	Test Construction (group wise)	Dr. Deepesh Rathore
15 July	III (2pm-4pm)	Pilot Study	Dr. Deepesh Rathore
16 July Saturday	I (9.30am-11pm) II (11.30am-1pm) III (2pm-4pm)	Thematic Apperception Test Presentations of students Presentation of Learning.	Prof Meetu Khosla Dr. Deepesh Rathore, Dr. Kshitija Wason, Dr. Rakhi Singh.



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## SESSION I

# Psychometry: Overview, Ethics, Uses & Applications

*Prof Rajni Sahni and Dr Kshitija Wason  
Psychology Department, Daulat Ram College*

### Session Content:

The session focused to annotate on what psychometry is, a brief about its historical background, who are psychometricians & psychometrists. The aim was to make the students aware of the basic concepts of psychometry including topics like what is a construct, psychometric soundness and utility, operational definition, assessment and so on. With the help of various examples, illustrations and theory the concepts were made clear about how as a field psychometry is so integrated and holds so much value in lives. To understand the field in a greater depth later in the session ethics and applications of psychometry were discussed followed by a number of interactive and engaging activities. The module helped the students to perceive how the field, despite a number of ethical concerns including that of informed consent, confidentiality, debriefing, knowledge of results, ablism vs disablism, non-stigmatization, cultural adaptation, data privacy/infringement, frauds in assessment holds so much of importance as a psychometric test is a legally binding document, they could make a difference in the lives of the individuals/ group and hence should be administered with utmost appropriateness. Then finally an understanding of how psychometry is applicable in the real-world setting was discussed. Despite having a number of ethical concerns, it is still most widely used in various fields for various purposes like screening, recruitment, diagnosis including the Military, educational setting, organisational setting, clinical spheres, sports and so on for objectively evaluating one's abilities, skills, knowledge, aptitude, mental states, behaviours etc. And finally, students were themselves made to take a personality test to get a hands-on experience on what psychometric tests are like and then the evaluation of results were done collectively in a very creative and interactive manner. The session highlighted the need for psychometry as a sub field of psychology, it's meaning and importance at the same aimed to make the students understand and keep in mind the ethical issues and further it's uses in the real time as they are not just mere "IQ" or "Personality tests" there is so much more of an application to them in each and every area of life today.

### Student Feedback:

A brief introduction about the skill development program was given at the inaugural function followed by the question of how many of us are aware with the term "psychometry", not many of us were, following that a detailed overview of psychometry was delivered to us which was a great add on to our pre-existing knowledge of psychometry. Later on, Ethics in psychological testing were discussed which was a very interactive yet insightful part as we got to know it is a cumbersome and very difficult task to construct as well as administer a psychometric test because it is actually a matter of lives and not a lay man's job, it requires great set of skills and knowledge.

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Then with that we ourselves were made to take a self-report personality test which was a very interesting one. And with that we were made to understand the application of these psychological measurements at different spheres of lives. The evaluation of test score helped us gain practical knowledge and we were made to do it in such a fun and effortless manner. The atmosphere throughout was warm, optimistic and kind. Each and every bit of the session was loved by all of us. The activity also gave us the chance to interact with one another and develop rapport.

**Learning Outcome:**

1. Understanding the field of psychometry.
2. Being familiar with the various notions of psychological testing.
3. Knowing the ethical aspects involved in developing and administering a psychological test.
4. Developing knowledge of the application and uses of the psychometry test in the real time settings.





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## SESSION II

# Psychological Testing: Characteristics (Standardisation and Reliability)

*Dr Rakhi Singh and Prof Rajni Sahni  
Psychology Department, Daulat Ram College*

### Session Content:

The main aim of this session was to explain the various characteristics of a psychological test. There are a number of tests available but are all of them good tests? The answer is a for sure no. A test is a good test when it is standardised, reliable, valid, objective and has well established set of norms. Only then it is said to be a good test. We were made familiar with all these characteristics and their relative and absolute importance in psychological testing. This session majorly focused upon the standardisation and reliability of the test and the rest were discussed in detail in the fourth coming sessions. With the help of presentations, examples, illustrations and input from all of us we were made to understand the concept of standardisation. Later in the session the meaning, importance and need of reliability along with its types and measurement was discussed. The aim was to make us understand the theoretical knowledge so that we can make use of that in the upcoming practical work of actual test construction. Inputs from the students were taken so as to brush up our existing knowledge and to understand the concept more efficiently.

### Student Feedback:

The session helped us to explore the various associated and important concepts in psychological testing. What are its characteristics and the important value it holds. How absence of even any one of them can make the relevance of the whole test in question. How these measures of standardisation and reliability are established why it is important to establish them, what purpose they serve. It was a great theoretical session on the understanding of various concepts and its further application in test construction.

