



# **Guru Nanak College**

## **Sri Muktsar Sahib**



# **ANNUAL PROGRESS REPORT**

**Star College Scheme, DBT, GOI, New Delhi**

**Session : 2024-25**



**Tibbi Sahib Road, Sri Muktsar Sahib**

**Punjab-152026**

**Email: [principal\\_gnc@yahoo.com](mailto:principal_gnc@yahoo.com)**

**Contact: 9878306013, 89684-65114**

**Department of Biotechnology**

**Annual Progress Report supported under Star College Scheme**

1. **Name of the College** : Guru Nanak College, Sri Muktsar Sahib
2. **Name of Coordinator, designation,** : Dr. Anita Rani, Assistant Professor,  
**Address, Phone nos.** : P G Department of Physics,  
 Guru Nanak College, Sri Muktsar Sahib-152026,  
 +91-8968465114
3. **Assessment duration:** 01/04/2024 to 18/01/2025, Duration in years: 0 years 09 months 18 days
4. **Details of Departments Supported**

S.No	Name of Department	Courses(B.Sc./M.Sc./PG Diploma, certificate etc.) offered	Regular Faculty members	
			Total	
			With Ph.D.	With out Ph.D.
1.	Physics	B.Sc.(Non-Medical) M.Sc. (Physics)	Total=03	
			02	01
			Dr. Anita Rani Dr.Prabhjeet Kaur	Ms. Rajveer Kaur
2.	Chemistry	B.Sc. (Medical) B.Sc.(Non-Medical)	Total=02	
			-	02
				Ms.Kirandish Kaur Ms.Parminder Kaur
3.	Mathematics	B.Sc.(Non-Medical) M.Sc. (Mathematics)	Total=03	
			Dr.Satinder Pal Kaur	02
				Ms.Navneet Rana Ms.Kamaljeet Kaur

5. **Number & Date of Advisory committee meeting:** 2<sup>nd</sup> Advisory committee meeting on 08.11.2024
6. **Qualitative improvements due to DBT support. Please highlight 5 salient points (within 500words).**

➤ **Strengthened infrastructure:**

- The departmental libraries are stocked with numerous copies of new books that aid in improving student learning.
- New equipment has been added to labs of Physics and Chemistry Departments, giving students more hands-on experience than they had before support years. The equipment to student ratio is also improved.
- The chemistry lab is enriched with chemicals and glass apparatus and students perform practical's on



individual basis.

- The computational labs of all departments are equipped with new computer systems, projectors, and printers; the students do project work and explore practical applications of the subject.
- Under this program, licensed mathematics software, such as MATLAB and SPSS have been purchased that allows students to cover new mathematical practicals. This improved the students' understanding, critical thinking, and enthusiasm for mathematics.

➤ **Research Interest and Educational Visits:**

- Educational visits for students are organized to higher research institutes to provide them better exposure of advanced equipments and libraries.
- The interdisciplinary minor projects are included along with practical work which develops research interest at undergraduate level.
- The faculty of the departments presented many research papers in national/international conferences and seminars.
- The students also presented research papers in many national and international conferences and seminars.
- Faculty members have published research papers in different reputed journals.

➤ **Interdepartmental/Interdisciplinary activities:**

- Expert talks of renowned personalities from higher institutes and universities are organized on different topics to enhance the knowledge of students and such activities provide a platform for interaction of students with experts.
- Interdisciplinary activities of departments such as celebration of International/National days such as Science Day/Ozone Day were organized for students. These activities helped in developing the interest of students towards science.
- The various activities such as Inter-School competitions, Seminars, Workshops, Short-Term courses, and training programs are organized for students to develop integrity and co-ordination skills.

➤ **Training Programmes for faculty and students:**

- The Mentorship Programme was conducted for faculty members of departments to guide them about utilization of grant received and planning of various activities.
- Hands-on training programmes and practicals were conducted on use of different software, equipment and chemical handling.
- Workshops, training programmes and short-term courses are organized for faculty and students.
- Computer workshop to provide basic knowledge of computers to teaching and non-teaching staff.

➤ **Inter-linkage with the neighboring institutes:**

- The departments have signed MOU with neighboring schools to develop networking with them.

- Various activities such as Inter-school competitions, training programmes, special lectures etc. are organized, so that students of neighboring institutes and schools can learn and get knowledge under this scheme.
- Outreach activities are organized to benefit the neighboring schools and college of the area to achieve the objectives of this strengthening scheme.

**7. Any Novel aspect introduced or planning to introduce during the Scheme duration.**

- Strengthened laboratories of Physics, Chemistry and Mathematics with new equipments and licensed software's.
- Improved equipment to students.
- Improved books to student ratio.
- Minor projects have been introduced for undergraduate students under this scheme. MOU's has been signed with neighboring schools so that more students could opt science as their career
- Students and lab staff have been trained to handle chemicals, glassware, lab equipments and on stock maintenance.
- DBT-TAB has been introduced on our official website to guide and motivate neighboring institutes for the star College scheme and the detailed information about the scheme and various activities organized under this scheme has been uploaded under this tab.

**8. Lessons learnt / difficulties faced/suggestions if any, in implementation of the programme and Utilization of DBT grant. (Max 3 points within 300words).**

The following difficulties had been faced during the utilization of the budget allocated:

- Consumable head under the Recurring Grant is confusing for some departments like Physics, Mathematics, etc.
- The departments faced problem to utilize the grant as the amount was lapsed on PFMS portal on Dec 12, 2024
- A lot of paperwork and formalities are required.

**Suggestions:**

- There should be no change in process of utilization of grant frequently within the session.

### 9. Key Performance Indicators

S. no	Indicator	FY:2023-24(Previous year's Progress Reports Link is Provided at the Bottom of the table.)						Remarks
1.	No. of students admitted	Total = 191						
2.		M=49			F=142			
		SC 11	OB 12	G 26	SC 35	OB 23	G 84	
		M F T						
		B.Sc.I 28 86 114						
		B.Sc.II 15 32 47						
		B.Sc.III 6 24 30						
3.	No. of students passing out (%) Students Admitted/passing out (pass %)	Result Awaited						
4.	Drop-out rates	7%						
5.	No. of students opting for M.Sc.	Result Awaited						
6.	Average marks	Result Awaited						
7.	No. of hands-on Experiments being conducted	Physics= 61(Experiments present in curriculum)+17(new experiments)						Proofs Attached in



8.		Chemistry=58(Experiments present in curriculum) +26 (new experiments) (Annexure I) Mathematics=10(Experiments present in curriculum) +23 (new experiments) (Annexure I)	Annexure
9.	No. of new experiments introduced	Physics=34 Chemistry= 26 Mathematics=23	Total=83 (Annexure I) -do-
10.	Publications(scopus indexed)/patents, if any.	Physics=nil Chemistry=nil Mathematics=1	Total=1 (Annexure II) -do-
11.	Training received by Faculty	Physics=36 Chemistry=30 Mathematics=114	Total=180 (Annexure III) -do-
12.	Exhibitions/seminars /training courses conducted	Physics=07 Chemistry=05 Mathematics=06	Total=18 (Annexure IV) -do-
13.	Books/journals subscribed from Grants	Physics=43(titles) and Total-87 (books) Chemistry=45 (titles) and Total -58(Books) Mathematics=52 (titles) and Total-71 (books)	Total Books=216 (Annexure V) -do-
14.	Outreach activities (Popular lectures)	Physics=05 Chemistry=13 Mathematics=8	Total=26 (Annexure VI) -do-
15.	Colleges mentored to apply for DBT Star College grants	Nil	-do-
16.	Invited lectures	Physics=04 Chemistry=07 Mathematics=10	Total=21 (Annexure VII) -do-

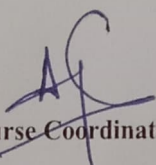
# 10. Self-Evaluation

Department	*Objective(as stated in the proposal)	% achieved	Reasons for under achievement/ If achieved, state In quantitative Metrics Marks attained
Physics	To enhance the quality of learning and teaching process	95%	1.5
	To stimulate original thinking and practical skill through 'hands-on' exposure		2
	To provide real time working exposure of respective field to students through educational visits.		2
	To upgrade Library facilities for the students and the faculty by adding text books and reference books.		2
	To conduct Workshops and training programs for students of the parent Institutional on with neighboring Institutions.		2
Chemistry	To conduct training programs for soft skill development Of the faculty and lab technicians	95%	2
	To enhance the knowledge of students and faculty by adding the text books in the library		2
	To conduct educational visits to industries, companies, and higher institutes for exposure of students		2
	To conduct Workshops/Seminars/Training programs /Science Fair for students		2
	To create research interest and enhanced hands-on experience at under graduate level		1.5
	To strength en academic and physical infrastructure of departments.	95%	2
	To stimulate original thinking and practical skill through 'hands-on' exposure to experimental work.		2

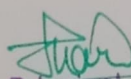
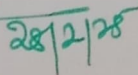
To develop integrity and co-ordination skills by conducting workshops/training programs/Competitions for students of the parent Institution along with neighboring Institutions.	2
To inculcate research and writing skills among students by making them to participate and present research papers in national/ international conferences.	2
To cater real life situations by exposure of computer languages and software like MATLAB, SPSS, to enable them to analyze data and draw inferences which may help community/industry.	1.5



Annexure Proof (QR Code)

  
Course Coordinator  
(With Seal)

**DBT Program Coordinator**  
**Guru Nanak College, Muktsar**

  
Principal   
Guru Nanak College  
Sri Muktsar Sahib  
Head of the Institution  
(With Seal)



