

Workshops/Seminars/Conference Including  
Programs Conducted on Research  
Methodology, Intellectual Property Rights  
(IPR), Entrepreneurship etc.

SESSION 2023- 24



SD COLLEGE BARNALA

## 1. Lecture on Various Standards of Bureau of Indian Standards (BIS)

Bureau of Indian Standards (BIS) Chandigarh and S. D. College BIS Club organized a lecture, Orientation and Quiz Cum Test on 2<sup>nd</sup> August 2023 under the leadership of BIS Club Mentor Dr. Sanjay Kumar Singh. In this programme, Dr. Sanjay Kumar Singh was the Resource person and delivered a lecture on various Standards of BIS. Moreover, this BIS Club was established for the harmonious development of the activities of Standardization and Quality Certification knowledge of goods to young students. After the lecture, Orientation and Quiz Cum Test was organized among all the BIS Club Members in which around 100 of students participated. 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> position holders were awarded with cash prizes of Rs1000 , Rs750 , Rs500 and Rs250 respectively.



## 2. Two Week Interdisciplinary Summer Training Program

The Department of Chemistry at SD College Barnala, in collaboration with the Department of Botany, organized a two-week interdisciplinary summer training program under the DBT Star College Scheme from July 29, 2023, to August 11, 2023. The primary objective of this program was to enhance bench skills and cultivate a scientific temperament among students. Each day was divided into two sessions, during which various interdisciplinary experiments were conducted by teachers from both departments. Dr. Kulbhushan Rana led experiments on the synthesis and spectroscopic analysis of several useful organic compounds. Ms. Rajni Gupta explained methods for determining oxalate ions in fruits, which, when consumed in large quantities, may lead to kidney stone formation.



## 3. Lecture to Celebrate World Standards Day under Bureau of Indian Standards (BIS) Chandigarh

In a dynamic and engaging event, the Bureau of Indian Standards (BIS) Club at S. D. College, Barnala & BIS Chandigarh Organised Lecture & Youth to Youth Quality Connect Campaign to celebrate World Standards Day-2023 on October 11, 2023. A comprehensive overview of the significance of World Standards Day was presented by Dr. Sanjay Kumar Singh, Mentor of BIS Club shedding light on the global impact of Indian standards. A presentation showcased the critical role and functions of the Bureau of Indian Standards (BIS) in formulating and regulating quality standards in India. Attendees gained insights into the essential work done by BIS in ensuring product safety and consumer protection by expert Speaker Mr. Ajay Maurya, Joint

Director/Scientist-D, Bureau of Indian Standards, Ministry of Consumer Affairs, Food & Public Distribution, Govt of India.



#### 4 . Training Program "Learning Science via Standards"

Dr. Sanjay Kumar Singh, Mentor of the BIS Club at S. D. College, attended the "Training of Resource Personals (RPs)" to act as Key RPs on 19-20 October 2023 at NITS Noida. The training, part of the "Learning Science via Standards" initiative, focused on the transaction of lesson plans to enhance quality consciousness among youth. Dr. Singh was nominated by the Chandigarh Branch Office, BIS, to participate in this program, which aims to educate higher secondary students about the importance of standards in improving quality of life and economic development.



## 5. Workshop and Hands on Training Program on Spectroscopy - 29<sup>th</sup> Feb 2024

One day workshop and hands on training program on UV-Visible spectroscopy was organised by Chemistry department S.D. College, Barnala under DBT Star College Scheme. Dr. Manmohan Chhibber, Head Department of Chemistry & Biochemistry from Thapar Institute of Engineering and Technology conducted the program. The first session was about the basic principles of spectroscopy. Dr. Chhibber conducted a very thorough & interactive session. In the second session the students were divided into groups for hands on training. They studied about the absorption of various organic compounds on spectrophotometer by preparing their solutions in Carbon Tetrachloride and Alcohol. Around 65 students from medical as well as non-medical stream participated in the program.



## 6. Extended Lectures: Organometallic Compounds & Mass Spectroscopy – 11<sup>th</sup> Mar 2024

The Chemistry Department, S.D. College Barnala, under the DBT Star College Scheme organised extended lectures on Organometallic Compounds & Mass Spectroscopy. The lectures took place in four sessions.