### Learning Outcome:

1. Knowing and understanding the characteristics of a psychological test.
  2. Learning the concept of standardisation of psychological test, its importance, need and use.
  3. Learning the concept of reliability in psychological test, its meaning, types, measurement importance, need and use.
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## Session III

# Validity And Item Analysis, Measuring Validity

*Dr. Deepesh Rathore*  
*Psychology Department, Daulat Ram College*

## Session Content

The session focused to elucidate on what Validity is, how is it understood in simple terms and its definition. The aim was to make students of both psychology and non- psychology courses aware of the meaning of Validity, its importance in the context of a psychometric test and how can it be measured. The aim also involved introducing the students to Item Analysis and Correlation. Students were also informed how validity is an ever-evolving concept and ways in which it is characterized. Further delving into the concept, light was also shed on the different types of Validity as well as the relationship between reliability and validity. An important aspect was also highlighted which the students would definitely remember which stated how a reliable test is not always valid but a valid test is always reliable. Item analysis was also conducted along with the concepts of Correlation and types of correlation included in the session. Ways to derive correlation using simple soft wares like excel was also taught to students at the same time making the student understand various features and techniques in excel format. The concept of norms was also introduced to the students accompanied with the different kinds of norms. The session ended with students learning about the applications of testing in an organizational setting with various examples supporting each application. The session was enlightening and engaging for students with great detail of knowledge towards the important components of a test.

## Student Feedback

The session started with us being asked as to what validity is, hence we engaged in an interactive experience of explaining what validity meant both in terms of its exact definition and in layman terms. Relevant examples were also given to explain the types of validity and how to measure it. The session concluded with informing us about the steps that were involved in constructing a standardized test. The theoretical aspect of the concept of validity and measuring validity was wonderfully demonstrated along with its applications.

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## Learning Outcome

1. Thorough understanding of the concept of Validity.
2. Understanding the types of Validity.
3. How to conduct Item Analysis.
4. Thorough understanding of the concept and types of Norms.
5. Understanding the steps in test construction.

**Table 4.2 Hypothetical Multitrait-Multimethod Matrix**

Traits	Self-Report			Peer Rating			Projective Test		
	A <sub>1</sub>	B <sub>1</sub>	C <sub>1</sub>	A <sub>2</sub>	B <sub>2</sub>	C <sub>2</sub>	A <sub>3</sub>	B <sub>3</sub>	C <sub>3</sub>
Self-Report									
Social interest	A <sub>1</sub>	(88)							
Creativity	B <sub>1</sub>	52	(89)						
Dominance	C <sub>1</sub>	31	36	(91)					
Peer Rating									
Social interest	A <sub>2</sub>	57	21	61	(85)				
Creativity	B <sub>2</sub>	22	59	58	42	33	(94)		
Dominance	C <sub>2</sub>	11	12	23	66				
Projective Test									
Social interest	A <sub>3</sub>	56	22	32	65				
Creativity	B <sub>3</sub>	23	58	13	57	14	81	(92)	
Dominance	C <sub>3</sub>	11	11	4	20	60		(86)	

NOTE: Letters A, B, and C refer to traits (social interest, creativity, dominance) and subscripts 1, 2, and 3 refer to methods of measurement (self-report, peer rating, projective test). The matrix consists of correlation coefficients.

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## Session IV

# Scoring Of Tests and Problems

*Dr. Deepesh Rathore*  
*Psychology Department, Daulat Ram College*

## Session Content

The session focused on teaching students as to how to score tests and the data gathered from it as well as problems faced during the same. It was a very interactive session where all the students engaged in learning various methods of data analysis and various functions used in the same on

excel.

The analysis was done on an already filled questionnaire that the students were told to fill before the program started.

## Student feedback

It was a very informative session. Got to learn new skills. The practical part especially using excel for data analysis was really fun and mentally stimulating. We really enjoyed the whole session; it was really insightful and a new experience.

## Learning Outcome

1. Learning how to score tests.
  2. Dealing and introduce possible problems that rise in a test.
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## Session V

# Test Construction and Pilot Study

*Dr. Deepesh Rathore*  
*Psychology Department, Daulat Ram College*

### Session content:

The session started with the students being divided into two groups where the topic Empathy was chosen for construction of the test. The session was followed by students selecting five definitions of Empathy and using all to create one common definition of Empathy. In an interactive session, each student got the opportunity to construct questions for the questionnaire and learn the possible difficulties and nuances in constructing a question. 30 questions were constructed under different components or factors of Empathy that involved experience, understanding and managing. Later the questions were shuffled and included in a google form. Followed by the google form being

distributed

to all possible participants between the ages of 18-24. Around 200 responses were collected.

### Student Feedback:

The session focused on teaching students the complexities of constructing a test and its various components. The session being very interactive as students participated actively in constructing the questions and choosing of a topic for the test too.