**Annexure I**

**No. of new experiments introduced under Star College Scheme, DBT (April 2024 - Jan 2025)**

<b>Sr. No.</b>	<b>Name of Experiment</b>	<b>Class</b>	<b>Number of Beneficiaries</b>	<b>Activity Incharge</b>
<b>Department of Physics</b>				
<b>Experiments in Curriculum</b>				
1.	Determination of Poisson's ratio for rubber/plastic.	B.Sc. I N.M.	64	Dr. Anita Rani
2.	To determine energy transfer, coefficient of restitution and verify laws of conservation of linear momentum and kinetic energy in elastic collisions using one dimensional collisions of hanging spheres.	B.Sc. I N.M.	64	Dr. Anita Rani
3.	To find inductance of coil by using Anderson bridge	B.Sc. I N.M.	64	Dr. Anita Rani
4.	Determination of coefficient of viscosity of a given liquid by Stoke's method and study its temperature dependence.	B.Sc. I N.M.	64	Dr. Anita Rani
5.	To study the magnetic field produced by current carrying Solenoid using search coil and calculate permeability of air.	B.Sc. I N.M.	64	Dr. Anita Rani
6.	To study to torsional vibration, dependence of time period on M.O.I. and restoring torque.	B.Sc. I N.M.	64	Dr. Anita Rani
7.	To study the dependence of moment of inertia on distribution of mass (by noting time periods of oscillations using objects of various geometrical shapes but of same mass).	B.Sc. I N.M.	64	Dr. Anita Rani
8.	To study standing waves on a string.	B.Sc. I N.M.	64	Dr. Anita Rani
9.	To determine low resistance with Carey Fosters Bridge.	B.Sc. I N.M.	64	Dr. Anita Rani
10.	Refractive index measurements for various types of oils using spectrometer setup.	B.Sc. II N.M.	37	Ms. Jeevanjot Kaur
11.	To study the variation of thermo-emf of a Thermocouple with Difference of Temperature of its Two Junctions.	B.Sc. II N.M.	37	Ms. Jeevanjot Kaur

12.	To study Radiation law.	B.Sc. II N.M.	37	Ms. Jeevanjot Kaur
13.	To study interference method	B.Sc. II N.M.	37	Ms. Jeevanjot Kaur
14.	To set up an oscillator and study its output on CRO.	B.Sc. III N.M.	24	Ms. Rajveer Kaur
15.	To draw the Plateau of a GM counter and find its dead time.	B.Sc. III N.M.	24	Ms. Rajveer Kaur
16.	To study the statistical fluctuations using GM counter.	B.Sc. III N.M.	24	Ms. Rajveer Kaur
17.	To study the absorption of beta-particles using GM counter.	B.Sc. III N.M.	24	Ms. Rajveer Kaur
<b>Additional Experiments</b>				
18.	Find frequency of A.C. mains using sonometer	B.Sc. I N.M.	64	Dr. Anita Rani
19.	Find elastic constant by Searle's method	B.Sc. I N.M.	64	Dr. Anita Rani
20.	Coefficient of Viscosity of water by Capillary Flow Method	B.Sc. I N.M.	64	Dr. Anita Rani
21.	Find out electronic charge by Milikan's Oil drop method	B.Sc. I N.M.	64	Dr. Anita Rani
22.	Demonstrate the phenomena of discharge by using Van De Graff Generator	B.Sc. II N.M.	37	Ms. Jeevanjot Kaur
23.	Study Photoelectric effect phenomena	B.Sc. II N.M.	37	Ms. Jeevanjot Kaur
24.	Study the intensity profile of the diffraction pattern of single slit and verify the uncertainty principle by using LASER set up.	B.Sc. II N.M.	37	Ms. Jeevanjot Kaur
25.	Verify Thevenin and Norton theorem	B.Sc. III N.M.	24	Ms. Rajveer Kaur
26.	To study characteristics of solar cells	B.Sc. III N.M.	24	Ms. Rajveer Kaur
27.	Study Gaussian distribution of G.M. counter.	B.Sc. III N.M.	24	Ms. Rajveer Kaur
28.	To verify Superposition Theorem.	B.Sc. III N.M.	24	Ms. Rajveer Kaur

29.	IR Remote Control	B.Sc. II N.M.	37	Dr. Anita Rani,  Ms. Rajveer Kaur,  Ms. Sandeep Kaur,  Ms. Jeevanjot Kaur
30.	Fire Alarm	B.Sc. III N.M.	23	
31.	Smart Dustbin	B.Sc. III N.M.	23	
32.	Electronic water tap	B.Sc. III N.M.	23	
33.	Mobile Protection	B.Sc. I N.M.	64	
34.	Water Level Indicator	B.Sc. I N.M.	64	

Department of Chemistry				
1.	To determine the Refractive indices of given liquids by Abbe's refractometer & calculate their specific refractions	B.Sc. I	60	Ms. Kirandish Kaur
2.	To determine the surface tension of given solution (n-Butyl alcohol, cyclohexane, barine solution) using stalagmometer	B.Sc. I	60	Ms. Kirandish Kaur
3.	To determine the viscosity of given solution (n-Butyl alcohol, cyclohexane, barine solution) using Ostwald viscometer	B.Sc. I	60	Ms. Kirandish Kaur
4.	Preparation of solutions of different Molarity/Normality of titrants	B.Sc. I	60	Ms. Kirandish Kaur
5.	Extraction of caffeine from tea leaves	B.Sc. II	45	Ms. Amandeep Kaur
6.	Estimation of hardness of water	B.Sc. II	45	Ms. Amandeep Kaur
7.	Separation of given compounds by thin layer chromatography	B.Sc. II	45	Ms. Amandeep Kaur



8.	Relationship between optical activity and concentration of given compound using polarimeter	B.Sc. II	45	Ms. Amandeep Kaur
9.	Study the kinetics of iodination of propanone in acidic medium using colorimeter	B.Sc. II	45	Ms. Amandeep Kaur
10.	To determine the Ph of buffer solutions	B.Sc. II	45	Ms. Amandeep Kaur
11.	Verify Lambert-Beer's law and determine the concentration of $\text{CuSO}_4/\text{KMnO}_4/\text{K}_2\text{Cr}_2\text{O}_7$ in a solution of unknown concentration using a colorimeter	B.Sc. II	45	Ms. Amandeep Kaur
12.	Determine the amount of iron present in a sample using 1, 10-phenanthroline, dissociation constant of an indicator (phenolphthalein)	B.Sc. II	45	Ms. Amandeep Kaur
13.	Synthesis of given organic compounds and analysis by UV-vis spectra	B.Sc. III	30	Ms. Rippandeep Kaur
14.	Determination of molecular weight of a non – volatile solute by Rast method	B.Sc. III	30	Ms. Rippandeep Kaur
15.	Preparation of methyl orange from N,N-dimethyl aniline and sulphanilic acid	B.Sc. III	30	Ms. Rippandeep Kaur
16.	Separation of fluorescein and methylene blue by using Column Chromatography	B.Sc. III	30	Ms. Rippandeep Kaur




17.	To determine the COD of different water samples.	B.Sc. III	30	Ms. Rippandeep Kaur
18.	To determine alkalinity, acidity and other parameters of given water samples collected from different areas.	B.Sc. III	30	Ms. Rippandeep Kaur
19.	Separation of given compounds by thin layer chromatography and other methods	B.Sc. III	30	Ms. Rippandeep Kaur
20.	Preparation and measurement of pH of acetate buffers at different concentrations	B.Sc. III	30	Ms. Rippandeep Kaur
21.	pH metric titration of (i) strong acid vs. strong base (ii) weak acid vs. strong base.	B.Sc. III	30	Ms. Rippandeep Kaur
22.	Determination of dissociation constant of a weak acid.	B.Sc. III	30	Ms. Rippandeep Kaur
23.	Study the effect on pH of addition of HCl/NaOH to solutions of acetic acid, sodium acetate and their mixtures.	B.Sc. III	30	Ms. Rippandeep Kaur
24.	Estimation of carbonate/bicarbonate/hydroxide present together in mixture.	B.Sc. III	30	Ms. Rippandeep Kaur
25.	Estimation of free alkali present in different soaps/detergents	B.Sc. III	30	Ms. Rippandeep Kaur


26.	To determine structural and magnetic properties of spintronic materials	B.Sc. III	30	Ms. Kirandish Kaur
<b>Department of Mathematics</b>				
1.	SPSS Data Entry	B.Sc II	20	Ms Kajal
2.	Frequency Distribution	B.Sc II	20	Ms Kajal
3.	Types of Frequency Distribution	B.Sc II	20	Ms Kajal
4.	Data Presentation (Graphical and Numerical)	B.Sc II	20	Ms Kajal
5.	Methods of central tendency (Mean, Median, Mode)	B.Sc II	20	Ms Kajal
6.	Deciles and Percentiles	B.Sc II	20	Ms Kajal
7.	Frequency Distribution	B.Sc II	20	Ms Kajal
8.	Types of Frequency Distribution	B.Sc II	20	Ms Kajal
9.	Data Presentation (Graphical and Numerical)	B.Sc II	20	Ms Kajal
10.	Methods of central tendency (Mean, Median, Mode)	B.Sc II	20	Ms Kajal
11.	Deciles and Percentiles	B.Sc II	20	Ms Kajal
12.	Frequency Distribution	B.Sc II	20	Ms Kajal
13.	Types of Frequency Distribution	B.Sc II	20	Ms Kajal
<b>Additional Experiments</b>				
14.	Plotting of graphs of functions: exponential function	B.Sc I & B. A. I	45	Ms. Shikha Rani
15.	$f \sin(ax+b)$ , $ \sin(ax+b) $ , $\cos(ax+b)$ , $ \cos(ax+b) $	B.Sc I & B. A. I	45	Ms. Shikha Rani
16.	To Plot the general equation of a straight line	B.Sc I & B. A. I	45	Ms. Shikha Rani