The first & second session was conducted by Dr. Gulshan Kumar Bansal, Professor and Head of Dept. Pharmaceutical Sciences and Drug Research, Punjabi University, Patiala. He elaborated about the principle and concept behind mass spectroscopy and explained how the structure and mass of a compound can be determined using mass spectrometer. He thoroughly explained the parts of the equipment along with their functions such as the Ion source, analyser, and detector. He also explained the practical applications of mass spectroscopy in the various fields such as analysis of pesticides in foods, soil testing and drug testing etc.

The third & fourth session was conducted by Dr. Meenu, Assistant Professor, Maharaja Ranjit Singh, Punjab Technical University, Bathinda. She explained about the types of organometallic compounds, their bonding and elaborated about carbonyl compounds an important class of organometallic. She also explained about the practical use of these compounds in electronics

industry, for polymerisation, in organic synthesis, and as catalyst etc. Around 60 students from medical as well as non-medical stream participated in the workshop.



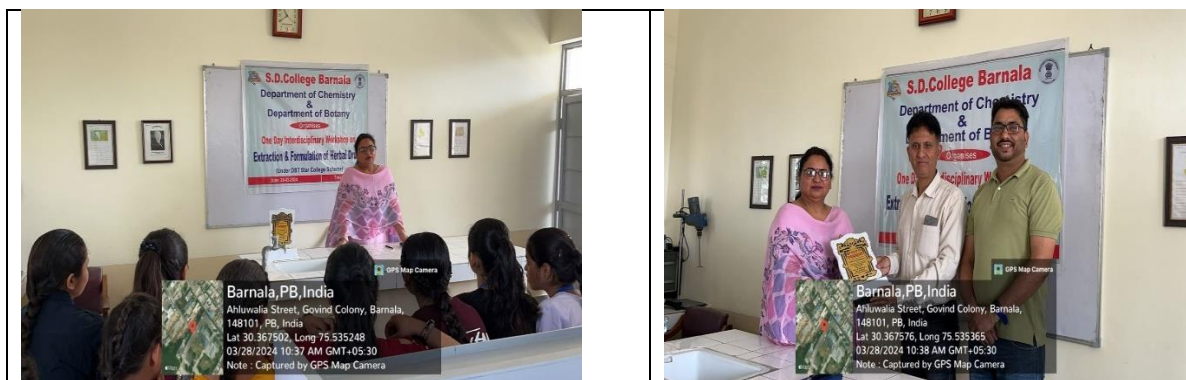
### 7. Lecture cum workshop series on Nanotechnology – 22<sup>nd</sup> Mar 2024

The Chemistry Department, S.D. College Barnala, under the DBT star college scheme conducted one day lecture cum workshop on Nanotechnology. Dr. Rajesh Kumar, Assistant Professor, JC DAV College, Dasuya who himself has done a lot of research on nano materials was the resource person. He explained the students regarding various methods of preparation of nano materials along with the benefits of each method. He explained that nano-materials can be created by breaking down of larger particles or combining smaller ones. In hands on training session the students in groups under the guidance of resource person prepared nano materials of zinc oxide, chromium oxide and nickel oxide by using muffle furnace. In the third session, he elaborated about the use of nano-materials in various fields like preparation of stain repellent clothes, solar cell coatings, transparent sunscreens etc. Around 85 students from medical as well as non-medical stream participated in the program.



### 8. Workshop on “Extraction and Formulation of Herbal Drugs”: 28<sup>th</sup> March, 2024

A workshop on “Extraction and Formulation of Herbal Drugs” on 28<sup>th</sup> March 2024 was organised by Department of Botany in collaboration with Department of Chemistry. In this workshop, Ms. Chitra Singh, Associate Professor, SD college of Pharmacy was a resource person. She trained students for extraction and formulation herbal creams, facewash from rose petals and gripe water preparation from fennel seeds. She also told students regarding beneficial effects of herbal products in comparison to synthetic ones. About 50 students of B.Sc. Medical & Non-Medical participated in the event.