### Learning Outcome:

1. How to construct a test.
  2. Possible problems faced during the construction of a test.
  3. How to construct a good question.
-

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## Session VI

# Thematic Apperception Test (TAT) & Presentations of students

*Prof Meetu Khosla, Dr. Deepesh Rathore, Dr. Kshitija Wason and Dr. Rakhi Singh.  
Psychology Department, Daulat Ram College*

### Session Content:

The session started with distribution of the thematic apperception test to all the students. The students were given the instructions pre-hand by the professor and then the test was administered as cues were presented one after the another. After the completion of the test the test questioners were collected and shuffled and were randomly re-distributed for scoring. The scoring procedure was explained one by one as TAT being a projective technique test has a very cumbersome and labour-intensive scoring procedure. The scoring procedure was well explained to all the students. And after completing the scoring all the tests were interpreted by the professor anonymously keeping in mind the confidentiality of the participants. With that we came to the end of the skill development program and now it was the students time to present the presentations of their learnings of this program of developing psychometric skills. The students were divided into two groups and very beautifully and gracefully presented their learnings of the six-day program. It was an absolutely wonderful experience conducting the session with highly interested and enthusiastic participants. Each one of the students took the valuable learnings from the sessions and made it a great success.

### Students Feedback:

This session focused on the importance of projective tests which are indirect test technique and are for participants who at times give the responses that are socially desirable or do not reveal their true self or are themselves consciously not aware of certain aspects. We have always been curious about how such tests that are so subjective in nature can be evaluated objectively in a standardised manner. This session was very informative and new to our learning experience. And the best part was the interpretation of the stories we wrote. It was done so beautifully and our enthusiasm was on the peak. We got to learn so much. These six days were a great learning experience. Along with the theory we learned the practical aspects of the subject and in the end, we also got a chance to showcase the set of skills we learnt. It was a very warm, nurturing and growing platform and we took the best of it with us.

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**Learning Outcomes of the session:**

1. A hands-on experience of using a projective technique.
2. A recap and evaluation of the skills learnt throughout the course of 6 days .



# **SANSKRIT**



**Report**

**Of**

**IN-HOUSE SKILL DEVELOPMENT PROGRAM**

**UNDER IQAC**

**Daulat Ram College**

**On**

**INDIAN CULTURAL TRADITION  
AND DIVERSITY INTEGRATION**





**Name of the collaborating departments:** Sanskrit Department, Daulat Ram College.

**Title of the course:** Indian cultural tradition and Diversity integration.

**Sub theme:** Cultural sensitization & diversity integration.

**Course Coordinators:** Dr. Sushma Devi, Assistant Professor, Department of Sanskrit, University of Delhi.

**Co-Coordinator:** Dr. Ravi Kumar Meena, Assistant Professor, Department of Sanskrit, University of Delhi.

**Duration with dates:** One week (22nd June to 28th June 2022)

Sr.no.	Date	Time	Module	Name of the Speaker	Affiliation of the Speaker	Session Coordinator
1	22 June, 2022	11:00 am – 01:00 pm	Inaugural Session <i>Vasudhaiva Kutumbakam</i> - Indian culture tradition	Prof. Anju Seth	Professor, Department of Sanskrit, Satyawati College, University of Delhi	
		02:00 pm – 04:00 pm	Indian culture spiritual development	Dr. Shashi Sharma	Department of Sanskrit, Daulat Ram College	Dr. Sushma Devi
2	23 June, 2022	11:00 am – 01:00 pm	Personality development by Indian astrological tradition	Dr. Shashi Sharma	Department of Sanskrit, Daulat Ram College	Dr. Sushma Devi
		02:00 pm – 04:00 pm	Personality building through culture	Dr. Sushma Devi	Department of Sanskrit, Daulat Ram College	Dr. Shashi Sharma
3	24 June, 2022	11:00 am – 01:00 pm	Hindi cinema Indian culture and personality development	Smt. Sneha Lata	Department of History, Daulat Ram College	Dr. Kamna Vimal

		02:00 pm – 04:00 pm	Indian panchkoshi development method	Dr. Kamna Vimal	Department of Sanskrit, Daulat Ram College	Dr. Sushma Devi
4	25 June, 2022	10:00 am – 11:30 am	Hindi cinema reference point of Indian culture	Dr. Manish Chaudhary	Department of Hindi, Daulat Ram College	Dr. Ravi Kumar Meena
		11:30 am – 01:00 pm	Indian method of qualified personality development	Dr. Kamna Vimal	Department of Sanskrit, Daulat Ram College	Dr. Sharda Gautam
		02:00 pm – 04:00 pm	Indian cultural institution family society and Nation	Dr. Rosy Sharma	Department of Sanskrit, Daulat Ram College	Dr. Ravi Kumar Meena
5	27 June, 2022	11:00 am – 01:00 pm	Vedic mantra pronunciation and location meditation method	Dr. Ravi Kumar Meena	Department of Sanskrit, Daulat Ram College	Dr. Sushma Devi
		02:00 pm – 04:00 pm	Purusharth Chaturthaya this personality development	Dr. Sharda Gautam	Department of Sanskrit, Daulat Ram College	Dr. Shashi Sharma
6	28 June, 2022	10:00 am – 11:30 am	Cultural Renaissance through Indian Legends	Dr. Sharda Gautam	Department of Sanskrit, Daulat Ram College	Dr. Ravi Kumar Meena
		11:30 am – 01:00 pm	Presentation Session	Students		
		02:00 pm - 04:00 pm	<i>Vaividhye Ekatvam</i>	Dr. Saurabh Ji	Department of Sanskrit, University of Delhi	Dr. Sushma Devi