17.	explore the variation in coefficients	B.Sc I & B. A. I	45	Ms. Shikha Rani
18.	To show conics as sections of a cone and constants in straight line	B.Sc I & B. A. I	45	Ms. Shikha Rani
19.	To draw circle when the Centre and radius are given.	B.Sc I & B. A. I	45	Ms. Shikha Rani
20.	To draw circle when the Centre and any point on the circle are given.	B.Sc I & B. A. I	45	Ms. Shikha Rani
21.	To find inverse and rank of a square matrix.	B.Sc I & B. A. I	45	Ms. Shikha Rani
22.	To find Rank of a square matrix	B.Sc I & B. A. I	45	Ms. Shikha Rani
23.	To find solution of a linear system of equation	B.Sc I & B. A. I	45	Ms. Shikha Rani

**LIST & PROOFS OF PUBLICATIONS (April 2024-Jan 2025)****A. Paper Publication in Peer Reviewed Journals**







<b>Sr. No.</b>	<b>Title</b>	<b>Journal</b>	<b>DOI No.</b>	<b>Proof</b>
<b>Department of Mathematics</b>				
<b>Dr. Satinderpal Kaur</b>				
<b>1.</b>	Applications of Matrix in Engineering and Science	International Journal of Research in Engineering, Science and Management Volume 7, Issue 8, August 2024	<a href="https://www.ijresm.com">https://www.ijresm.com</a>   ISSN (Online): 2581-5792	
<b>2.</b>	Use of Extrapolation Method to Estimate the Extreme Rainfall Probabilities	International journal for innovative research in multidisciplinary field	DOIs:10.2015/IJI RMF/202408025	
<b>3.</b>	Stability Analysis of Hermite Collocation Method for Pulp Washing Models	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT) Online Journal Volume 4, Issue 1, September 2024	ISSN (Online) 2581-9429	
<b>4.</b>	Numerical Procedure for the Solution of Non-Linear Pulp Washing Models	International Journal of Science and Engineering Applications Volume 13-Issue 08, 37 – 42, 2024,	ISSN:- 2319 - 7560 DOI: 10.7753/IJSEA13 08.1008	
<b>5.</b>	Role of mathematics in study of astrology	International Education & Research Journal	<b>E-ISSN No : 2454-9916   Volume : 10   Issue : 7   July 2024</b>	

<b>Ms. Navneet Rana</b>				
<b>1.</b>	Role of fear factor in controlling chaos of a plankton- fish system with prey refuge and an additional food	The European Physical Journal Plus”, Volume 139, article number 104, January 2024. (IF 2.8)	<a href="https://doi.org/10.1140/epjp/s13360-024-04888-8">https://doi.org/10.1140/epjp/s13360-024-04888-8</a>	

### **B. Publication in Conference Proceedings/Book Chapter**

<b>S.No</b>	<b>Title</b>	<b>Publisher</b>	<b>ISBN</b>	<b>Year</b>	<b>Level</b>	<b>Proof</b>
<b>Dr. Anita Rani</b>						
<b>1.</b>	Pressure induced analysis on the structural, optoelectronic, magnetic and thermoelectric properties of spinel ferrites: a DFT study	Woodhead	9780443217425	2024	International	
<b>Ms. Rajveer Kaur</b>						
<b>1.</b>	Nanotechnology and its applications in different fields- A review	JS University, Manipuri Road, Shikohabad, Firozabad (U.P)	978-93-91535-99-5	2024	International	



Department of Chemistry						
Ms. Kirandish Kaur						
1.	DFT Study of Fe doped GaP using SIESTA	J S University, Manipuri Road, Shikohabad Dist. Firozabad	978-93-91535-99-5	2024	International	
2.	Nanomaterials: A Boon for Our Environment	J S University, Manipuri Road, Shikohabad Dist. Firozabad	978-93-91535-99-5	2024	International	
3.	Nanotechnology and its applications in different fields- A review	J S University, Manipuri Road, Shikohabad Dist. Firozabad	978-93-91535-72-8	2023	International	
Ms. Rippandeep Kaur						
1.	DFT Study of Fe doped GaP using SIESTA	J S University, Manipuri Road, Shikohabad Dist. Firozabad	978-93-91535-99-5	2024	International	
2.	Nanomaterials: A Boon for Our Environment	J S University, Manipuri Road, Shikohabad Dist. Firozabad	978-93-91535-99-5	2024	International	
3.	Nanotechnology and its applications in different fields- A review	J S University, Manipuri Road, Shikohabad Dist. Firozabad	978-93-91535-72-8	2023	International	




### C. Research Projects




S.No.	Title	Status	Role	Funding Agency	Duration	Year of completion
nil						

### D. Invited Talk



S.No	Title	Conference	Venue	National/ International	Date	Proof
nil						




### E. Paper presentation


S.No	Title	Conference	Venue	National/ International	Date	Proof
<b>Dr. Anita Rani</b>						
1.	Spinel Ferrites (SF): Synthesis and catalytic application in environment and energy field	RISEMH-2024	J S University, Shikohabad , Uttar Pradesh	International (Within Country)	26-10-2024	
2.	Structural and electronic properties of N substituted C20 fullerene  (Abstract accepted)	NCMD-2025	Teerthanker Mahaveer University, Moradabad	National	15-02-2025	
<b>Ms. Rajveer Kaur</b>						
3.	Nanotechnology and its applications in different fields- A review	RISEMH-2024	J S University, Shikohabad , Uttar Pradesh	International (Within Country)	26-10-2024	




Department of Chemistry						
Ms. Kirandish Kaur						
1.	DFT Study of Fedoped GaP using SIESTA	RISEMH-2024	J S University, Shikohabad, Uttar Pradesh	International (Within Country)	26-10-2024	
Ms. Rippandeep Kaur						
1.	Nanomaterials: A Boon for Our Environment	RISEMH-2024	J S University, Shikohabad, Uttar Pradesh	International (Within Country)	26-10-2024	
Department of Mathematics						
Ms. Satinderpal Kaur						
1.	Exploring derivatives in modeling and real life applications	International Symposium on Recent Advances in Differential equations and Applications (ISRADEA-2024)	Deshbandhu College, University of Delhi	International	6 <sup>th</sup> Aug, 2024	



1.	Discovering the power of derivatives in Mathematical Modelling and everyday Life	Symposium titled Solutions For Current Issues in the society, Environment, Ethics, Health, Education, Business, Culture, S&T including ICT	Sri Sarada College For Women, Tiruneveli, Tamilnadu	National	01 <sup>st</sup> October, 2024	
2.	Mathematical Modelling and analysis for efficiency of pulp washing process	International Conference on Science, Mathematics, Technology and Education-Making and Shaping the Future (SMTE-2024)	Punjabi University Patiala	International	27-29 <sup>th</sup> Nov, 2024	
<b>Ms. Navneet Rana</b>						
1.	A mathematical study of phytoplankton-zooplankton population dynamics'	National Conference on Recent Trends in Mathematics	Guru Nanak College, Sri Muktsar Sahib, Punjab.	National	March 27, 2024	

2.	<b>Stability and bifurcation analysis of a phytoplankton-zooplankton-fish model</b>	Recent Advances in Fundamental and Applied Sciences” (RAFAS-2024)	Lovely Professional University (LPU), Phagwara, Punjab.	National	April 19-20, 2024	
3.	<b>Stability and bifurcation analysis of plankton-fish system</b>	Conference on Recent Advancements in Mathematical Sciences organized by.	DAV College, Sadhaura, Yamunanagar, Haryana	International	28 April, 2024	
4.	<b>Mathematical analysis of a time delayed model of phytoplankton and zooplankton species</b>	International Conference on Non-linear Analysis and Computational Techniques (ICNACT-2024)	VIT Bhopal University, India in collaboration with the Institute of Physics and Mathematics, Technological University of Mixteca, Oaxaca, Mexico.	International	8 <sup>th</sup> to 10 <sup>th</sup> August, 2024	

5.	<b>Mathematical analysis of a time delayed model of phytoplankton and zooplankton species</b>	8th International Joint Conference on Advances in Computational Intelligence (IJCACI 2024)	SAU Center for Research and Innovative Learning (SCRIL), South Asian University, India and Jahangirnagar University, Bangladesh	International	5 <sup>th</sup> to 6 <sup>th</sup> October, 2024.	
6.	<b>Bifurcation analysis of a planktonic system with harvesting of infected zooplankton</b>	2nd International Conference on Evolution in Pure and Applied Mathematics (ICEPAM-2024).	Akal University, Talwandi Sabo (Bathinda)	International	20 <sup>th</sup> -22 <sup>nd</sup> , November 2024	
7.	<b>Environmental toxins shaping the emergent behavior of fear induced plankton-fish system</b>	International Conference on Matrix Analysis and Mathematical Modelling (MAMM 2024)	Dr B. R. Ambedkar National Institute of Technology Jalandhar, Punjab	International	29 <sup>th</sup> November to 1 <sup>st</sup> December 2024	


