



DEPARTMENT OF MATHEMATICS

**GARGI COLLEGE
UNIVERSITY OF DELHI
(Established in 1967)**



Galileo Galilei

MATHEMATICS IS THE LANGUAGE
WITH WHICH GOD HAS WRITTEN THE UNIVERSE.

A horizontal timeline with four pink arrow-shaped boxes pointing right. Each box contains a year in a red circle and a description of the event. The background features abstract blue and pink wavy shapes.

1967

Mathematics
as a subject
was
introduced in
Gargi

2013

B.Sc.(H)
Mathematics
was
introduced
under FYUP

2016

B.Sc.(H)
Mathematics
under CBCS

2019

B.Sc.(H)
Mathematics
under LOCF

Mathematics as a subject in:

B.A. (H) Applied
Psychology
B.A. (H) Business
Economics
B.A. (H) Economics
B.A. (H) English
B.A. (H) Hindi
B.A. (H) History
B.A. (H) Philosophy
B.A. (H) Political
Science
B.A. (H) Psychology
B.A. (H) Sanskrit
B.A. (Prog.)

HUMANITIES

B.Sc. (H) Mathematics
B.Sc. (H) Botany
B.Sc. (H) Chemistry
B.Sc. (H) Microbiology
B.Sc. (H) Physics
B.Sc. (H) Zoology
B.Sc. Life Science
B.Sc. Physical
Science

SCIENCE

B. Com. (H)
B. Com. (Prog.)

COMMERCE

B. El. Ed.

ELEMENTARY EDUCATION

Teaching Faculty



Designation	Number
Professor	1
Associate Professor	3
Assistant Professor	12

Faculty Profile

Name	Qualification	Designation	Specialization	Years of Experience (in Gargi College)
Prof. Promila Kumar	Ph.D. Mathematics	Professor	Mathematical Programming	39
Ms. Arshmeet Kaur	M.Phil. Mathematics	Associate Professor	Mathematical Programming	27
Ms. Bhawna Kapoor	M.Phil. Mathematics	Associate Professor	Algebra	27
Ms. Bharti R. Talwar	M.Phil. Mathematics	Associate Professor	Analysis	27
Ms. Pooja Gupta	M.Phil. Mathematics	Assistant Professor	Information Theory	14
Mr. Ramakant Prasad	M.Tech. (Pursuing Ph.D.)	Assistant Professor	Climate Change Modelling, Tropical Storm	12

Faculty Profile

Name	Qualification	Designation	Specialization	Years of Experience (in Gargi College)
Ms. Sapna Malhotra	M.Phil. Mathematics (Pursuing Ph.D.)	Assistant Professor	Operator Theory	12
Ms. Manpreet Kaur	M.Phil. Mathematics (Pursuing Ph.D.)	Assistant Professor	Information Theory	7.5
Ms. Anshika Agrawal	M.Sc. Mathematics (Pursuing Ph.D.)	Assistant Professor	Fuzzy Set Theory	6
Dr. Vidya Sagar	Ph.D. Mathematics	Assistant Professor	Functional Analysis	5.5
Dr. Bharti Sharma	Ph.D. Mathematics	Assistant Professor	Optimization, Mathematical Programming	5

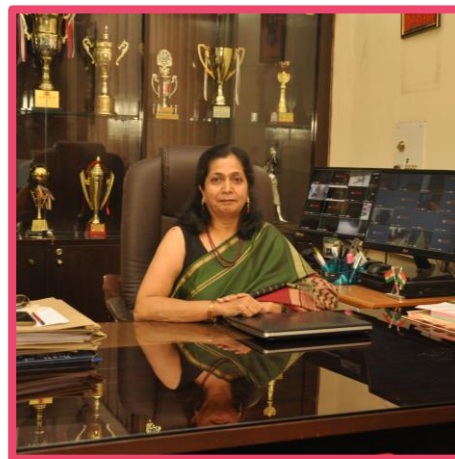
Faculty Profile

Name	Qualification	Designation	Specialization	Years of Experience (in Gargi College)
Dr. Deepika Dhall	Ph.D. Mathematics	Assistant Professor	Numerical Analysis	5
Ms. Farheen Ahmed	M.Phil. Mathematics	Assistant Professor	Differential Equations	4
Dr. Vibha	Ph.D. Mathematics	Assistant Professor	Geometric Function Theory	1.5
Dr. Rimpi Pal Kundu	Ph.D. Mathematics	Assistant Professor	Nonlinear Dynamical Systems	10 months
Ms. Krishna Meena	M.Sc. Mathematics	Assistant Professor	Differential Equations	5 months

Prof. Promila Kumar

Awards & Recognitions

- ❑ Meritorious teacher award from Govt. of NCT of Delhi in 2016
- ❑ WAGE lifetime achievement award from Women's Agency for Generating Employment in 2017
- ❑ Distinguished teacher award from Ramanujan College and Indian Accounting Association NCR Chapter
- ❑ Felicitated, along with the women heads of other academic institutions by MHRD, on the occasion of International Women's Day



As Supervisor

Name of Student	Course	Year of award
Jyoti	M.Phil.	2011
Bharti Sharma	Ph.D.	2018
Jyoti	Ph.D.	2019
Gambheer Singh	Ph.D.	Pursuing

Membership of Academic/ Professional Societies

International Societies:

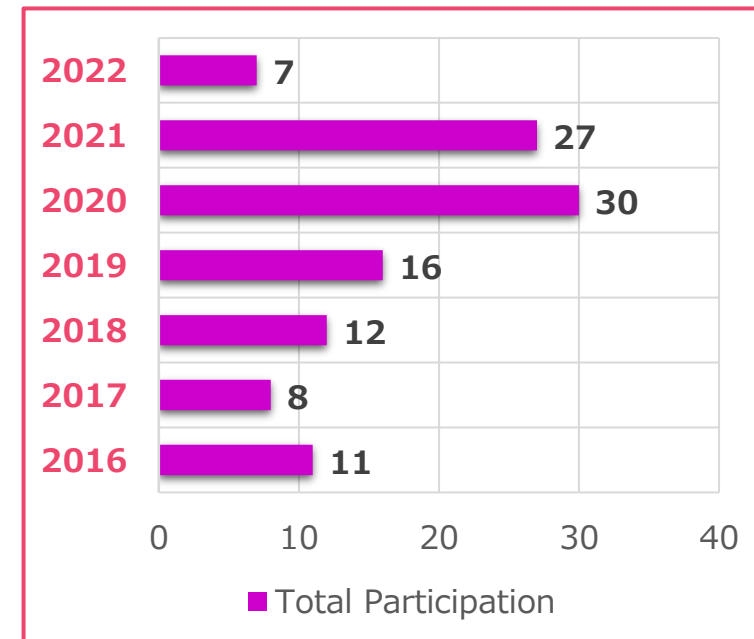
- ❑ Working group on Generalized Convexity and Monotonicity
- ❑ International Association of Engineers

National Societies:

- ❑ Operational Research Society of India.
- ❑ Alumni Association of Faculty of Mathematics, University of Delhi.
- ❑ Expert Committee member of Task force on Star College Scheme by DBT.
- ❑ Member of Ethical Committee for Biomedical and Health Research of 'All India Institute of Medical Sciences'.