#### Details of the Program :

The program started on 22nd June 2022 with the inaugural session at 10:00 a.m. In the beginning of the program, the lamp was lit in front of Saraswati Mata and manglacharan was sung with the welcoming of our chief guest Prof. Anju Seth. Our Vice Principal mam, felicitated Prof. Anju Seth and presented her the SDP folder, Dr. Sneha Lata mam from history department was honoured with folder by Dr. Sushma Devi, Dr. Shashi Sharma mam honoured professor Savita Nanda mam by giving her folder and Dr. Pooja Sharma mam was honoured with folder by Dr. Ravi Kumar Meena.

The program continued for seven days and lasted on 28th June 2022 with the PPT presentations by the participants and judgement by the Dr. Sushma Devi and Dr. Shashi Sharma. Students presented PPT presentation on different topics, first position was secured by Dipika Maini from Sanskrit department and second position secured by Laxmi Kumari from Sanskrit department and third position secured by Kastoori Yadav from Hindi Department. Students were awarded with the prizes. On the last day of this program, Dr. Saurabh Ji gave a very good and very inspirational speech on the topic of Unity in diversity. A brief report was presented by Dr. Sushma Devi about the sessions held in the program in the presence of Principal, Department teachers and students. A token of thanks was presented by the convener of the program Dr. Sushma Devi to the Chief Guest, Guest of Honour, Principal Ma'am, Teacher – Incharge, Department teachers and the members of non-teaching staff to provide their help who made the event a great success. The event ended with the enchanting of 'Shanti Patha'.

#### Description of the course:

Indian culture is a culture of unity in diversity, with the knowledge of which the feeling of Vasudhaiva Kutumbakam becomes possible. The goal of individual and nation building and development can be achieved through cultural consciousness. Through this, efforts will be made during the SDP to spread knowledge related to different aspects of Indian culture among the participating students through various methods and through that their personality will develop as an ideal Indian citizen.

#### Objectives:

- That strength of knowledge integration
- Personality development through Indian culture
- Overview of Indian culture traditions
- Development of morality through Indian culture.
- Promotion of Indian culture among students.
- Maximum development of girl students according to Indian culture.
- To inculcate moral ideals and life values in the students
- To increase awareness of Indian cultural traditions, to develop individual and organizational abilities in the girl students.

#### Topics Covered:

- Indian culture spiritual development.
  - Indian method of qualified personality development.
  - Indian cultural institution family society and Nation.
  - Vedic mantra pronunciation and location meditation method.
  - Purusharth chaturtha personality development.
  - Cultural Renaissance through Indian Legends.
  - Vasudhaiva kutumbakam Indian culture tradition.
  - Personality building through culture.
  - Hindi cinema Indian culture and personality development.
  - Personality development by Indian astrological tradition.
  - Cultural renaissance through Indian legends.
-



- Diversity unity

**Speaker's in the Course:**

Sr. no.	Name	Designation	Department
1	Prof. Anju Seth	Professor	Sanskrit department, Satyawati college, University of Delhi
2	Dr. Sneha Lata	Assistant Professor	History Department, Daulat Ram College, University of Delhi
3	Dr. Shashi Sharma	Assistant Professor	Sanskrit department, Daulat Ram College, University of Delhi
4	Dr. Sharda Gautam	Assistant Professor	Sanskrit department, Daulat Ram College, University of Delhi
5	Dr. Sushma Devi	Assistant Professor	Sanskrit department, Daulat Ram College, University of Delhi
6	Dr. Kamna Vimal	Assistant Professor	Sanskrit department, Daulat Ram College, University of Delhi
7	Dr. Saurabh Ji	Assistant Professor	Sanskrit department, Daulat Ram College, University of Delhi
8	Dr. Rosy Sharma	Assistant Professor	Sanskrit department, Daulat Ram College, University of Delhi
9	Dr. Ravi Kumar Meena	Assistant Professor	Sanskrit department, Daulat Ram College, University of Delhi
10	Dr. Manish Chaudhary	Assistant Professor	Hindi Department, Daulat Ram College, University of Delhi

**Number and Profile of Participants:**

No. of students	Department	Year
11	Sanskrit Department	1 <sup>st</sup> yr
2	Sanskrit Department	2 <sup>n</sup> yr
1	Hindi Department	1 <sup>st</sup> yr
6	B.A. Program	1 <sup>st</sup> yr

Method of assessments of participants:

PPT PRESENTATION: 50 Marks

ATTENDANCE: 50 Marks



Detailed Learning Outcomes of the Course:

- Alternative career options
- Enhancing value system
- Encouraging Indian culture
- Holistic development of participants
- Understanding oneness among diverse cultures
- Emerging as self- confident and proud Indian citizen