### 9. Two Days Seminar followed by Poster Presentation and Guest Lectures 1-2 March 2024

Department of Physics, SD College Barnala organized a seminar, poster presentation and workshop on Nano-material and High Energy Physics and its applications in various sectors on 1-2 March 2024 under DBT star College Scheme. These two days event was divided into four sessions. On 1<sup>st</sup> March, Dr. Pukhrambham Deepak, resource person from Chandigarh University discussed about Nanomaterials and their applications. After this lecture poster presentation competition was organised and 29 students of B.Sc-I,II and III took part in it. Awards were given to the students who got first, second and third positions. On 2<sup>nd</sup> March, Dr. Captain Rituraj Singh, Post Doctoral Fellow, IIT Indore, delivered guest lecture on some secrets of origin of Universe. After the lecture, students were given hands on training on preparation of carbon nanorods using a simple technique in Physics lab by Dr. Pukhrambham Deepak. In this event Dr. Baltej Singh, Dr. Manoj Kumar Gupta and Dr. Sanjay Singh were present. At the end, Dr Sanjay Kumar Singh gave vote of thanks.







### **10. Three Days Electronics Based Hands on Training Programme Cum Workshop 12-14 March 2024**

Department of Physics, S. D. College, Barnala under DBT star college organised “Three Days Electronics Based Hands on Training Programme Cum Workshop” on 12-14 March 2024. Resource person of this workshop was Mr. Sukhvinder Singh, Coordinator, N. I. E. R. T, Patiala. In this workshop more than 75 students of B.Sc. NM (I, II and III) took part and enhanced their knowledge about the working of various electronics and electrical components like Resistor, Capacitor, LED, transformer, LDR, MOSFET, VDR, Relay, Speaker, buzzer, Preset, Diodes, transistor etc. by making electronics based working projects prepared under the guidance of resource person. On this occasion , Prof. Nirmal Gupta, Vice Principal, Dr. Baltej Singh, Dr. Manoj Kumar Gupta and Dr. Sanjay Kumar Singh were present . Dr Manoj Kumar Gupta gave vote of thanks.



## 11. One day Hands-on-training program “Exploring Oscilloscopes: CRO vs DSO” on 18 March 2024

Under the DBT Star college Scheme, the Physics Department at S.D. College Barnala organised one-day hands-on training programme on March 18, 2024, titled "Exploring Oscilloscopes: CRO vs. DSO." Dr. Asha Rani, an assistant professor in the PG Department of Physics at Dev Samaj College for Women in Ferozpur, served as the program's resource person. In first session, Dr. Asha Rani gave a brief explanation of the DSO and CRO's functioning principles, their applications, and the benefits and drawbacks of each depending on the measuring circumstances. The second session covered the practical uses of these two instruments in the

several Physics Practical's prescribed in syllabus of B.SC Physics. Under the direction of a resource person, B.SC. II and III students enthusiastically performed various experiments using these devices. In addition, students were taught how to test a variety of electrical components, including diodes, NPN and PNP transistors, capacitors, and others, using these two devices. Approximately forty students of B.SC. II and III in two batches took part in this one-day training program. On this occasion, Prof. Ashwani Kumar Sikri, Vice Principal, Dr. Baltej Singh, Dr. Manoj Kumar Gupta and Dr. Sanjay Kumar Singh were present. Dr Baltej Singh gave vote of thanks.



## 12. Guest Lecture on “Self-sustainability Opportunities for Zoology Students” dated 13 March, 2024

Dr. Charan Kamal Sekhon, Head, Department of Zoology, Shri Guru Granth Sahib World University, Fatehgarh sahib, Punjab was Resource person and explained fish culture, bee keeping, pearl culture, poultry farming, dairy farming lac culture, silk worm culture in detail. She explained each and every aspect including how to start, requirements, guidance source, budget, precautions, diseases, cure etc.

47 students of B.Sc. Medical participated.



### **13 &14. Guest Lectures cum workshop on Neglected Tropical diseases & ‘Forensic Entomology, Molecular systematic and Phylogeny’(20 March, 2024)**

Department of Zoology conducted a guest lectures cum workshop on Neglected Tropical diseases & ‘Forensic Entomology, Molecular systematic and Phylogeny’. The resource persons were Dr. Hina Sachdeva Assistant Professor, M. M. Modi College, Patiala & Dr. Manish Sharma Assistant Professor, M. M. Modi College, Patiala. About 33 students of medical stream participated.