Ms. Kamaljeet Kaur						
1.	Modeling the effects of insecticides on crop production in the presence of insect population	National Conference on Recent Trends in Mathematics	Guru Nanak College, Sri Muktsar Sahib, Punjab.	National	March 27, 2024	
2.	<b>Recent Trends in Fuzzy Logic</b>	Conference on Recent Advancements in Mathematical Sciences organized by.	DAV College, Sadhaura, Yamunagar, Haryana	International	28 April, 2024	
3.	<b>Use of Algebra In Real Life- An Overview</b>	Symposium titled Solutions For Current Issues in the society, Environment, Ethics, Health, Education, Business, Culture, S&T including ICT	Sri Sarada College For Women, Tiruneveli, Tamilnadu	National	01 <sup>st</sup> October, 2024	


### Annexure III


#### List of training courses/workshops attended by the faculty (April 2024-Jan 2025)

Sr. No.	Title	Date	Proof(certificates)
<b>Department of Physics</b>			
<b>Dr. Anita Rani</b>			
1.	Attended One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda.	07-08-2024 to 13-08-2024	
2.	Attend the One week Workshop on Hand on Training Workshop ON ELECTRONICS PROJECTS Conducted by Er. Sukhwinder Singh , Coordinator , National Institute of Electronics , Research and Training , Patiala	09-09-2024 to 14-09-2024	
3.	Attended workshop on G.M. Counters Conducted by Dr. Sarbjit Singh , Ex- Scientific Office, BARC , Mumbai	25-09-2024 to 26-09-2024	
4.	Attended Mentorship Programme delivered by Dr. Vimal Mehta , Assistant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	30-09-2024	
5.	Attended the Extension Lecture on Indoor Radon ,Thoron Concern And Measurement Techniques delivered by Dr. Vimal Mehta , Assistant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	01-10-2024	
6.	Attended the Lecture on Standard Model I and II delivered by Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh.	05-10-2024	





7.	Attended the workshop on CRO AND DSO conducted by Dr. Asha Arora ,Assisstant Professor in Physics ,Dev Smaj College For Women at Ferozpur.	09-10-2024 to 10-10-2024	
8.	Attended the Extension Lectutre on Nuclear Physics delivered by Dr. Bhawandeep Kaur Uppal Assisstant Professor ,University College of Jaito.	23-10-2024	
Ms. Rajveer Kaur			
1.	Attend the One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre,Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda.	07-08-2024 to 13-08-2024	
2.	Attend the One week Workshop on Hand on Training Workshop ON ELECTRONICS PROJECTS Conducted by Er. Sukhwinder Singh , Coordinator , National Institute of Electronics , Research and Training , Patiala	09-09-2024 to 14-09-2024	
3.	Attend the lecture Special talk on radioactivity and nuclear decay, radiation detection and measurement, workshop on G.M. Counters Conducted by Dr. Sarbjit Singh , Ex- Scientific Office, BARC , Mumbai	25-09-2024 to 26-09-2024	
4.	Attend Mentorship Programme delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	30-09-2024	
5.	Attend the Extension Lecture on Indoor Radon ,Thoron Concern And Measurement Techniques delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	01-10-2024	
6.	Attend the Lecture on Standard Model I and II delivered by Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh.	05-10-2024	

7.	Attend the workshop on CRO AND DSO conducted by Dr. Asha Arora ,Assisstant Professor in Physics ,Dev Smaj College For Women at Ferozpur.	09-10-2024 to 10-10-2024	
8.	Attend the Extension Lectutre on Nuclear Physics delivered by Dr. Bhawandeep Kaur Uppal Assisstant Professor ,University College of Jaito.	23-10-2024	
Ms. Jeevanjot Kaur			
1.	Attend the One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre,Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda.	07-08-2024 to 13-08-2024	
2.	Attend the One week Workshop on Hand on Training Workshop ON ELECTRONICS PROJECTS Conducted by Er. Sukhwinder Singh , Coordinator , National Institute of Electronics , Research and Training , Patiala	09-09-2024 to 14-09-2024	
3.	Attend the lecture Special talk on radioactivity and nuclear decay, radiation detection and measurement, workshop on G.M. Counters Conducted by Dr. Sarbjit Singh , Ex- Scientific Office, BARC , Mumbai	25-09-2024 to 26-09-2024	
4.	Attend Mentorship Programme delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	30-09-2024	
5.	Attend the Extension Lecture on Indoor Radon ,Thoron Concern And Measurement Techniques delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	01-10-2024	
6.	Attend the Lecture on Standard Model I and II delivered by Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh.	05-10-2024	


7.	Attend the workshop on CRO AND DSO conducted by Dr. Asha Arora ,Assisstant Professor in Physics ,Dev Smaj College For Women at Ferozpur.	09-10-2024 to 10-10-2024	
8.	Attend the Extension Lectutre on Nuclear Physics delivered by Dr. Bhawandeep Kaur Uppal Assisstant Professor ,University College of Jaito.	23-10-2024	
Ms. Sandeep Kaur			
1.	Attend the One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre,Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda.	07-08-2024 to 13-08-2024	
2.	Attend the One week Workshop on Hand on Training Workshop ON ELECTRONICS PROJECTS Conducted by Er. Sukhwinder Singh , Coordinator , National Institute of Electronics , Research and Training , Patiala	09-09-2024 to 14-09-2024	
3.	Attend the lecture Special talk on radioactivity and nuclear decay, radiation detection and measurement, workshop on G.M. Counters Conducted by Dr. Sarbjit Singh , Ex- Scientific Office, BARC , Mumbai	25-09-2024 to 26-09-2024	
4.	Attend Mentorship Programme delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	30-09-2024	
5.	Attend the Extension Lecture on Indoor Radon ,Thoron Concern And Measurement Techniques delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	01-10-2024	
6.	Attend the Lecture on Standard Model I and II delivered by Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh.	05-10-2024	


7.	Attend the workshop on CRO AND DSO conducted by Dr. Asha Arora ,Assisstant Professor in Physics ,Dev Smaj College For Women at Ferozpur.	09-10-2024 to 10-10-2024	
8.	Attend the Extension Lectutre on Nuclear Physics delivered by Dr. Bhawandeep Kaur Uppal Assisstant Professor ,University College of Jaito.	23-10-2024	



Department of Chemistry			
Ms. Kirandish Kaur			
1.	Attended One-Week Workshop on Proteus Software, Machine Learning and Cyber Security	August 07-13, 2024	
2.	Attended Extensionlecture onMetal Organic Frameworks (MOF's): The Next Generation of Materials for Advanced Applications	17-09-2024	
3.	Attended Extensionlecture on Spectroscopic Techniques: Principles, Types and Applications	17-09-2024	
4.	Attended One Day Workshop on “Hands on Training on UV-Vis Spectrophotometer”	17-09-2024	
5.	Attended Extensionlecture on Stereochemistry	20-09-2024	
6.	Attended Extensionlecture on Chemistry of Drug Discovery and Development	23-09-2024	
7.	Attended Extensionlecture on Intellectual Property Rights: Protecting Creativity and Innovation	23-09-2024	
8.	Attended Three Days Workshop on Mathematics for Chemists	October 08-10, 2024	
9.	Attended Extensionlectureon Organic Reactions: Mechanistic Studies and Applications	10-10-2024	


10.	Attended Extensionlecture on Role of Chirality and Asymmetric Synthesis in Chemistry	21-10-2024	
<b>Ms. Rippandeep Kaur</b>			
1.	Attended One-Week Workshop on Proteus Software, Machine Learning and Cyber Security	August 07-13, 2024	
2.	Attended Extensionlecture onMetal Organic Frameworks (MOF's): The Next Generation of Materials for Advanced Applications	17-09-2024	
3.	Attended Extensionlecture on Spectroscopic Techniques: Principles, Types and Applications	17-09-2024	
4.	Attended One Day Workshop on “Hands on Training on UV-Vis Spectrophotometer”	17-09-2024	
5.	Attended Extensionlecture on Stereochemistry	20-09-2024	
6.	Attended Extensionlecture on Chemistry of Drug Discovery and Development	23-09-2024	
7.	Attended Extensionlecture on Intellectual Property Rights: Protecting Creativity and Innovation	23-09-2024	
8.	Attended Three Days Workshop on Mathematics for Chemists	October 08-10, 2024	
9.	Attended extensionlectureon Organic Reactions: Mechanistic Studies and Applications	10-10-2024	
10.	Attended Extensionlecture on Role of Chirality and Asymmetric Synthesis in Chemistry	21-10-2024	




<b>Ms. Amandeep Kaur</b>			
1.	Attended One-Week Workshop on Proteus Software, Machine Learning and Cyber Security	August 07-13, 2024	
2.	Attended Extensionlecture onMetal Organic Frameworks (MOF's): The Next Generation of Materials for Advanced Applications	17-09-2024	
3.	Attended Extensionlecture on Spectroscopic Techniques: Principles, Types and Applications	17-09-2024	
4.	Attended One Day Workshop on “Hands on Training on UV-Vis Spectrophotometer”	17-09-2024	
5.	Attended Extensionlecture on Stereochemistry	20-09-2024	
6.	Attended Extensionlecture on Chemistry of Drug Discovery and Development	23-09-2024	
7.	Attended Extensionlecture on Intellectual Property Rights: Protecting Creativity and Innovation	23-09-2024	
8.	Attended Three Days Workshop on Mathematics for Chemists	October 08-10, 2024	
9.	Attended extensionlectureon Organic Reactions: Mechanistic Studies and Applications	10-10-2024	
10.	Attended Extensionlecture on Role of Chirality and Asymmetric Synthesis in Chemistry	21-10-2024	