Faculty Research and Development

Number of Papers Published	25
Chapters in Books	2
Number of Papers Presented in Conference	14
Number of FDPs/Refresher Courses Attended	68
Number of Research Projects	2



* The data is from July 2016 till June 2022

Papers Published

Title of Paper	Name of the Author/s	Name of Journal	Year of Publication	ISSN Number
A new subclass of Q0-matrix in linear complementarity theory	Gambheer Singh, S.K. Neogy, Promila Kumar	Linear Algebra and its Applications	2022	0024-3795
Caputo fractional order derivative model of Zika Virus transmission dynamics	Ramakant Prasad , Ravins Dohare, Kapil kumar	Journal of Mathematics and Computer Science	2022	2008-949X
Estimates for initial coefficients of certain bi-univalent functions	Vibha Madaan , Ajay Kumar and V. Ravichandran	Filomat	2021	2406-0933
Transmission dynamics of COVID-19 outbreak in India and effectiveness of self-quarantine: a phase-wise data driven analysis	Narender Kumar <i>et al.</i>	International Journal of Computer Applications in Technology	2021	1747-5047

Papers Published

Title of Paper	Name of the Author/s	Name of Journal	Year of Publication	ISSN Number
SIR-SI mathematical model for Zika Virus progression dynamics in India: a case study	Narender Kumar et al.	Journal of Communicable Diseases	2021	2581-351X
Comparative Transmission Dynamics and Optimal Controls for Chikungunya, Dengue and Zika Virus Infections	Narender Kumar et al.	Letters in Biomathematics	2020	2373-7867
Radii of starlikeness and convexity of some entire functions	Vibha Madaan, Ajay Kumar and V. Ravichandran	Bullettin of Malaysian Mathematical Sciences Society	2020	0126-6705
Optimality and Duality for Multiobjective Semi-infinite Variational Problem Using Higher-Order B-type I Functions	Promila Kumar and Jyoti	Journal of Operational Research Society of China	2019	2194-668X

Papers Published

Title of Paper	Name of the Author/s	Name of Journal	Year of Publication	ISSN Number
Lemniscate convexity of generalized Bessel functions	Vibha Madaan, Ajay Kumar and V. Ravichandran	Studia Scientiarum Mathematicarum Hungarica	2019	0081-6906
Starlikeness associated with lemniscate of Bernoulli	Vibha Madaan, Ajay Kumar and V. Ravichandran	Filomat	2019	2406-0933
Second order duality for variational problem via efficiency of higher order	Promila Kumar and Bharti Sharma	International Journal of Mathematics in Operational Research	2019	1757-5850
Temperature and rainfall dependent mathematical modelling for progression of Zika virus infection	Narender Kumar <i>et al.</i>	International Journal of Mathematical Modelling and Numerical Optimisation	2019	2040-3615

Papers Published

Title of Paper	Name of the Author/s	Name of Journal	Year of Publication	ISSN Number
Comparative evaluation of curcumin and antioxidants in the management of oral submucous fibrosis	Narender Kumar <i>et al.</i>	Journal of Investigative and Clinical Dentistry	2019	2041-1618
Interval Valued Programming Problem with Infinite constraints	Promila Kumar, Bharti Sharma and Jyoti	Journal of Operational Research Society of China	2018	2194-668X
On the multiobjective control problem	Promila Kumar and Bharti Sharma	Journal of Applied Analysis	2018	1869-6082
Duality for Non-differentiable Multi-objective Semi-infinite Programming for Higher order invex functions	Promila Kumar and Jyoti	International Journal of Mathematics in Operational Research	2018	1757-5850

Papers Published

Title of Paper	Name of the Author/s	Name of Journal	Year of Publication	ISSN Number
(F, ρ) Invexity of Higher Order for Multiobjective Fractional Variational Problem	Promila Kumar and Bharti Sharma	Control and Cybernetics	2018	0324-8569
Higher order efficiency and duality for multiobjective variational problem	Promila Kumar and Bharti Sharma	Control and Cybernetics	2017	0324-8569
Multi-objective semi-infinite variational problem and generalized invexity	Promila Kumar, Bharti Sharma and Jyoti	Opsearch	2017	0030-3887
Progression dynamics of zika fever outbreak in El salvador during 2015–2016: a mathematical modelling approach	Narender Kumar <i>et al.</i>	Future Virology	2017	1746-0794

Papers Published

Title of Paper	Name of the Author/s	Name of Journal	Year of Publication	ISSN Number
Weak efficiency of higher order for multiobjective fractional variational problem	Promila Kumar and Bharti Sharma	Opsearch	2016	0030-3887
Multiobjective variational problem through generalized (F, ρ) -invex functionals of higher order	Promila Kumar and Bharti Sharma	Communications on Applied Nonlinear Analysis	2016	1074-133X
Characterization of generalized invexity in multi-objective fractional variational problem	Promila Kumar , Bharti Sharma and Jyoti	Statistics, Optimization and Information Computing	2016	2311-004X
Awareness and use of free/open software for science and mathematics education	Arshmeet Kaur et al.	International Journal of Humanities Social Science and Education	2016	2349-0381

Papers Published

Title of Paper	Name of the Author/s	Name of Journal	Year of Publication	ISSN Number
Evaluation of Boltzmann's constant: revisit using interfaced data analysis by in the physics education	Arshmeet Kaur et al.	The Physics Education	2016	2661-3409

Chapters in Books

Title of Chapter	Name of the Author/s	Name of Book	Year of Publication	ISBN Number
Adaptive Hybrid Function Projective Synchronization of Chaotic Space-Tether System A. Khan and R. Pal	Rimpi Pal Kundu and A. Khan	Advances in Stability and Control Theory for Uncertain Dynamical Systems	2021	978-1-908106-73-5
RC-Network and Comm-Network for Improvement of Research Collaboration and Communication Among Delhi University Teachers	Narender Kumar, Sapna Malhotra <i>et al.</i>	Performance Management of Integrated Systems and its Applications in Software Engineering, Asset Analytics	2020	978-981-13-8252-9

Papers Presented in Conferences

Title of Paper	Name of Faculty	Name of Conference	Year of Presentation
Hybrid function projective synchronization of time delayed genesis and Lorenz systems with application to secure communication	Rimpi Pal Kundu	International Conference on Dynamical Systems, Control Theory and their Applications	2022
New dissimilarity functions between a probability distribution and its negation	Manpreet Kaur	International Conference on Recent Advances in Computational Mathematics and Engineering	2022
On non-smooth continuous time programming problems	Bharti Sharma	Indo-French Seminar on Optimization, Variational Analysis and Application	2020
Lemniscate starlike and convex radii of Bessel function	Vibha	Second International Symposium on Geometric Function Theory	2019
Janowski starlike and convex radii of some entire functions	Vibha	National Conference on Mathematical Analysis and its Applications	2019

Papers Presented in Conferences

Title of Paper	Name of Faculty	Name of Conference	Year of Presentation
Certain geometric properties of some special functions	Vibha	National Conference on Advances in Mathematical Analysis and its Applications	2019
Lemniscate convexity and lemniscate caratheodory of some analytic functions	Vibha	The 84 th Annual Conference of Indian Mathematical Society	2018
Starlikeness associated with lemniscate of Bernoulli	Vibha	International Conference on Recent Advances in Pure and Applied Mathematics	2018
Starlikeness with respect to lemniscate of Bernoulli using admissibility conditions	Vibha	The 33 rd Annual Conference of Ramanujan Mathematical Society	2018