**Feedback from Participants regarding the event (compiled and summarized):** Rating given by all 18 students.

	<b>Exceptional (5)</b>	<b>Very Good(4)</b>	<b>Good (3)</b>	<b>Fair (2)</b>	<b>Poor (1)</b>
<b>Overall event</b>	18	-	-	-	-
<b>Usefulness of sessions</b>	18	-	-	-	-
<b>Quality of speakers/ resource persons</b>	18	-	-	-	-
<b>Facilities</b>	18	-	-	-	-
<b>Material</b>	18	-	-	-	-
<b>Registration Process</b>	18	-	-	-	-
<b>Food/ Beverage</b>	18	-	-	-	-











# **ZOOLOGY**



**Report**

**Of**

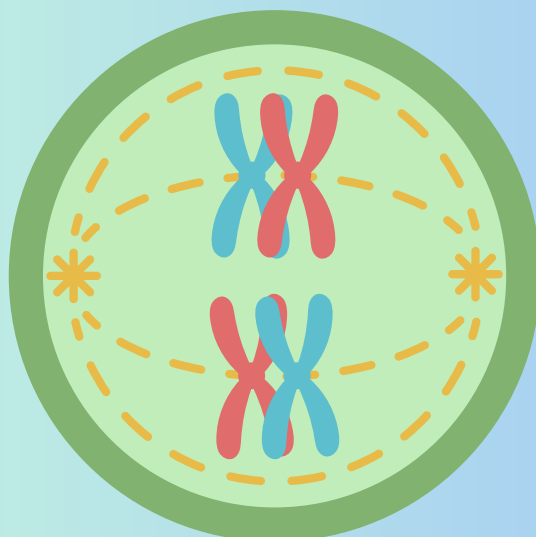
**IN-HOUSE SKILL DEVELOPMENT PROGRAM**

**UNDER IQAC**

**Daulat Ram College**

**On**

**HANDS ON TRAINING IN LIFE  
SCIENCES: TOOLS AND  
TECHNIQUES**



**Report for Skill Development Programs**  
**Daulat Ram College**  
**2022-23**

**Names of the Collaborating Departments:** Department of Zoology

**Title of the Course:** Hands on training in Life Sciences: Tools and Techniques

**Course Coordinator:** Dr. Jyoti Taneja, Co-Coordinator: Dr. Sonika Sharma

**Duration with dates:** 5 days- 13.07.22, 14.07.22, 15.07.22, 18.07.22, 19.07.22

SNo.	Date	Theme	Topic	Resource person	Affiliation	Time
1	13-Jul-22	Medical Diagnostics	BP measurement	Mr. Amit		10AM-12:00 PM
			Hb estimation	Dr. Madhu		12:00 PM-1:00 PM
			Differential leucocyte count (DLC)	Dr. Sonika Sharma		2:00 PM-3:30 PM
2		Developmental biology	Chick windowing	Dr. Pallavi		3:30 PM-4:30 PM
3	14-Jul-22	Cell Biology	Study of mitosis	Dr. Jyoti Singh		9:30 AM-11:00 PM
			Study of X inactivation in human cheek cells	Ms. Kungreiliu Panmel		11:00 AM-1:00 PM
			Principle of fixation and staining	Dr. Pallavi		1:30 PM-3:30 PM

4		Developmental biology	Observation of chicken embryonic development.	Dr. Pallavi		3:30 PM-4:30 PM
	15-Jul-22					
5		Molecular Biology	Primer designing	Dr. Sonika Sharma		9:30 AM -11:00 AM
			Polymerase Chain Reaction (PCR)	Dr. Neha Niharika		1 1:00 AM-12:30 PM
			DNA estimation	Dr. Sunita k. Yadav		1:30 PM-3:30 PM
6		Developmental biology	Chick windowing and observation of chicken embryonic development.	Dr. Pallavi and Dr. Jyoti Taneja		3:30 PM-4:30 PM
7	18-Jul-22	Biochemistry	Qualitative assay of protein	Dr. Madhu		9:30 AM-11:00 AM
			Enzyme activity bioassay kinetics and achromic point determination	Dr. Jyoti Taneja		11:00 AM-I:00 PM
			Amino acid separation by Paper chromatography	Mr. Amit Singh Dhaulaniya		1 :30 PM-2:30 PM
8		Developmental biology	Chick windowing and observation of chicken embryonic development.	Dr. Pallavi		3:30 PM-4:30 PM
	19-Jul-22					
9		Ecology	Dissolved oxygen measurement			9:30 AM -11:30 AM

			in the water	Dr. Meenakshi Thakur	
			Turbidity and transparency study In pond	Mr. Amit	11:30 AM-12:30 PM
			Study of phytoplankton and Zooplankton	Ms. Kungreiliu Panmei	1 :30 PM-3:30 PM
10		Developmental biology	Real-time observation of embryonic development	Dr. Pallavi Sethi	3:30 PM-4:30 PM

Details of the course:

1) Description of the course: The aim of the course is to provide students with a multi disciplinary perspective to facilitate their skills in research. The comprehensive course structure encompasses valuable wet lab skills and instrumentation knowledge that will strengthen their conceptual understanding and bridge the gap of online education. The course will expose them to fundamental concepts and basic practicals to cover topics spanning life science essential course tools and techniques. Theoretical Knowledge is not complete without practical skills and the practical aspect of the course will help students to work in research labs and understand the basic life science practical experiments exposure to fill the gap in practical knowledge and would be beneficial in their future endeavors (M.Sc./ Research/other higher studies).