### **15. One-Day Workshop on ‘Preparing, Photographing Slides of Insect Genitalia, Wings, Legs’ 13 March,2024**

Department of Zoology conducted Workshop on ‘Preparing, Photographing Slides of Insect Genitalia, Wings, Legs’ on 13 March,2024. The resource persons were Dr. Charan Kamal Sekhon, Head, Department of Zoology, Shri Guru Granth world University, Fatehgarh Sahib, Punjab and Ms Mandeep Kaur Assistant Professor, Department of Zoology, Shri Guru Granth World University, Fatehgarh Sahib, Punjab. About 47 students were participated.



## 16. DBT Sponsored Two Days Workshop on MATLAB

A two-day workshop was held on March 12<sup>th</sup> and 13<sup>th</sup>, 2024, by the Department of Mathematics in which 36 students participated. Dr. Vivek Sangwan, Assistant Professor at the Mathematics department of Thapar Institute of Engineering and Technology, Patiala, provided an overview of MATLAB software on the first day and taught the students how to operate matrices and programming. On the second day, Dr. Paramjeet Singh, Associate Professor in the Mathematics department at Thapar Institute of Engineering and Technology, Patiala, further expanded the students' understanding by guiding them in creating more challenging programs. He emphasized the importance of learning programming languages for students to succeed in any field.





### 17. Guest lectures on Topics: ‘Introduction to Curves’ and ‘Geometric Visualization of Surfaces’

The Department of Mathematics invited Dr. Rakesh Kumar from the Mathematics Department, Punjabi University, Patiala, on March 19, 2024, to deliver two guest lectures on ‘Introduction to Curves’ and ‘Geometric Visualization of Surfaces’. With engaging examples drawn from daily life, Dr. Rakesh Kumar offered students a deeper understanding of these topics.



### 18. Lecture on World Consumer Rights Day under Bureau of Indian Standards (BIS) Chandigarh

On 1st March 2024, S. D. College, in collaboration with the Bureau of Indian Standards (BIS) CLUB and BIS Chandigarh, celebrated World Consumer Rights Day. The event featured an informative lecture by Sh. Harsh Sonkar, Assistant Director & Scientist, who discussed various standards and their significance. The celebration aimed to raise awareness about consumer rights and the importance of adhering to quality standards.





## 19. Two Guest Lectures on 19<sup>th</sup> March, 2024

On 19 March, 2024, two guest lectures were organised by the Botany Dept. under DBT Star College Scheme. The resource person for the lectures was Dr. Ashutosh Sharma, Associate Professor, Faculty of Agricultural Sciences, DAV University, Jalandhar. His first lecture was on "Mycology & Plant Pathology" in which he explained about types of fungi and their role in human food and various diseases. In the second session, he gave lecture on "Fungal Diseases in Plants: Implications in Quality Control of Herbal Medicine" in which he discussed fungal diseases by taking an example of fungal diseases *Withania somnifera*, their detection, identification and control. He also explained how these fungal diseases lower the quality of medicinal plants by lowering their secondary metabolites which in turn results in low efficacy of herbal drugs. All the students of B.Sc. Medical attended the lectures and gained knowledge about beneficial and harmful effects of different fungi. At the end, feedback was taken from students and group discussions were carried out.



## **20. Lecture Cum Industrial Visit on Mig and Flux Welding Wire**

On April 27, 2024, the Bureau of Indian Standard (BIS) Club of S. D. College, Barnala, organized a lecture & industrial visit to Shakunt Enterprises Pvt. Ltd. in Ludhiana for 40 B.Sc students, led by Dr. Sanjay Kumar Singh. The tour focused on Mig and flux welding wire manufacturing processes, providing students with practical exposure to complement their theoretical knowledge. The visit enhanced students' understanding of industrial operations and stimulated their curiosity. Gratitude was expressed to BIS and the college management, particularly Principal Dr. Rama Sharma, for facilitating this enriching experience. Such initiatives are crucial in preparing students for industry challenges and fostering holistic development.