Papers Presented in Conferences

Title of Paper	Name of Faculty	Name of Conference	Year of Presentation
Multiobjective fractional continuous time problems using quasi efficiency	Bharti Sharma	International Conference on Recent Trends in Operations Research and statistics	2017
On Multiobjective Fractional Variational Problem Using Higher Order Efficiency	Bharti Sharma	Research Scholar Seminar and Annual Conference of the Society of Mathematical Sciences	2017
Quasi Efficiency for Non-Smooth Multiobjective Continuous Time Problems	Bharti Sharma	International Conference on Analytics in Operational Research	2016
KT-pseudoinvex Interval Valued Optimization Problem	Bharti Sharma	National Conference on Algebra, Analysis, Coding and Cryptography	2016

Papers Presented in Conferences

Title of Paper	Name of Faculty	Name of Conference	Year of Presentation
Vector Variational Semi-Infinite Problem Using $()$ - Invexity	Bharti Sharma	Recent Advances in Optimization Theory and Applications	2016

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Ramakant Prasad	Refresher Course on "Advanced Research Methodology"	Ramanujan College, University of Delhi	22-03-2022 to 05-04-2022
Bhawna Kapoor	Faculty in Universities/ College/ Institutes of Higher Education	TLC, Ramanujan College, University of Delhi	20-12-2021 to 19-01-2022
Arshmeet Kaur Arora	Faculty in Universities/ College/ Institutes of Higher Education	TLC, Ramanujan College, University of Delhi	20-12-2021 to 19-01-2022
Bhawna Kapoor	Online Faculty Development Program on Stress Management	ICT Academy	13-12-2021 to 17-12-2021

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Farheen Ahmed	Online Faculty Development Program on "Emotional Intelligence"	ICT Academy	22-11-2021 to 26-11-2021
Sapna Malhotra	Online Faculty Development Program on "Graph Theory and its Applications"	Deshbandhu College, University of Delhi	15-09-2021 to 21-09-2021
Pooja Gupta	Online Faculty Development Program on "Graph Theory and its Applications"	Deshbandhu College, University of Delhi	15-09-2021 to 21-09-2021

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Ramakant Prasad	Refresher Course in Mathematics	TLC, Ramanujan College, University of Delhi	31-08-2021 to 14-09-2021
Dr. Rimpi Pal Kundu	Refresher Course in Mathematics	TLC, Ramanujan College, University of Delhi	31-08-2021 to 14-09-2021
Bhawna Kapoor	Uasge of ICT in Education: Challenges and Opportunities during Covid19	Hansraj College, University of Delhi	2-07-2021 to 15-07-2021

Continued list of FDPs/ Refresher Courses attended

Government Funded Research Projects

Project Title	Teacher Mentors	Amount Sanctioned
Low cost and novel-Integrated Test, Measure and Analysis Station (ITMAS) for teaching and research; Advocacy for open sources: Paradigm changers for Science and Mathematics Education in India	Dr. Vandana Luthra, Ms. Arshmeet Kaur and Dr. Sunanda Saini	5.5L
Analysis of Communication and Research Collaboration Network among Delhi University Teachers	Dr. Narender Kumar, Ms. Sapna Malhotra and Ms. Chitra Rajora	4.5 L

Teaching Methods Adopted for Improved Learning

- ❑ Apart from chalk and board, projectors are used in classroom to make lectures more interactive
- ❑ During pandemic, G-Suite tools like Jamboard, Meet, Classroom, etc. were used for effective teaching
- ❑ Mathematica, LaTeX, R, C++, Microsoft Office, Tora, etc. are taught
- ❑ Licensed version of Wolfram Mathematica 12 was purchased in 2019
- ❑ Students were given access to Wolfram Cloud for performing practicals online during pandemic

Wolfram
Mathematica



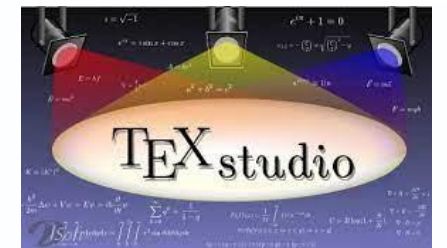
Office



Tora[®]



WOLFRAM CLOUD



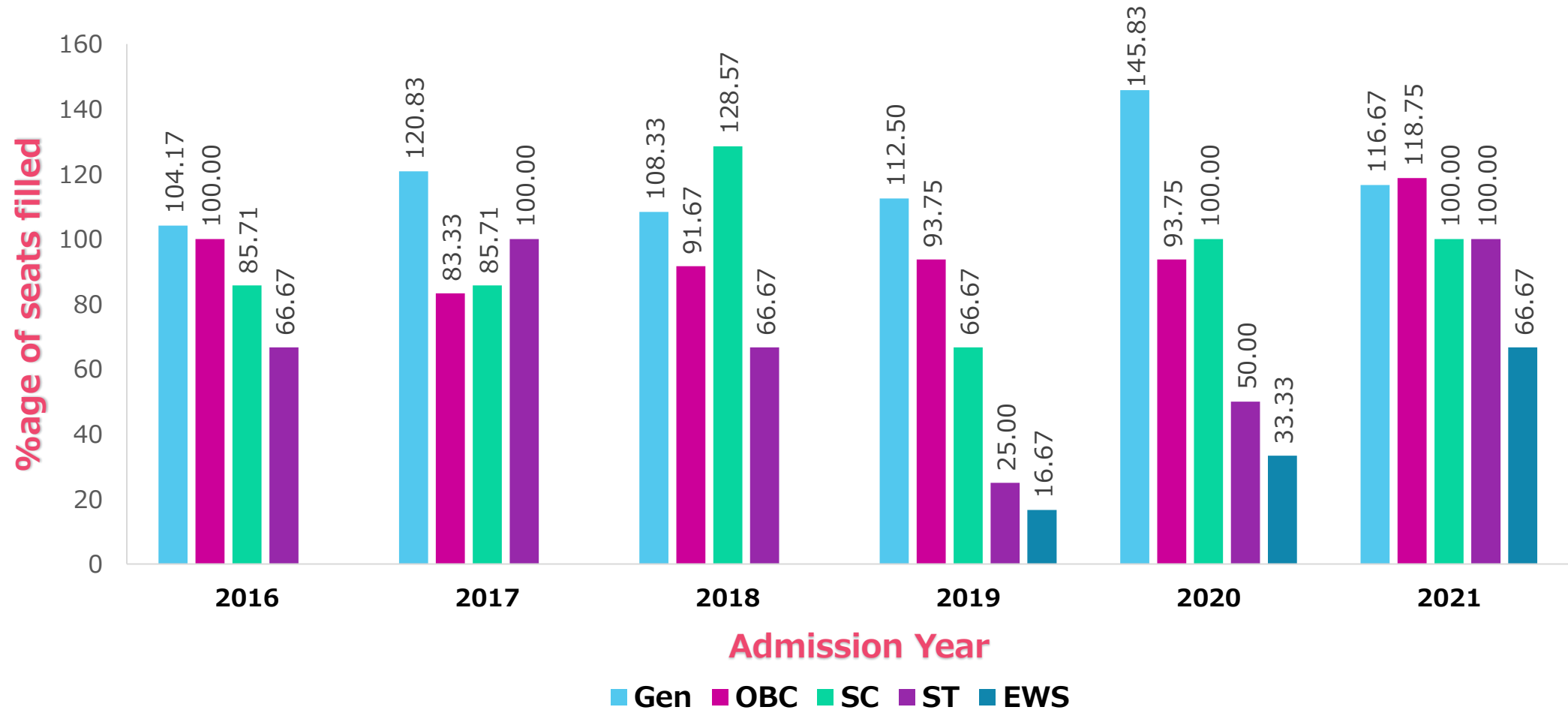
Involvement of Faculty in Corporate Life of College