2) Objectives: To provide Hands on-training on Life Sciences Tools and Techniques

At the end of the course, the student should be able to:

3) Perform basic life science wet lab experiments and use of instruments

4) Have basic understanding of life science lab instruments and techniques in practical context

5) To keep pace with the new and essential technologies and expanding information in the field.



- 6) Basic medical diagnostic skills to provide better employability opportunities to graduate students.
- 7) Hands on experience of latest techniques that are in current usage in advanced research laboratories and diagnostics

Topics covered:

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

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

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

● **Practical methods in Ecology:** Study of Pond water ecosystem

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

Speakers in the course:

SNO.	Name	Designation	Affiliation
1	Mr. Amit		Department of Zoology, DRC
2	Dr. Madhu		Department of Zoology, DRC
3	Dr. Sonika Sharma		Department of Zoology, DRC
4	Dr. Pallavi		Department of Zoology, DRC
5	Dr. Jyoti Singh		Department of Zoology, DRC
6	Ms. Kungreiliu Panmel		Department of Zoology, DRC

7	Dr. Meenakshi Thakur		Department of Zoology, DRC
8	Dr. Neha Niharika		Department of Zoology, DRC
9	Dr. Sunita k. Yadav		Department of Zoology, DRC
10	Dr. Jyoti Taneja		Department of Zoology, DRC

#### Number and Profile of Participants:

No. of Students	Department	Year
16	Zoology	Second year
9	Biochemistry	Second year
11	Life Sciences	Second year

Methods of Assessment of Participants: (Test/Assignment/Project/Quiz/Presentation etc.)  
(Kindly provide a copy of the pre-imposed measures/instruments/scales/questionnaires used for assessment of the learning outcomes):

1. Continuous evaluation based on performance and activity during the training period.
2. Assignments taken via Google classroom including practical based questions.
3. Self practice of chick windowing and visualize developmental stages in Developmental biology.

#### Detailed Learning Outcomes of the Course:

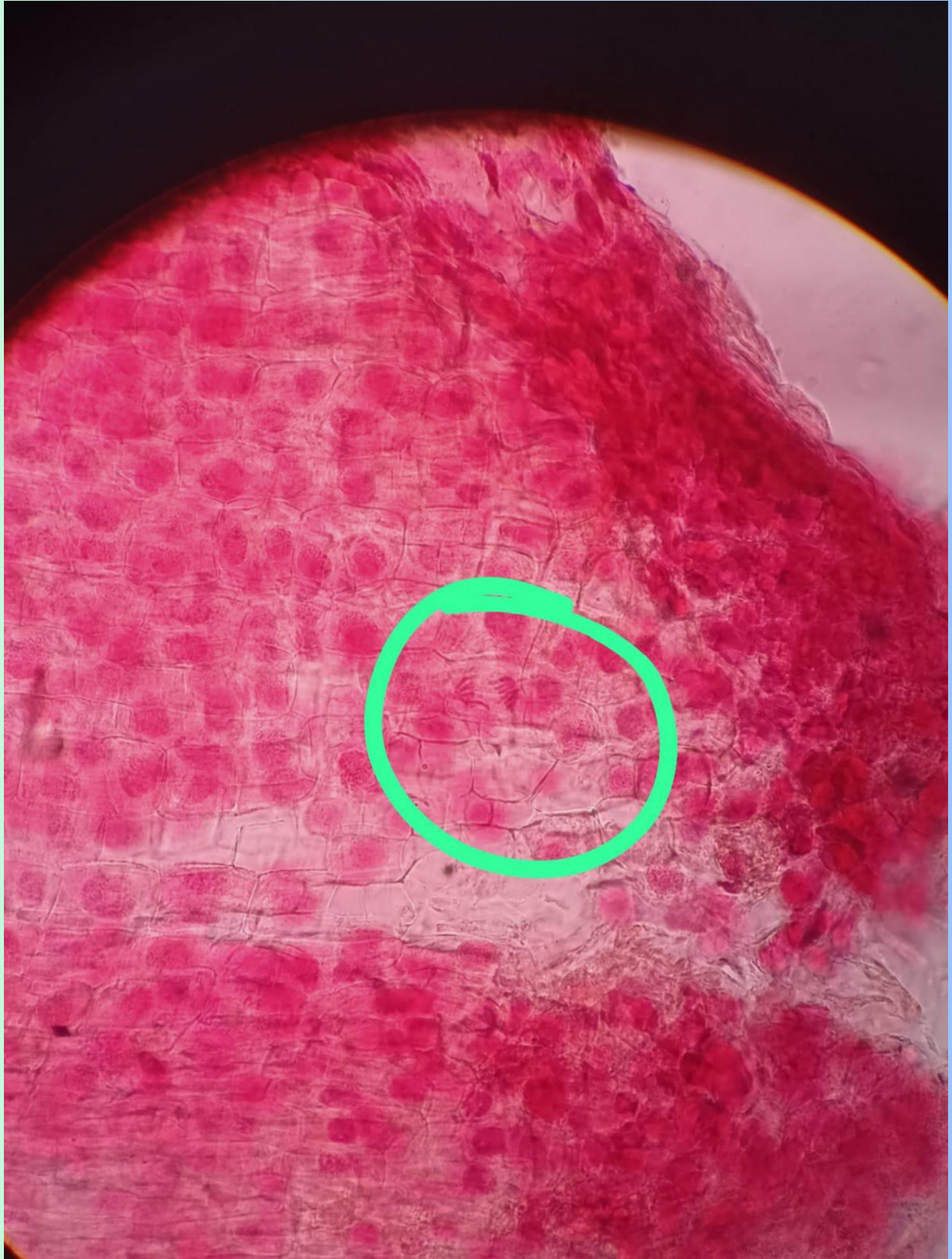
1. Students learnt and familiarized with laboratory experiences.
  2. Hands-on experience of all subject practicals which were missed in online education.
  3. Firstly ever performed Chick windowing and real time observation of chick embryonic development.
  4. Lab manual for Life science Tools and technique was made available for the students.
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Feedback from Participants Regarding the Program: Hard copy feedback forms have been submitted.