Sr. No.	Title	Date	Proof(certificates)
<b>Department of Mathematics</b>			
<b>Dr. Satinderpal Kaur</b>			
1.	Workshop on SPSS	August 23-24, 2024	
2.	Workshop on MATLAB	Sept 4-7, 2024	
3.	Online Lecture Series on Career Opportunities in Acturial Sciences	Sept 10, 2024	
4.	Lecture Series on Application of Mathematics	Sept 27-28, 2024	
5.	Online Workshop on Mathematical Modelling and Applications	Sept 30 to Oct 08, 2024	
6.	Mentorship Program	01-10-2024	
7.	Workshop on Python and Data Science	Oct 25-26, 2024	
8.	Lecture Series on Calculus	Oct 28, 2024	
9.	Online Lecture Series on Group Theory and Applications	Nov 1-2, 2024	
10.	Infinity Hunt	5 <sup>th</sup> Nov, 2024	
11.	Online Lecture Series on Number Theory and its Applications	9 <sup>th</sup> Nov, 2024	
12.	Educational Tour to Guru Nanak Dev University, Amritsar	11 <sup>th</sup> Nov, 2024	
13.	Lecture Series on GAP	Nov 13-14, 2024	
14.	Online Lecture Series on Geometrical Visualisation of Curves and Surfaces	22-23 Nov, 2024	
15.	Online Workshop on Writing research paper using LaTeX typesetting	1 <sup>st</sup> Dec, 2024	
16.	Lecture Series on Mathematical Modelling of Co-infection Dynamics with Recovery	3 <sup>rd</sup> Dec, 2024	
17.	Online Lecture on Irreducibility of polynomials	3 <sup>rd</sup> Dec, 2024	
18.	Online Lecture Series on New Trends Analytics and Optimization Energy	9 <sup>th</sup> Dec, 2024	


Ms Navneet Rana			
1.	Attended Online FDP on Recent Development of Mathematical Sciences on Biological and Dynamical Systems with Fuzzy and Fractional	19 <sup>th</sup> -29 <sup>th</sup> June, 2024.	
2.	International FDP on Ethical Issues in Research Writing	11 <sup>th</sup> to 16 <sup>th</sup> Sept., 2024	
3.	STTP (Online) on Mathematical Methods organized by UGC-MMTTC, Shri Mata Vaishno Devi University, Katra, J&K	14 <sup>th</sup> to 19 <sup>th</sup> Oct., 2024.	
4.	Workshop on SPSS	August 23-24, 2024	
5.	Workshop on MATLAB	Sept 4-7, 2024	
6.	Online Lecture Series on Career Opportunities in Acturial Sciences	Sept 10, 2024	
7.			
8.	Lecture Series on Application of Mathematics	Sept 27-28, 2024	
9.	Online Workshop on Mathematical Modelling and Applications	Sept 30 to Oct 08, 2024	
10.	Mentorship Program	01-10-2024	
11.	Workshop on Python and Data Science	Oct 25-26, 2024	
12.	Lecture Series on Calculus	Oct 28, 2024	
13.	Online Lecture Series on Group Theory and Applications	Nov 1-2, 2024	


14.	Infinity Hunt	5 <sup>th</sup> Nov, 2024	
15.	Online Lecture Series on Number Theory and its Applications	9 <sup>th</sup> Nov, 2024	
16.	Educational Tour to Guru Nanak Dev University, Amritsar	11 <sup>th</sup> Nov, 2024	
17.	Lecture Series on GAP	Nov 13-14, 2024	
18.	Online Lecture Series on Geometrical Visualisation of Curves and Surfaces	22-23 Nov, 2024	
19.	Online Workshop on Writing research paper using LaTeX typesetting	1 <sup>st</sup> Dec, 2024	
20.	Lecture Series on Mathematical Modelling of Co-infection Dynamics with Recovery	3 <sup>rd</sup> Dec, 2024	
21.	Online Lecture on Irreducibility of polynomials	3 <sup>rd</sup> Dec, 2024	
22.	Online Lecture Series on New Trends Analytics and Optimization Energy	9 <sup>th</sup> Dec, 2024	
<b>Ms Kamaljeet Kaur</b>			
1.	Attended Online FDP on Recent Development of Mathematical Sciences on Biological and Dynamical Systems with Fuzzy and Fractional	19 <sup>th</sup> -29 <sup>th</sup> June, 2024.	
2.	Workshop on SPSS	August 23-24, 2024	
3.	Workshop on MATLAB	Sept 4-7, 2024	
4.	Online Lecture Series on Career Opportunities in Acturial Sciences	Sept 10, 2024	
5.	Lecture Series on Application of Mathematics	Sept 27-28, 2024	
6.	Online Workshop on Mathematical Modelling and Applications	Sept 30 to Oct 08, 2024	
7.	Mentorship Program	01-10-2024	

8.	STTP (Online) on <b>Mathematical Methods</b> organized by UGC-MMTTC, Shri Mata Vaishno Devi University, Katra, J&K	14 <sup>th</sup> to 19 <sup>th</sup> Oct., 2024.	
9.	Workshop on Python and Data Science	Oct 25-26, 2024	
10.	Lecture Series on Calculus	Oct 28, 2024	
11.	Online Lecture Series on Group Theory and Applications	Nov 1-2, 2024	
12.	Infinity Hunt	5 <sup>th</sup> Nov, 2024	
13.	Online Lecture Series on Number Theory and its Applications	9 <sup>th</sup> Nov, 2024	
14.	Educational Tour to Guru Nanak Dev University, Amritsar	11 <sup>th</sup> Nov, 2024	
15.	Lecture Series on GAP	Nov 13-14, 2024	
16.	Online Lecture Series on Geometrical Visualisation of Curves and Surfaces	22-23 Nov, 2024	
17.	Online Workshop on Writing research paper using LaTeX typesetting	1 <sup>st</sup> Dec, 2024	
18.	Lecture Series on Mathematical Modelling of Co-infection Dynamics with Recovery	3 <sup>rd</sup> Dec, 2024	
19.	Online Lecture on Irreducibility of polynomials	3 <sup>rd</sup> Dec, 2024	
20.	Online Lecture Series on New Trends Analytics and Optimization Energy	9 <sup>th</sup> Dec, 2024	
<b>Ms Shikha Rani</b>			
1.	Workshop on SPSS	August 23-24, 2024	
2.	Workshop on MATLAB	Sept 4-7, 2024	
3.	Online Lecture Series on Career Opportunities in Acturial Sciences	Sept 10, 2024	
4.	Lecture Series on Application of Mathematics	Sept 27-28, 2024	



5.	Online Workshop on Mathematical Modelling and Applications	Sept 30 to Oct 08, 2024	
6.	Mentorship Program	01-10-2024	
7.	Workshop on Python and Data Science	Oct 25-26, 2024	
8.	Lecture Series on Calculus	Oct 28, 2024	
9.	Online Lecture Series on Group Theory and Applications	Nov 1-2, 2024	
10.	Infinity Hunt	5 <sup>th</sup> Nov, 2024	
11.	Online Lecture Series on Number Theory and its Applications	9 <sup>th</sup> Nov, 2024	
12.	Educational Tour to Guru Nanak Dev University, Amritsar	11 <sup>th</sup> Nov, 2024	
13.	Lecture Series on GAP	Nov 13-14, 2024	
14.	Online Lecture Series on Geometrical Visualisation of Curves and Surfaces	22-23 Nov, 2024	
15.	Online Workshop on Writing research paper using LateX typesetting	1 <sup>st</sup> Dec, 2024	
16.	Lecture Series on Mathematical Modelling of Co-infection Dynamics with Recovery	3 <sup>rd</sup> Dec, 2024	
17.	Online Lecture on Irreducibility of polynomials	3 <sup>rd</sup> Dec, 2024	
18.	Online Lecture Series on New Trends Analytics and Optimization Energy	9 <sup>th</sup> Dec, 2024	
<b>Ms Kirandeep Kaur</b>			
1.	Workshop on SPSS	August 23-24, 2024	
2.	Workshop on MATLAB	Sept 4-7, 2024	
3.	Online Lecture Series on Career Opportunities in Acturial Sciences	Sept 10, 2024	
4.	Lecture Series on Application of Mathematics	Sept 27-28, 2024	
5.	Online Workshop on Mathematical Modelling and Applications	Sept 30 to Oct 08, 2024	



6.	Mentorship Program	01-10-2024	
7.	Workshop on Python and Data Science	Oct 25-26, 2024	
8.	Lecture Series on Calculus	Oct 28, 2024	
9.	Online Lecture Series on Group Theory and Applications	Nov 1-2, 2024	
10.	Infinity Hunt	5 <sup>th</sup> Nov, 2024	
11.	Online Lecture Series on Number Theory and its Applications	9 <sup>th</sup> Nov, 2024	
12.	Educational Tour to Guru Nanak Dev University, Amritsar	11 <sup>th</sup> Nov, 2024	
13.	Lecture Series on GAP	Nov 13-14, 2024	
14.	Online Lecture Series on Geometrical Visualisation of Curves and Surfaces	22-23 Nov, 2024	
15.	Online Workshop on Writing research paper using LaTeX typesetting	1 <sup>st</sup> Dec, 2024	
16.	Lecture Series on Mathematical Modelling of Co-infection Dynamics with Recovery	3 <sup>rd</sup> Dec, 2024	
17.	Online Lecture on Irreducibility of polynomials	3 <sup>rd</sup> Dec, 2024	
18.	Online Lecture Series on New Trends Analytics and Optimization Energy	9 <sup>th</sup> Dec, 2024	
19.	FDP on Pedagogical Skills and Learning Management System	22-28 <sup>th</sup> Nov. 2024	
			