- ❑ Roster Committee
- ❑ Screening Committee
- ❑ Promotions Committee
- ❑ NAAC
- ❑ NIRF
- ❑ Student Advisor
- ❑ Admission Convenor
- ❑ Computer Lab Committee
- ❑ Bursar
- ❑ Staff Council Secretary
- ❑ Purchase Committee
- ❑ Building Maintenance
- ❑ Workload Committee
- ❑ Time-Table Committee
- ❑ India Today Ranking
- ❑ Website Committee
- ❑ Deputy Superintendent Examinations
- ❑ Nodal Officer Examinations
- ❑ Internal Assessment Committee
- ❑ Library Committee
- ❑ College Magazine
- ❑ Planning and Monitoring Committee

Number of Seats Sanctioned vs Filled

Year↓	Category→	UR	OBC	SC	ST	EWS	Total
2016	Sanctioned	24	12	7	3	NA	46
	Filled	25	12	6	2	NA	45
2017	Sanctioned	24	12	7	3	NA	46
	Filled	29	10	6	3	NA	48
2018	Sanctioned	24	12	7	3	NA	46
	Filled	26	11	9	2	NA	48
2019	Sanctioned	24	16	9	4	6	59
	Filled	27	15	6	1	1	50
2020	Sanctioned	24	16	9	4	6	59
	Filled	35	15	9	2	2	63
2021	Sanctioned	24	16	9	4	6	59
	Filled	28	19	9	4	4	64

Category Wise Filled Seat Matrix

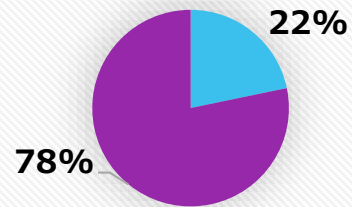


* EWS category was introduced in year 2019

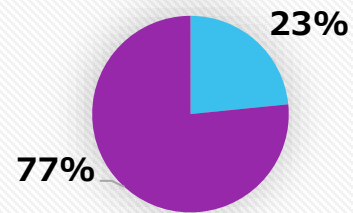
Student Diversity

■ Outside Delhi ■ Delhi

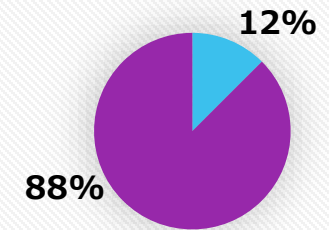
2016



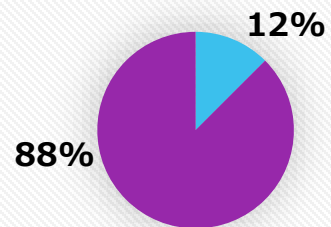
2017



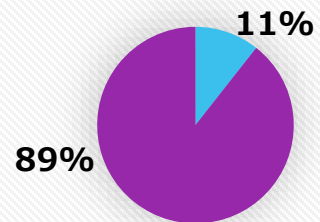
2018



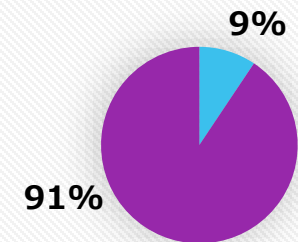
2019



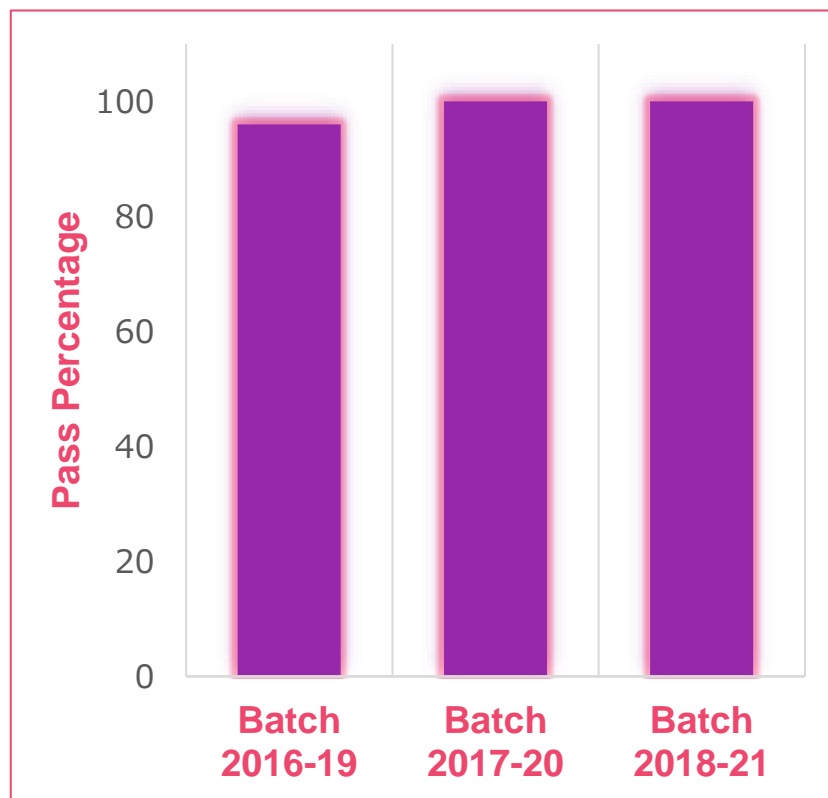
2020



2021



Students' Result



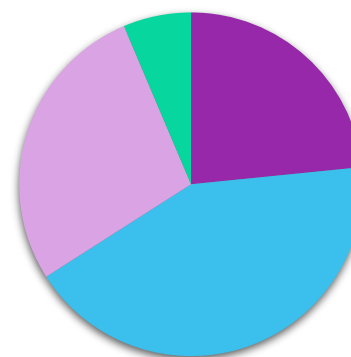
**Batch
2016-19**



■ CGPA 9 or more

■ CGPA 7 or more and less than 8

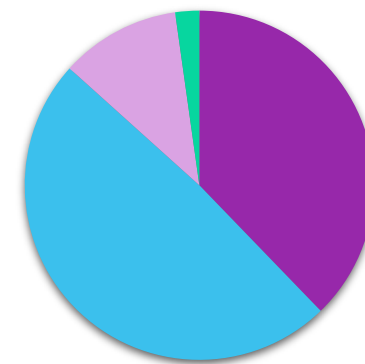
**Batch
2017-20**



■ CGPA 8 or more and less than 9

■ CGPA less than 7

**Batch
2018-21**



University Rank Holders



Namrata Mongia (Batch 2016-19)