(No certificates will be provided till the feedback is submitted by the participants. Committee will provide the link for the feedback form.)

A Few Photographs (student activity oriented photographs only/activity photos):









Video 1:

<https://drive.google.com/file/d/1QaFGV2aMtTguFyeiheI8zBoGjf9UICd3/view?usp=sharing>

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Video 2:

<https://drive.google.com/file/d/1QbZgtBHf8CN4Yc-qJBeHyqPXEVzpVUYG/view?usp=sharing>

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# **ZOOLOGY**



**Report**

**Of**

**IN-HOUSE SKILL DEVELOPMENT PROGRAM**

**UNDER IQAC**

**Daulat Ram College**

**On**

**UNVEILING THE ANIMAL  
WORLD IN BEHAVIOURAL  
WAY**



**Coordinators:** Dr. Jyoti Singh, Dr. Neha Niharika

**Duration:** 23rd March 2023- 8th April 2023 (Every Thursday and Saturday)

**No. of Students participated:** 34

**Mode of Learning:** offline

**Objectives:**

This course aims to provide an overview of animal behaviour and chronobiology starting from historical prospective to types of behaviours and their evolutionary significance. The course also highlights types, mechanisms and importance of the biological rhythms and biological clocks operating in the living organisms. This course will help the learners to understand and appreciate the different types of animal behaviours, their adaptive, evolutionary and practical significance. The practical aspect of course will help students to design and analyse the research hypothesis/study critically and would be beneficial in their future endeavors (M.Sc./ Research/other higher studies).

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## Program Schedule

S.No.	Day/ Session	Details	Resourceperson
1.	<b>D1-Thursday 23<sup>rd</sup> March 12:00pm onwards</b>	"Darwinian concept for evolution of sexual selection"  " Time will neither Wait for You nor for Me: Clock-controlled Behaviours in Nature and Lab"	<b>Prof. A.K. Singh</b>  <b>Prof. Vinod Kumar</b>
2.	<b>D2-Saturday 25<sup>th</sup> March 12:00pm onwards</b>	Rearing of Aphid colony in the lab and Effect of phytochemicals on biology of aphids.  Mate selection through videos and documentary and Sexual selection Vs. Natural selection	Dr. Jyotsna Singh and Ms Anna Senrung  Ms. Rohini Arya and Dr. Nisha Singh
3.	<b>D3-Saturday 1<sup>st</sup> April 12:00pm onwards</b>	Social Life of honey Bee.  Demonstration and calculation of LC 50 and LD 50.	Dr. Sunita Yadav  Dr. Madhu and Dr Sonika Sharma
4.	<b>D4-Thursday 6<sup>th</sup> April 08:00am onwards</b>	Birds Nests Marvels of Architecture and Design  Habitat selection of woodlice and mechanism of Photo-taxis in wood-lice  Study of Model organisms (Rat/Mice)  Study of Estrous cycle.  Effect of pesticides on Environment.	Dr. Anju Jain  Dr. Meenakshi Thakur  Miss Priyanka and Miss Largee Biswas  Dr. Jyoti Taneja  Dr. Sonika Sharma and Dr. Madhu
5.	<b>D5-Saturday 8<sup>th</sup> April 12:00pm onwards</b>	Geotropism in Earthworm  Determination of Chronotype to improve sleep quality.	Dr. Pallavi Sethi  Dr. Nisha Singh



**Assessment method:** Quizzes, assignments, group activities, presentation and analysis were done after each session.

**Feedback:** Feedback from each participants was collected after the end session.

### **Description of SDP**

The SDP started with a warm welcome of our guest speakers by Dr. Neha Niharika and Dr. Jyoti Singh (Coordinators). Inaugural talk was given by Prof. A. K. Singh and Prof. Vinod Kumar. The importance of animal behavioural, economic importance and environmental awareness was discussed in the entire SDP. One important aspect pertaining to the studies on Animal Behaviour is that it can be conducted anywhere and at any time, depending on the interest of the researcher. Moreover, it is not confined to the four walls of the classroom or the laboratory. The behavioural biology has high applied value and currently linked to conservation biology, molecular biology, behavioural ecology and integrated pest management.