<b>Ms. Kajal</b>			
1.	Workshop on SPSS	August 23-24, 2024	
2.	Workshop on MATLAB	Sept 4-7, 2024	
3.	Online Lecture Series on Career Opportunities in Acturial Sciences	Sept 10, 2024	
4.	Lecture Series on Application of Mathematics	Sept 27-28, 2024	

5.	Online Workshop on Mathematical Modelling and Applications	Sept 30 to Oct 08, 2024	
6.	Mentorship Program	01-10-2024	
7.	Workshop on Python and Data Science	Oct 25-26, 2024	
8.	Lecture Series on Calculus	Oct 28, 2024	
9.	Online Lecture Series on Group Theory and Applications	Nov 1-2, 2024	
10.	Infinity Hunt	5 <sup>th</sup> Nov, 2024	
11.	Online Lecture Series on Number Theory and its Applications	9 <sup>th</sup> Nov, 2024	
12.	Educational Tour to Guru Nanak Dev University, Amritsar	11 <sup>th</sup> Nov, 2024	
13.	Lecture Series on GAP	Nov 13-14, 2024	
14.	Online Lecture Series on Geometrical Visualisation of Curves and Surfaces	22-23 Nov, 2024	
15.	Online Workshop on Writing research paper using LaTeX typesetting	1 <sup>st</sup> Dec, 2024	
16.	Lecture Series on Mathematical Modelling of Co-infection Dynamics with Recovery	3 <sup>rd</sup> Dec, 2024	
17.	Online Lecture on Irreducibility of polynomials	3 <sup>rd</sup> Dec, 2024	
18.	Online Lecture Series on New Trends Analytics and Optimization Energy	9 <sup>th</sup> Dec, 2024	



**Training/Workshops/Seminars organized (April 2024-Jan 2025)**



S.No	Name of Activity	Resource Person	No. of beneficiaries	Date	Proof
<b>Department of Physics</b>					
1.	One Week Workshop on Proteus Software, Machine Learning and Cyber Security	Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda.	151	07-08-2024 to 13-08-2024	
2.	One week Workshop on Hand on Training Workshop ON ELECTRONICS PROJECTS	Er. Sukhwinder Singh , Coordinator , National Institute of Electronics , Research and Training , Patiala.	151	09-09-2024 to 14-09-2024	
3.	Rangoli Competition to Observe International Ozone Day.	-	20	16-09-2024	
4.	Workshop on G.M. Counters.	Dr. Sarbjit Singh , Ex-Scientific Office, BARC , Mumbai	130	25-09-2024 to 26-09-2024	
5.	Mentorship Programme	Dr. Vimal Mehta , Assistant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	14	30-09-2024	





6.	workshop on CRO AND DSO	Dr. Asha Arora ,Assistant Professor in Physics ,Dev Smaj College For Women at Ferozpur.	120	October 09- 10,2024	
7.	National Graduate Physics Examination	-	15	19-01- 2025	

Department of Chemistry					
1.	Mentorship Programme	Dr. Vimal Mehta, Assistant Professor Physics, Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib	14	30-09-2024	
2.	One-Week Workshop on Proteus Software, Machine Learning and Cyber Security	Dr. Navdeep Goyal, Department of Electronics and Communication Engineering, Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda	151	August 07-13, 2024	
3.	Rangoli Competition to observe Interational Ozone Day	Judges: Ms. Rajveer Kaur, Assistant Prof. in Physics, GNC, Muktsar Ms. Rippandeep Kaur, Assistant Prof. in Chemistry, GNC, Muktsar	20	16-09-2024	



4.	One Day Workshop on “Hands on Training on UV-Vis Spectrophotometer”	Dr.Amanpreet Kaur, AssistantProfessor,DepartmentofChemistry,GuruNanakDev University Amritsar Punjab Dr. NiveditaChaudhri, AssistantProfessor,DepartmentofChemistry,GuruNanakDev University Amritsar Punjab	29	17-09-2024	
5.	Three Days Workshop on Mathematics for Chemists	Ms. Navneet Rana, Assistant Professor in Mathematics, GNC, Sri Muktsar Sahib		October 08-10, 2024	

S.No	Name of Activity	Resource Person	No. of beneficiaries	Date	Proof
<b>Department of Mathematics</b>					
1.	Workshop on SPSS	Dr. Harmanpreet Singh Kapoor, Assistant Professor, Department of Mathematics and Statistics, Central University of Punjab, Bathinda	137	August 23-24, 2024	
2.	Training Program on Projects	Dr Satinderpal Kaur, Assistant Professor, Guru Nanak College, Sri Muktsar Sahib	34	August 29-31, 2024.	

3.	Workshop on MATLAB	Dr VK Kukreja, Professor, Department of Mathematics, SLIET, Longowal and Dr. Dilbag Singh, Assistant Professor, Department of Mathematics, Panjab University, Chandigarh	152	Sept 4-7, 2024	
4.	Online Workshop on Mathematical Modelling and Applications		78	Sept 30 to Oct 08, 2024	
5.	Workshop on Python and Data Science	Dr. Amandeep Kaur, Associate Professor, Central University, Bathinda, Dr. Suraj Srivastawa, Department of Computer Science and Engineering, PEC, Chandigarh and Dr. Karan Arora , founder and CEO, Itronix Solutions, Chandigarh	102	Oct 25-26, 2024	
6.	Online Workshop on writing research paper using latex Typesetting	Dr. Satvir Singh, Professor, ECE, IKGPTU, Kapurthala	32	Dec 1, 2024	

## Annexure V

**Books purchased (April 2024-Jan 2025)**

**Department of Physics**

**1. Journal Subscribed: Nil**

**2. List of Books (Total Books: 87 with 43 )**

<b>S.No.</b>	<b>Book Name</b>	<b>Author</b>	<b>QTY.</b>
1.	Classical Mechanics	Gupta	2
2.	Mechanics	Soni	2
3.	The special theory of relativity	Morris	2
4.	Vibration and waves	French A	2
5.	Waves and Oscillations	Subrahmanya m N	2
6.	Electricity and Magnetism	Murugesan	3
7.	Introduction to Electrodynamics	Griffiths	3
8.	Statistical Physics, thermodynamics and kinetic theory	Bhatia V	3
9.	Thermal Physics	GARG	2
10.	Electronic devices and circuit theory	Boylestad	3
11.	Electronic principles	Malvino	3
12.	Solis state electronic devices	Streetman B.G	3
13.	Basic electronics and linear circuits	BHARGAVA	2
14.	Electronics fundamentals and applications	Chattopadhyay	2
15.	Nuclear Physics	Roy R	2
16.	Lasers and non-linear optics	Laud	3
17.	A textbook of optics	Subrahmanyam	3
18.	Optics	Ghatak A	3
19.	Introduction of quantum mechanics	Griffiths	2
20.	Solid state Physics	Pillai	3

21.	Elementary solid state Physics	Omar	2
22.	Fundamentals of Physics (2016)	GIAMBATTIST	3
23.	Introduction of crystallography and solid state Physics	Bhattacharya D	2
24.	Elements of solid state Physics	Srivastava J.	2
25.	Introduction to Nuclear Physics	Krane	3
26.	Introduction to Solid State Physics	Kittel	3
27.	An Introduction to Mechanics	Kleppner	3
28.	Non-Relativistic Quantum Mechanics	Puri	1
29.	Statistical Physics Vol, 9	Landau	1
30.	Classical Electrodynamics	Schwinger	1
31.	Quantum Field Theory	Ryder	1
32.	Introductory Solid state physics	Schmool D.	2
33.	Statistical Physics Vol 5	Landau	1
34.	Digital Integrated Electronics	TAUB	2
35.	Computational Physics	Mittal	1
36.	Elements of Modern Physics	Jain V	1
37.	Mathematical Physics	Balakrishr	1
38.	Introduction to Electromagnetic Theory	Chow	1
39.	Atomic and Nuclear Physics	Thorley N	1
40.	Basic Electronics	Thareja	1
41.	Radiation Detection and Measurement	Knoll G	1
42.	Laser Fundamentals 2nd Edition (South AsianEdition)	SILFVAS T	2
43.	Elements of Modern Physics	Patil	1

## Department of Chemistry

### List of Books (Total Books =58 with 45 Titles)

S. No	Name of Book	Author	Quantity
1.	Photochemistry and Pericyclic Reactions, New Age International Publishers.	Singh, Jagdamba; Singh, Jaya	1
2.	Introduction to Spectroscopy, 3rd edition, Harcourt College Publication, 2001.	Pavia; Lampman, D.L.; George, Gary M; Kriz, S.	1
3.	Molecular Photochemistry	Turro, N.J.; Benjamin, W.A.	1
4.	Solid State Chemistry, New Age International.	Chakrabarty, D.K.	1
5.	Principles of Organic Synthesis, Blackie Academic & Professional.	Norman, R.O.C.; Coxon, J.M.	1
6.	Structure and Mechanism in Organic Chemistry, Cornell University Press.	Ingold, C.K.	2
7.	Modern Methods of Organic Synthesis, Cambridge University Press.	Carruthers, W.	1
8.	Organic Chemistry, 6th edition, Prentice Hall, 1992	Morrison, R.T.; Boyd, R.N.	2
9.	Organometallic Chemistry, 2 <sup>nd</sup> 2005 edition, New Age International,	Mehrotra; Singh, A.	2
10.	Spectrometric Identification of Organic Compounds, 6th edition, John Wiley, 2002.	Silverstein, R.M.; Bassler, G.C.; Morrill, T.C.	1
11.	Modern Electro-Chemistry, 2 <sup>nd</sup> edition, Plenum Press, New York, 1998. Part A	Bockris, John O'M; Reddy, Amulya K.N.	1
12.	Modern Electro-Chemistry, 2 <sup>nd</sup> edition, Plenum Press, New York, 1998. Part II B	Bockris, John O'M; Reddy, Amulya K.N.	1
13.	Modern Electro-Chemistry, 2 <sup>nd</sup> edition, Plenum	Bockris, John O'M; Red	1