2nd position in University of Delhi

1st position in South Campus, DU

Mahima Yadav

Batch 2016-19

10th position in South
Campus, DU

Divya Khurana

Batch 2017-20

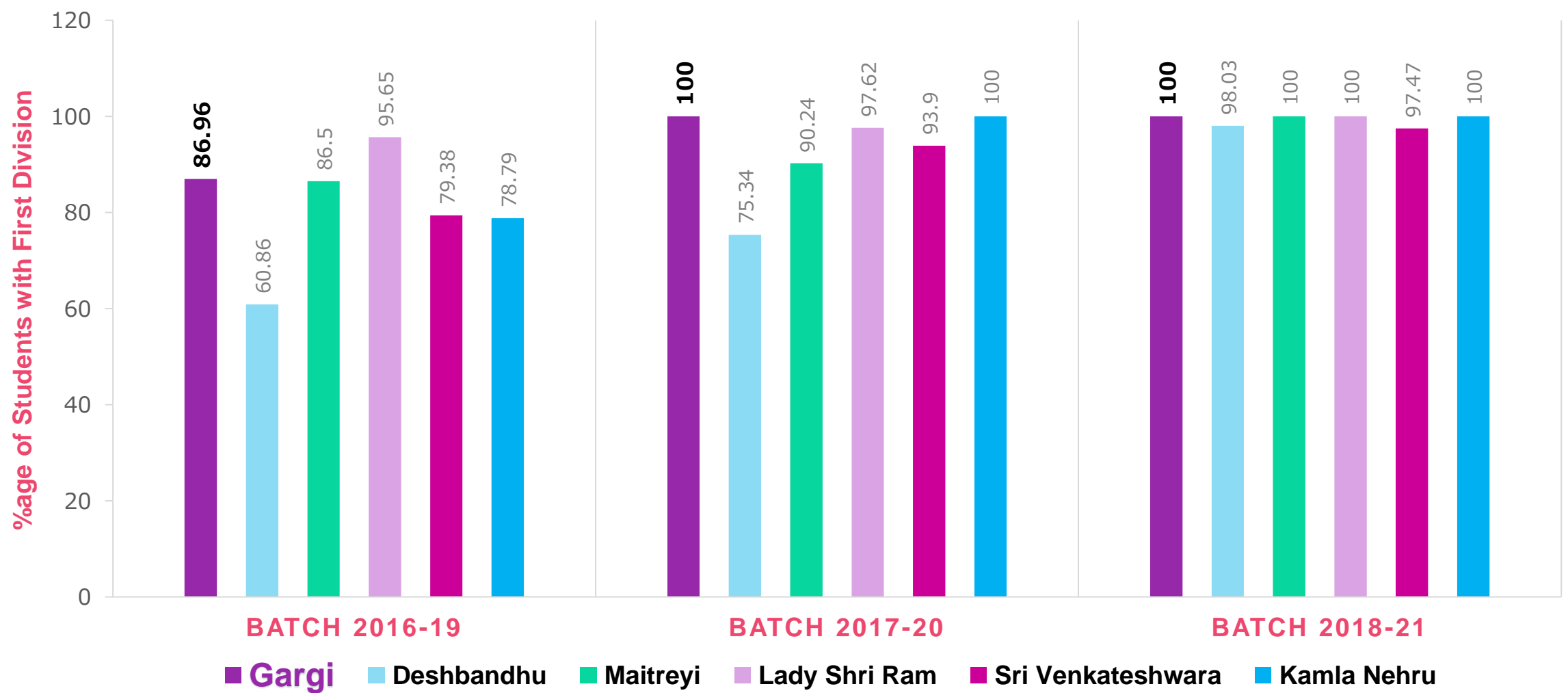
10th position in South
Campus, DU

Aakansha Kumari

Batch 2018-21

8th position in South
Campus, DU

Result Comparison



MATHEMA- The Mathematics Association

Department of Mathematics has its own association by the name MATHEMA.
It was established in 2016.

The members of association for the academic session 2022-23 are listed below.

Faculty Advisors: Ms. Arshmeet Kaur, Ms. Bhawna Kapoor, Ms. Anshika Agrawal and
Dr. Deepika Dhall



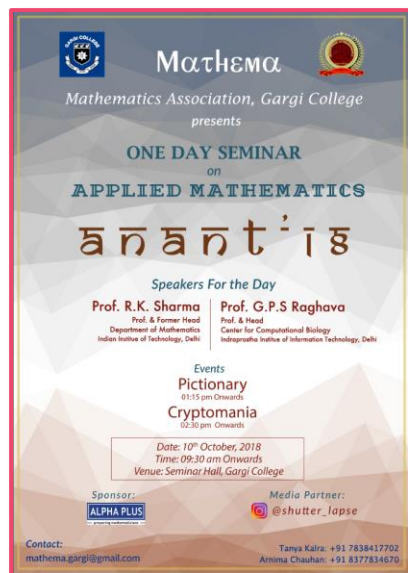
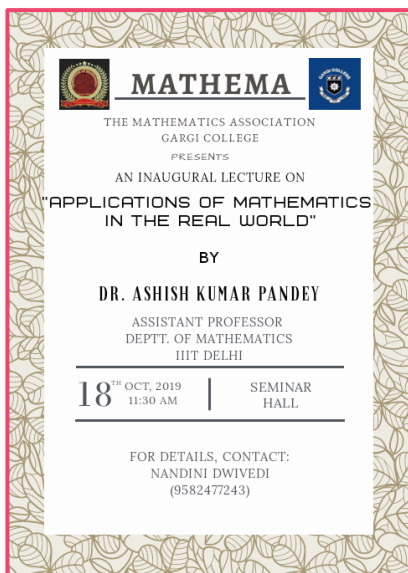
Designation	Name
President	Anushka Raghav
Vice President	Tareeshi Mittal
General Secretary	Prerna Panghal
Public Relationship Officer	Pallavi Raj
Treasurer	Lavina Goyal
Creative Head	Raima
Co-Creative Head	Ishita Soni
Editorial Head	Niharika Sethi



Events Organised by MATHEMA in 2016-2021

❑ Photography Competition on the theme
“Primera Vista”

❑ Lecture by Prof. Aparna Mehra on
“Eigen Values and their applications”



❑ Seminar on “Applied Mathematics” by Prof. R.K. Sharma and Prof. G.P.S. Raghava

❑ Career Counselling seminar for students of B.Sc.(H) Mathematics was organised on “Scope of Actuarial Sciences”, in collaboration with Alpha Plus

Events organised by MATHEMA in 2016-2021

**DEPARTMENT OF MATHEMATICS
GARGI COLLEGE**
(UNIVERSITY OF DELHI)
presents
webinar
on
INFINITY: a treasury of intrigue and interest

Speaker: Dr. Rita Malhotra
- President, Poetry Across Cultures, India
- Former Principal and Professor of Mathematics, Kamala Nehru College, University of Delhi
- Post-Doctoral Fellow in Mathematics, University of Paris