#### **Day-1 (23rd March 2023)**

The 1st day of SDP was started with the inaugural talk of Dr. A.K Singh. He explained sexual dimorphism ; the systematic difference in the form between individuals of different sex in the same species. Many examples from wild life were included in the presentation so that the students could effectively link the concepts. He also described how to create a clear and precise research question and how to pursue research in animal behaviour.

Second session was led by Prof Vinod Kumar, he explained about the clock controlled behaviour in Nature and Labs. Prof. Kumar explained seasonality and human and impact of disturbed biological rhythms on human health. Many examples from day to day life were also given to explain the concept of biological clock and rhythms. Participant were motivated to autonomously identify current problems and impact on human health.

#### **Day-2 (25th March 2023)**

The session 1 was opened by Dr. Jyotsna Singh and Ms Anna Senrunga

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Students learnt rearing of Aphids in lab condition and study of both beneficial insect like honeybees that perform pollination and harmful insect like agricultural pests that damage crop pests. Continuous overuse and misuse of insecticides in agriculture has aggravated pest problems, amongst which aphids are a major concern

The session 2 was led by Ms. Rohini Arya and Dr Nisha Singh during which she discussed various forms deep into the special mating system in birds mainly courtship. The type of courtship behaviour seen in birds include singing, dancing, preening, feeding, nest building and territory behaviour. Study of courtship behaviour in Peacock, Baya bird, avocet bird, Weaver bird, Pigeons etc. She presented them with several examples.

### **Day-3 (1st April 2023)**

Session 1 was conducted by Dr. Sunita Kumari Yadav. She provided information to students about the honeybee. As it is remarkable for the dancing movements. Details of communication about the location, distance, size, and quality of a particular food source was discussed. This class also covered about bee product and different types of pollen grains.

Session 2 was led by Dr. Madhu and Dr. Sonika Sharma. They discussed there is sequential rise in the production and consumption of pesticide during last few decades. If these pesticides used correctly and safely, they can prevent and control pests, diseases and weeds to increase the harvest. However, during application, only a small amount of toxic chemical reaches the targeted pests, disease and weeds. The rest contaminates the surrounding soil, air, and waterbodies – which brings harm to useful living

### **Day-4 (6th April, 2023)**

The session was started by Dr. Anju Jain. She explained to them identification of different types of nest, and participants learnt the subtle clues that distinguish different nests and make each nest just as distinct as the species that builds it.

Then experiments related to habitat selection of woodlice and the behavioral response in relation to the different environmental conditions was conducted by Dr Meenakshi Thakur. participants noted woodlice prefer high humidity and cooler temperatures is a direct caused by the permeability

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of their exoskeleton to water, these preferences are behavioural adaptations to help reduce desiccation.

Dr. Jyoti Taneja conducted the next session and explained reproductive cycle. The reproductive cycle in rodents called the estrous cycle. The timing of the cycle may be influenced by light, temperature, nutritional status and sociological relationships. Change in in the light dark cycle or timing of food, light affects the productivity.

Ms. Priyanka and Ms. Largee Biswas explained about the model organisms by taking mice as one of the example. Students were excited to see mice and hands on demonstration was done by taking the vaginal smear of the mouse and showing them the different phases of estrous cycle. The session was enjoyed as they were told about the ethical issues associated with using animal as model organism.

The next session was led by Dr Madhu and Dr Sonika Sharma. They continued the experiment by using different concentrations of pesticides and different types of pesticides and observed how it affects the ecosystem.

#### **Day-5 (8th April, 2023)**

Dr. Pallavi Sethi conducted the session and instructed the students on how to handle the live animals. They got an opportunity to hands on the experiment to study Geo-taxis behavior in earthworm. Participants used different obstructions and angles to see the behaviour of earthworm.

Last session of the SDP was led by Dr. Nisha Singh. She explained the effects of modern lifestyle, light at night, usage of mobile phone etc. The modern lifestyle might lead to change in the natural distribution of chronotype which is directly reflected to alterations in sleep parameters and mood behaviour. Therefore assessing chronotype and its relation to sleep quality and mood behaviour can provide an insight into the changes in the physical and mental health.

The feedback from the students for each session was overwhelmingly positive. Participants were very enthusiastic to work on animals. They have asked that more workshops like this be held in the future. The workshop inspired the participants to start small projects/ experiments their own.

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**Few glimpses of workshop:**