	Press, New York, 1998. Part 2A	dy, Amulya K.N.	
14.	Chemical Kinetics, 3rd edition, Harper & Row, Publishers, New York,	Laidler, Keith J.	1
15.	Principles and Applications of Electrochemistry, 4th edition, Hall, London, 1994.	Crow, D.R.	1
16.	Advanced Inorganic Chemistry, 6th edition, John Wiley & Sons, 1999.	Cotton, F.A.; Wilkinson	2
17.	Inorganic Chemistry: Principles of Structure and Reactivity, 4th edition, Harper Collins College Publishers, 1993.	Huheey, James E.	1
18.	Physical Methods in inorganic chemistry	Drago, Russell S.	1
19.	A Guide Book to mechanism in Organic Chemistry, 6th edition, Longman, 1989.	Sykes, Peter	1
20.	Reactions Mechanism in Chemistry, Vol. I, Macmillan, 1985.	Mukherji, S.M.; Singh, S.P.	2
21.	Reactions Mechanism in Chemistry, Vol. III, Macmillan, 1985.	Mukherji, S.M.; Singh, S.P.	2
22.	Stereochemistry of Organic Compounds, 2nd edition, New Age International Publishers, 1994.	Nasipuri, D.	2
23.	Spectroscopy of Organic Compounds, 2nd edition, New Age International, 1993.	Kalsi, P.S.	2
24.	Stereochemistry: Conformation and Mechanism, 2nd edition, Wiley Eastern Limited, 1993.	Kalsi, P.S.	2
25.	Practical Organic Chemistry, 4th edition, Orient Longman Pvt. Ltd., 1981. edition, New Impression,	Mann, F.G.; Saunders, B.C.	1
26.	Textbook of Organic Chemistry, 2nd edition, Vikas Publishing House, 1976. edition,	Tewari, K.S.; Vishnoi, N.K.; Mehrotra, S.N.A	1

27.	Advanced Practical Organic Chemistry, Chapman and Hall, 1995	Leonard, J.; Lygo, B.	1
28.	Fundamentals of Photochemistry, New Age	Mukherjee	2
29.	Elements of Organic Spectroscopy, S. Chand	Y.R. Sharma	2
30.	Physical Chemistry 2/E, McGraw Hill	Metz	1
31.	Principles of Physical Chemistry, Vishal	Puri Sharma	1
32.	Quantum Chemistry, PEA	Levine	1
33.	Symmetry & Spectroscopy of Molecules, New Age	Reddy	1
34.	Organic Chemistry Vol. 1, PEA	Finar	1
35.	Organic Chemistry Vol. 2, PEA	Finar	1
36.	Organic Chemistry	Solomons	1
37.	Principles of Physical Chemistry, VIVA	Mallick	1
38.	Chemical Kinetics & Catalysis, Medtec	Panchenkov	1
39.	Organometallic Chemistry : A Unified Approach, New Age	Mehrotra	1
40.	Vogel's Qualitative Inorganic Analysis, PEA	Svehla,	1
41.	Chemical Applications of Group Theory, Wiley	Cotton	1
42.	Senior Practical Physical chemistry R. Chand and co., new Delhi 2011	B.D. Khosla, Garg V.C	3
43.	Reactions and Reagents in Organic Chemistry.	Aggarwal, O.P.	1
44.	Electrochemistry, Medtec	Lahiri	1
45.	Organic synthesis: Reaction Mechanisms & Reagents, Medtec	G. Joshi	1



## Department of Mathematics




### List of Books (Total Books =72 with 52 Titles)




S. No	Name of Book	Author	Quantity
1.	Introductory Statistics and Random Phenomena	Denker, M	4
2.	Curves and Surfaces	Abate, M	1
3.	Introductory Differential Equations 4/Ed	Abell, M.L	1
4.	Contemporary Topics in Mathematics and Statistics with Applications, Vol. 1	Adhikari, A	1
5.	Algebra, Geometry, Analysis and Their Application	Ahmad, N	3
6.	Nonstandard Methods in Stochastic Analysis and Mathematical Physics	Albeverio, S	1
7.	Simulation Modeling and Analysis with Arena	Altioek, T	2
8.	Analytical Dynamics Theory and Applications	Ardema, M.D	1
9.	Lectures on Partial Differential Equations	Arnold, V.L	1
10.	Partial Differential Equations and Boundary Value Problems with Maple, 2/Ed	Articolo, G.A	1
11.	Class Field Theory	Artin, E	1
12.	Approximation of Elliptic Boundary-Value Problems	Auvin, J-P	1
13.	Metric Spaces	Babu Ram	2
14.	Kernel Functions and Elliptic Differential Equations in Mathematical Physics	Bergman, S	1
15.	Numerical Analysis	Bhat, R	2
16.	A Basic Course in Probability Theory	Bhattacharya, R	2
17.	An Introduction to Differential Equations Using MATLAB	Bhut, R	2
18.	An Introduction to Fuzzy Logic and Fuzzy Sets	Buckley, J.J	1
19.	A Course in Approximation Theory	Cheney, W	1






20.	Control of Nonlinear Dynamical Systems: Methods and Applications	Chernousko, F.L	1
21.	Ordinary Differential Equations with Applications, 2/ed	Chicone, C	1
22.	Complex Analysis with Applications in Science and Engineering, 2/Ed	Cohen, H	2
23.	Further Algebra and Applications	Cohn, P.M	2
24.	The Mathematics of Encryption	Cozzens, M	1
25.	Stochastic Processes	Doob, J.L	1
26.	Modern Geometry-Methods and Applications Part III	Dubrovin, B.A	1
27.	An Introduction to Difference Equations, 3/Ed	Elaydl. S	1
28.	Introduction to Biostatistics	Forthofer, R.N	1
29.	Applied Numerical Analysis	Gerald, C.F	2
30.	Partial Differential Equations: Analytical and Numerical Methods, 2/Ed	Goekenbach, M.S	1
31.	Methods of Real Analysis	Goldberg, R.R	1
32.	Beginning Topology	Goodman, S.E	1
33.	Introductory Course on Differential Equations	Gorian, G.C	2
34.	Pobabilities on Algebraic Structures	Grenander, U	1
35.	Engineering Mathematics- III	Gupta, C.B	1
36.	Elements of Numerical Analysis, 2/Ed	Gupta, R.S	2
37.	Probability Models	Haigh, J	1
38.	Introduction to Functional Differential Equations	Hale, J.K	2
39.	A Basic Course in Partial Differential Equations	Han, Q	1
40.	Fundamentals of Error-Correcting Codes	Hoffman,W.D	2
41.	Practical Applied Mathemaics: Modelling, Analysis, Approximation	Howison, S	1
42.	Introduction to Mathematical Methods in	Isaev, A	1







	Bioinformatics		
43.	Engineering Mathematics Vol, 1	ITL	1
44.	Analysis and Probabilty Wavelets, Signals, Fractals	Jorgensen, P.E	1
45.	Wavelet Bases in Bounded Domains and Applications	Jouini, A	2
46.	Introductory Operations Research: Theory and Applications	Kasana, H.S	1
47.	Basic of Functional Analysis	Khan, B.K	2
48.	Analysis of Stochastic Partial Differential Equations	Khoshnevisan, D	1
49.	Differential Equations Linear. Nonlinear, Ordinary,Partial	King, A.C	1
50.	Logistic Regression: A Self-Learning Text, 2/Ed	Kleinbaum, D.G	1
51.	Algebraic Aspects of Cryptography	Koblitz, N	1
52.	Group Theory: An Expedition with Sage Math	Kumar, A	1



**Outreach Interdisciplinary Activities (April 2024-Jan 2025)**



S. No.	Name Of Activity	Date	Participants	Proofs
<b>Department of Physics</b>				
1.	Educational visit to Verka Milk Plant, Ludhiana	04-11-2024	90	
2.	Dr. Anita Rani delivered a special talk on the topic 'Semiconductor Physics' to students of 10+1 of Guru Nanak Collegiate School, Sri Muktsar Sahib	14-10-2024	18	
3.	Ms. Rajveer Kaur delivered a special talk on the topic 'semiconductor materials' to students of 10+2 of Guru Nanak Collegiate School, Sri Muktsar Sahib	25-10-2024	20	
4.	Ms. Jeevanjot Kaur delivered a special talk on the topic 'wave optics' to students of 10+2 of Guru Nanak Collegiate School, Sri Muktsar Sahib	25-10-2024	20	
5.	Ms. Sandeep Kaur delivered a special talk on the topic 'communication system' to students of 10+2 of Guru Nanak Collegiate School, Sri Muktsar Sahib	26-10-2024	18	
6.	Paper presented by Ms. Gaganpreet Kaur and Ms. Jashanpreet Kaur (students of B.Sc. III N.M.) in RISEMH-2024 at J S University, Shikohabad, Uttar Pradesh	26-10-2024	02	