Patron – Dr. Promila Kumar, Principal, Gargi College

DATE – 25th SEPTEMBER, 2020
TIME – 3:00 pm
PLATFORM – Google Meet

Organized by – **Mathema** (Mathematics Association, Gargi College) under the aegis of IQAC

Register now!!
E-certificates will be provided to the participants

- ❑ Seminar on “Application of Mathematics in Real World” by Dr. Ashish Kumar Pandey
- ❑ Webinar on “Infinity :A treasury of intrigue and interest”, delivered by Dr. Rita Malhotra
- ❑ Career counselling session for students of the department was conducted by Dr. Ravins and Mr. Ramakant Prasad

**CAREER COUNSELLING
SESSION**
DEPARTMENT OF MATHEMATICS, GARGI COLLEGE

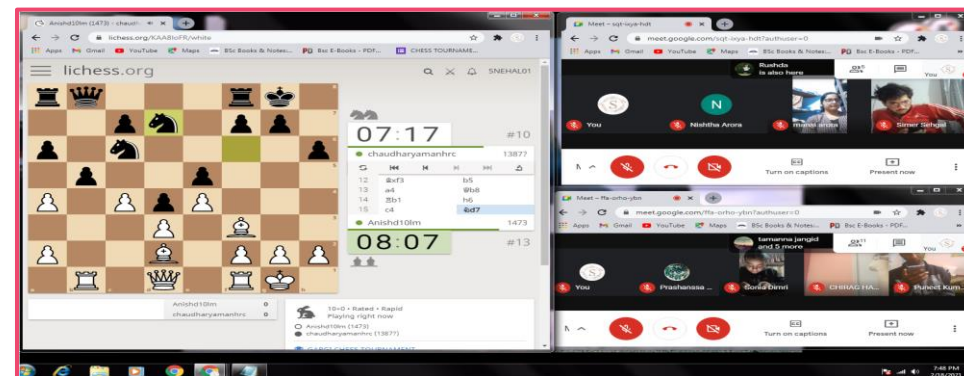
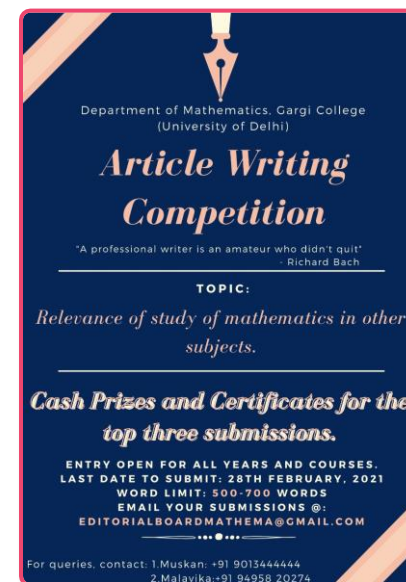
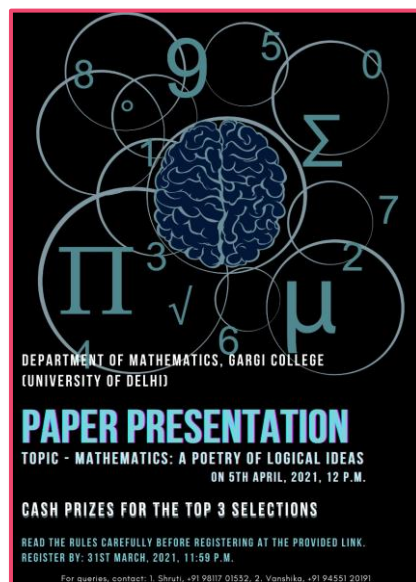
DR. RAVINS
ASSISTANT PROFESSOR
CENTRE FOR INTERDISCIPLINARY
RESEARCH IN BASIC SCIENCES
JAMIA MILLIA ISLAMIA

MR. RAMAKANT PRASAD
ASSISTANT PROFESSOR
DEPARTMENT OF MATHEMATICS
GARGI COLLEGE

UNIVERSITY OF DELHI

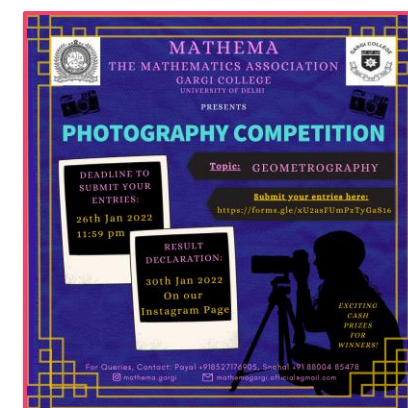
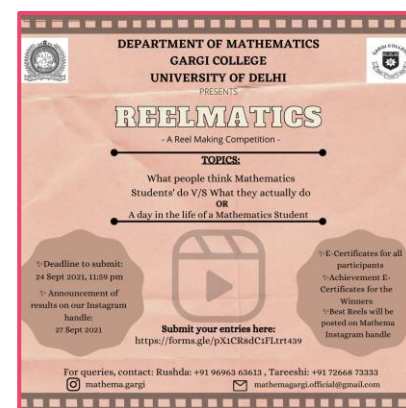
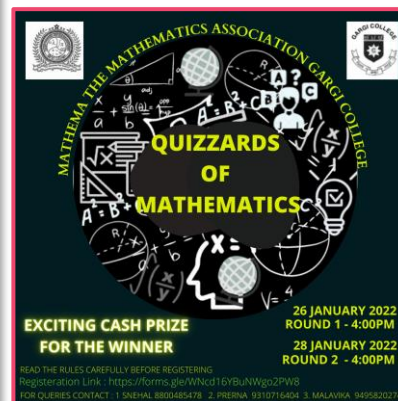
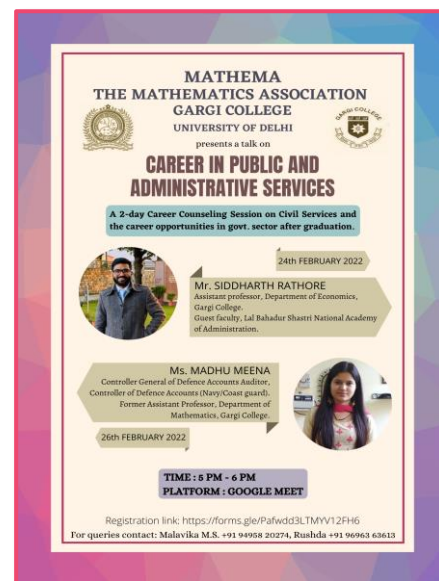
Events organised by MATHEMA in 2016-2021

- ❑ Paper presentation on the topic “Mathematics-A poetry of logical ideas”
- ❑ Article writing competition on the topic “Relevance of Mathematics in other subjects”
- ❑ Two-day workshop on “Machine Learning”
- ❑ Online chess tournament



Events organised by MATHEMA in 2021-2022

- ❑ Webinar was organised on the topic "The tales of constant e " delivered by Dr. Tanvi Jain
- ❑ Article Writing competition was conducted on the topic "Role of mathematics in evolution"
- ❑ A Reel Making competition was executed by the student union
- ❑ Photography competition was held on the topic "Geometrography"
- ❑ Quizzards of Mathematics, the quiz competition was conducted
- ❑ Career counselling session was held for students of department of mathematics by Mr. Siddharth Rathore and Ms. Madhu Meena



Events Organised in Association with Other Departments

- ❑ Seminar on “Making the Invisible Visible” by Dr. Sarvapriya Sangwan, Editorial Producer, NDTV and Dr. Ruplekha Khullar, Associate professor, JDMC
- ❑ Annual Science Fest: SCINTILLATIONS-2016
- ❑ ALHOMORA'16: Impact of Advertising on Marketing: A Paradigm Shift
- ❑ Annual Science Fest: SCINTILLATIONS-2017
- ❑ Environmental Health Sensitization Workshop through Public Health Foundation of India



Events Organised in Association with Other Departments

❑ Annual Science Fest: SCINTILLATIONS-2018

❑ Department of Mathematics, in collaboration with Department of Botany organised Student Enrichment Program on “Mathematics for Biologists”. Ms. Arshmeet Kaur was one of the conveners and delivered two talks. Ms. Manpreet Kaur also delivered a talk in the event.

❑ In collaboration with other science departments, REVEL- A Paper Presentation competition was organised on the occasion of National Science Day

Department of Botany
in collaboration with
Department of Mathematics
Gargi College
University of Delhi
Under the aegis of IQAC and BIF, Gargi College is organizing an online

Student Enrichment Program on Mathematics for Biologists

for
B.Sc. (Program) Life Science students of Gargi College

July 09, 2021 - July 19, 2021

- Registration is free and on first-cum-first-serve basis. E-certificate will be given to all the participants on the basis of attendance and assignment.
- Seats are limited. Kindly register at the earliest.

Link for Registration: <https://forms.gle/BWWLYiXA1uivNoCT6>

Broad Course Structure

- Measures of central tendency and dispersion
- Correlation analysis
- Test of significance
- Basics of Excel, R and SPSS

Patron: Dr. Promila Kumar
Conveners: Ms. Arshmeet Kaur, Dr. Geeta, Dr. Anjana Rustagi, Dr. Reema Mishra

GARGI COLLEGE UNIVERSITY OF DELHI
SCIENCE & MATHEMATICS DEPARTMENTS

UNDER THE AEGIS OF NATIONAL ACADEMY OF SCIENCES, INDIA (NASI) SCIENCE SOCIETY PROGRAM BY NASI SEEP CHAPTER

IN ASSOCIATION WITH NASI

officially invite you for
REVEL- A Paper Presentation Event

to highlight
THE ETHOS OF THE NATIONAL SCIENCE DAY AND NOBEL PRIZE OF SIR C.V. RAMAN

THEMES
Integrated Approaches in Science and Technology for a Sustainable Future, Ministry of Science & Technology, Govt. of India
International Year of Basic Sciences for Sustainable Development by United Nations

PATRONS
Prof. Pooja Kaur, Prof. Ajay K. Ghatak
Principal, Gargi College (Delhi), Former Professor, IIT Delhi

ADVISORY MEMBERS
Prof. Anand Sharma, Former Professor, IIT Delhi & Chairperson, NASI Delhi Chapter
Dr. Shashi Singh, Former Professor & Associate Professor, Department of Botany, Gargi College
Dr. Sushila Choudhary, Former Associate Professor, Department of Chemistry, Gargi College
Dr. Nisha Gupta, Former Associate Professor, Department of Physics, Gargi College

CONVENERS
Piy National Academy of Sciences
Science Society Program at Gargi College

ORGANISERS
HOD, Department of Botany
HOD, Department of Chemistry
HOD, Department of Mathematics
HOD, Department of Physics
HOD, Department of Biology
HOD, Association of Physical and Life Sciences

TIME: 28 February 2022, 4:30 PM onwards
For Queries: piys.gargi@gmail.com

Technical Support: Mr. Anand Bhattacharya

Link for the registration: <https://forms.gle/n1D8rhAGQjw2X7N>
Last date for Registration: 23 February 2022

SCINTILLATIONS
The Annual Inter College Science Festival
presented by
Gargi College
University of Delhi
Siri Fort Road, New Delhi-110049
On
March 20-21, 2018

Speakers
Professor Ajoy Ghatak
Professor Meghnad Saha Fellow of NASI (National Academy of Sciences, India)
Title: Albert Einstein and his Famous Equation $E = mc^2$
Dr. Chirashree Ghosh
Associate Professor, Department of Environmental Studies, University of Delhi
Title: Indoor Air Quality and Human Health

DAY 1: 20th March

- > Inauguration and Jointed Lecture 9:30 am (Auditorium)
- > Science Crossword 12:45-2:15 pm (Seminar hall)
- > Art & Science 2:45-4:15 pm (L.T-4)
- > Science Fiction Plot Writing 2:30-3:30 pm (L.T-3)
- > Paint the picture 2:45-3:45 pm (Microbiology Lab)
- > Scientific Trivia 4:00-4:30 pm (L.T-4)
- > Mathematical Posing 4:30-5:00 pm (Near Seminar Hall)