7.	Paper presented by Ms. Chahat, (students of B.Sc. II N.M.) in ICIM-2024 at St. Stephens College, Uzhavoor, Kerala	21-11-2024	03	
8.	Paper presented by Ms. Ramandeep Kaur, (students of B.Sc. II N.M.) in ICIM-2024 at St. Stephens College, Uzhavoor, Kerala	21-11-2024	03	
9.	Paper presented by Ms. Harsharan in ICIM-2024 at St. Stephens College, Uzhavoor, Kerala	21-11-2024	03	

Department of Chemistry				
1.	Ms. Kirandish Kaur delivered a special talk on the topic 'Basics of Chemistry' to students of 10+1 of Guru Nanak Collegiate School, Sri Muktsar Sahib	19.09.2024	18	
2.	Ms. Amandeep Kaur delivered a special talk on 'Chemical bonding' to students of 10+1 of Guru Nanak Collegiate School, Sri Muktsar Sahib on	20.09.2024	18	
3.	Ms. Rippandee Kaur delivered a special talk on 'Carboxylic Acids' to students of 10+2 of Guru Nanak Collegiate School, Sri Muktsar Sahib on	14.10.2024	20	
4.	Ms. Kirandish Kaur delivered a special talk on 'Periodic Properties' to students of School of Eminence, Bariwala	25-10-2024	50	
5.	Ms. Rippandee Kaur delivered a special talk on 'Basics of Hybridization' to students of School of Eminence, Bariwala	25-10-2024	50	

6.	Ms. Amandeep Kaur delivered a special talk on 'Chemical Kinetics' to students of School of Eminence, Bariwala on 25-10-2024.	25-10-2024	50	
7.	Workshop on Chemistry Practicals on Volumetric Analysis to students of School of Eminence, Bariwala	25-10-2024	50	
8.	Educational Visit to Verka Milk Plant, Ludhiana	04-11-2024	95	
9.	Paper presented by Anurag Singh on the topic Steroids and How They Effect on Human Body in CHASCON-2024 organized by PU Chd	Nov 6-8, 2024	1	
10.	Paper presented by Ravinderpal Singh on the topic Role of Carbon Sequestration In Climate Change in CHASCON-2024 organized by PU Chd	Nov 6-8, 2024	1	
11.	Paper presented by Palak on the topic Forensic Chemistry AT Crime Scene in CHASCON-2024 organized by PU Chd	Nov 6-8, 2024	1	

12.	Paper presented by Devika on the topic Green Chemistry and Environmental Sustainability in CHASCON-2024 organized by PU Chd	Nov 6-8, 2024	1	
13.	Paper presented by Anupriya Verma on the topic Nanotechnology in Medicines in CHASCON-2024 organized by PU Chd	Nov 6-8, 2024	1	





S. No.	Name Of Activity	Date	Participants	Proofs
<b>Department of Mathematics</b>				
1.	Educational Tour to Guru Nanak Dev University, Amritsar	Nov 11, 2024	55	
2.	Ms.Jyoti Kaur(M.Sc. Math-1) and Ms.Kirti Girdhar ( BA-II) presented research papers in the 'One day International symposium on Recent advances in Differential Equations and Applications (ISRADEA-2024) organized by the Department of mathematics, Deshbandhu College (University of Delhi) kalkaji.	Aug 06,2024	2	




3.	Ms Jashanpreet Kaur( M.Sc. Math-1), S. Arshdeep Singh (BA-I) presented their research work in National Symposium on Solutions For Current Issues In the Society , Environment,Etics, Health, Education, Business, Culture S&T Including ICT organised by research centre/ Department of social work, Sri Sarda College for women, Tirunelveli.)	October 20,2024	2	
4.	Ms.Gaganpreet Kaur( B.Sc Non-medical) and Ms.Jashanpreet Kaur( B.Sc Non-medical ) presented research papers in 2nd International conference on "Evolution in Pure and Applied Mathematics" held at Akal University, Talwandi Sabo (Bathinda).	November 20-22, 2024	2	
5.	Ms Satinderpal Kaur delivered talk on topic “Practical Applications of Mathematics in Real Life” to students of School of Eminence, Bariwala	5 <sup>th</sup> Dec, 2024	34	
6.	Ms Satinderpal Kaur Delivered talk on topic “Practical Applications of Mathematics in Real Life” to students of YS Public School, Thandewala	5 <sup>th</sup> Dec, 2024	57	
7.	Ms Kamaljeet Kaur Delivered talk on topic “Need of mathematical literacy as a crucial tool for everyday life and future studies” to students of Govt Sr. Sec School Village Pakkan	Dec 03, 2024	15	
8.	Ms Navneet Rana acted as resource person during Workshop on Mathematics for Chemists for <a href="#">B.Sc.</a> Medical and <a href="#">B.Sc.</a> Non-Medical students.	08-10, 2024	138	

**Annexure VII**


**Invited Lectures (April 2024-Jan 2025)**

<b>S. No.</b>	<b>Topic</b>	<b>Speaker</b>	<b>Date</b>	<b>No. of Beneficiaries</b>	<b>Proofs</b>
<b>Department of Physics</b>					
1.	Special talk on radioactivity and nuclear decay, radiation detection	Dr. Sarbjit Singh , Ex- Scientific Office, BARC , Mumbai	25-09-2024 to 26-09-2024	130	
2.	Extension Lecture on Indoor Radon ,Thoron Concern And Measurement Techniques.	Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib.	01-10-2024	120	
3.	Extension lecture on Standard Model I and II	Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh.	05-10-2024	120	
4.	Extension Lectutre on Nuclear Physics	Dr. Bhawandeep Kaur Uppal Assisstant Professor ,University College of Jaito.	23-10-2024	120	

Department of Chemistry					
1.	Extensionlecture onMetal Organic Frameworks (MOF's): The Next Generation of Materials for Advanced Applications	Dr.Amanpreet Kaur, AssistantProfessor,DepartmentofChemistr y,GuruNanakDev University Amritsar Punjab	17-09-2024	197	
2.	Extensionlecture on Spectroscopic Techniques: Principles, Types and Applications	Dr. NiveditaChaudhri, AssistantProfessor,DepartmentofChemistr y,GuruNanakDev University Amritsar Punjab	17-09-2024	197	
3.	Extensionlecture on Stereochemistry	Dr Sudesh Kumar, Associate Professor, Department of Chemistry, DESM, National Institute of Education, and National Council of Education for Research and Training New Delhi	20-09-2024	180	

4.	Extensionlecture on Chemistry of Drug Discovery and Development	Dr. Vinod Kumar, Professor, Department of Chemistry, Central University of Punjab, Bathinda	23-09-2024	200	
5.	Extensionlecture on Intellectual Property Rights: Protecting Creativity and Innovation	Dr. Rakesh Kumar, Assistant Professor, Department of Chemistry, Central University of Punjab, Bathinda	23-09-2024	275	
6.	Extensionlectureon Organic Reactions: Mechanistic Studies and Applications	Dr. Pushpinder Singh, Assistant Professor in Chemistry, DAV College, Sector 10, Chandigarh	10-10-2024	150	
7.	Extensionlecture on Role of Chirality and Asymmetric Synthesis in Chemistry	Dr. Aman Bhalla, Associate Professor, Department of Chemistry and Centre of Advanced Studies in Chemistry, Panjab University, Chandigarh	21-10-2024	200	

Department of Mathematics					
1.	Online Lecture Series on Career Opportunities in Actuarial Sciences	Dr. Harmanpreet Singh Kapoor, Central University of Punjab, Bathinda and Bharti Singh, Accenture, team lead, Gurgaon, Haryana .	Sept 10, 2024	52	
2.	Lecture Series on Application of Mathematics	Dr Arwind Kumar Gupta, Associate Professor , IIT Ropar, Dr. Sapna Sharma, Associate Professor, Thapar University, Patiala and Dr Gursharan Singh Sandhu, Professor, SCD Govt. College Ludhiana	Sept 27-28, 2024	86	
3.	Lecture Series on Calculus	Prof. Ashish Arora from IKGPTU, Jalandhar and Dr Jatinder Singh from GNDU, Amritsar.	Oct 28, 2024	64	
4.	Online Lecture Series on Group Theory and Applications	Dr. Yashpreet Kaur, Assistant Professor, Department of Mathematics, Thapar Institute of Engineering & Technology, Patiala	Nov 1-2, 2024	74	
5.	Lecture Series on Number Theory and its Applications	Dr Rachna Assistant Professor, Department of Mathematics, GNDU, Amritsar	Nov 9, 2024	74	

6.	Online Lecture on irreducibility of polynomials	Dr. Ankita Jindal, Assistant Professor, MRM College, Dharbanga, Bihar	Dec 3, 2024	74	
7.	Online Lecture Series on Mathematical Modelling of co-infection dynamics with recovery	Dr. Joydip Dhar, Professor, Department of Engineering Sciences, ABV, Gwalior	Dec 3, 2024	74	
8.	Online Lecture Series on New Trends in Analytics and Optimisation of Energy-	Dr Saurav Sharma, Deputy of Industrial engineering university of Houston, USA	Dec 9, 2024	74	
9.	Lecture Series on GAP	Dr. Dilpreet Kaur, IIT Jodhpur	Nov 13-14, 2024	28	
10.	Online Lecture Series on Geometric Visualization of Curves and surfaces	Dr. Rakesh Kumar, Assistant Professor, Department of mathematics, Punjabi University Patiala	22-23 Nov, 2024	64	