DAY 2: 21st March

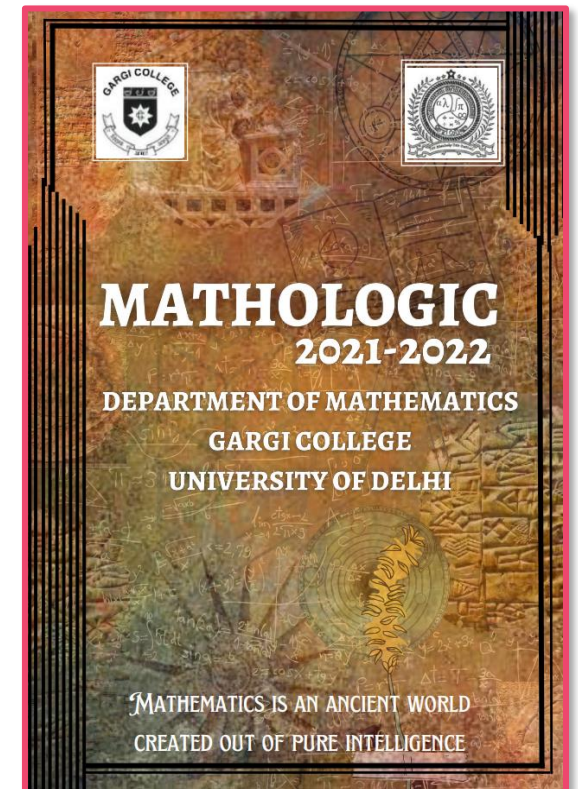
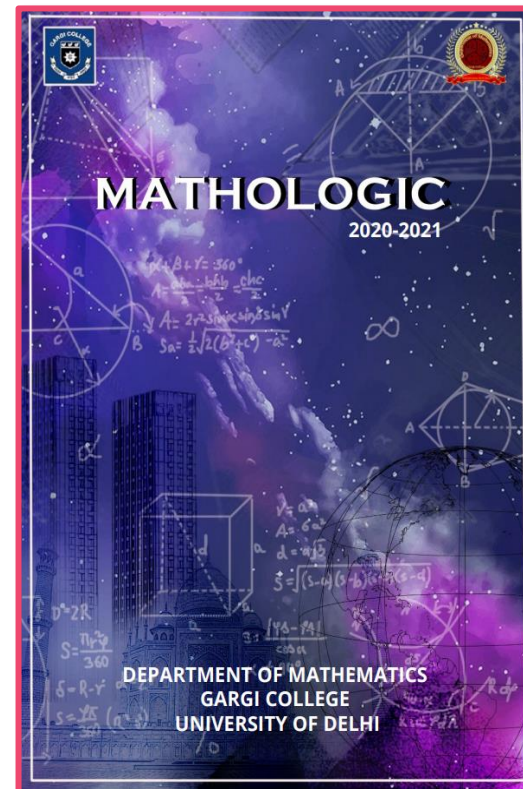
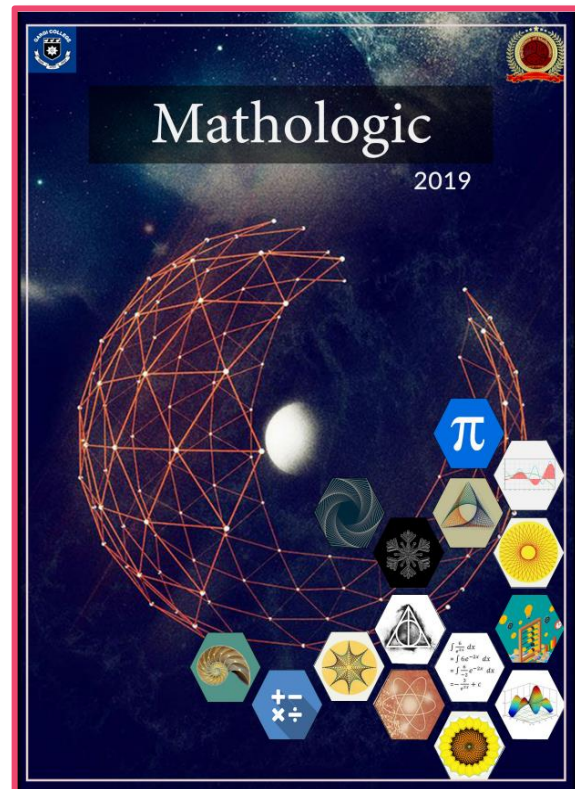
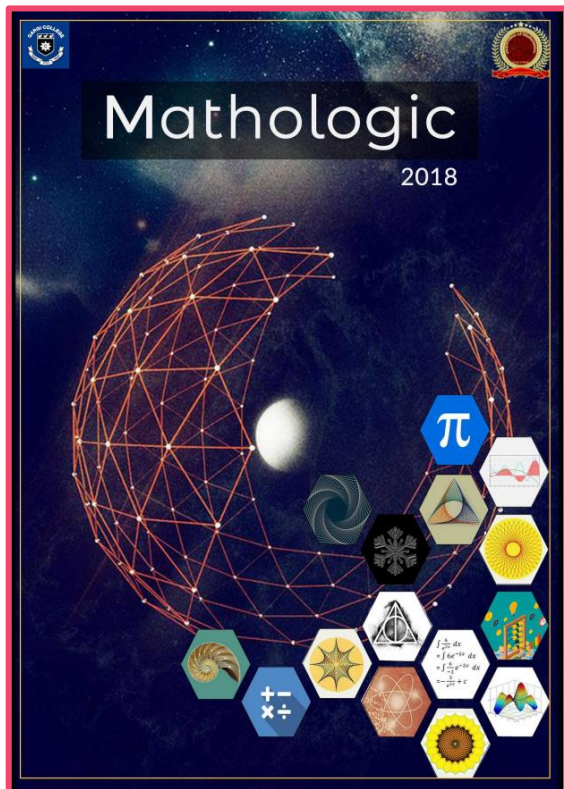
- > Extempore 10:15-11:15 am (Seminar hall)
- > Scientific Quiz Quiz 10:30-11:30 am (L.T-2)
- > Fun in Lab 11:30-12:30 pm (Chemistry Lab)
- > Scientific Planning 12:00-1:00 pm (L.T-1)
- > Scientific Fashion Show 1:00-2:00 pm (Seminar hall)
- > Circuit Making 1:30-2:30 pm (Physics Lab)
- > Cryptogram 2:00-3:00 pm (L.T-2)
- > Collage Making 2:00-3:00 pm (L.T-3)

Online Registration: <https://goo.gl/forms/FmACm7TPHt6G3>
On the Spot Registration: March 20, 2018 at 9:30 am (Near Auditorium)
Email: scintillations@gmail.com
Contact: 9810369659 (Mrs Bhavna Kapoor, Associate Professor)
Follow us on: <https://www.facebook.com/Scintillations-Gargi-College-5321744062118>

LET'S IGNITE THE SPARK!

Department Magazine- MATHOLOGIC

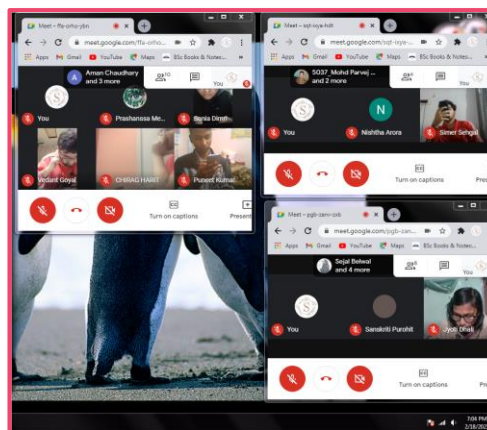
The first edition of magazine was released in 2018. In total four editions have been released till now.



Students' Participation in ECA

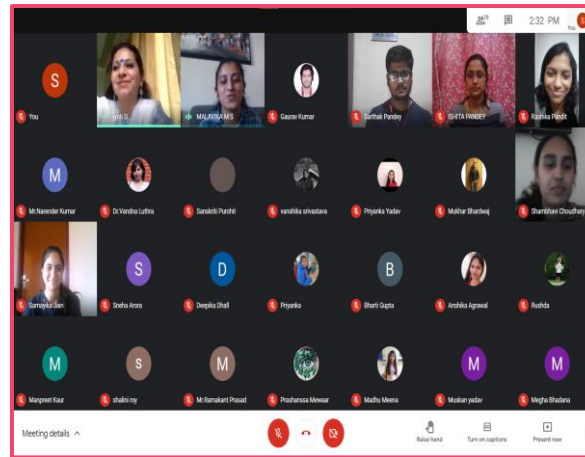
Every year students from our department participate in various inter and intra college competitions organised at university, state and national level. Few of them to mention are as below

- ❑ Quiz competitions conducted by IITD, Gargi College, AIIMS, SGGSCC, JMC, KNC, Ramjas, etc.
- ❑ Article writing competition conducted by Gargi College, DCAC, etc.
- ❑ Paper Presentation competition conducted by Gargi College, SPM College, PGDAV College, etc.
- ❑ Karnival, Matrubhumi, Kombat, A Fan's Note, Sphinx, etc. organised by IITD



Students' Participation in ECA

- ❑ JQL Finale, Delhi zone, organised by Jaipuria Institute of Management, Noida
- ❑ Quiz in commemoration of Swami Vivekananda conducted by Centre of University Informatics, TNOU
- ❑ Poster making competitions, organised by Gargi College, PGDAV (Eve.) College, etc.
- ❑ Poetry writing competition, organised by Gargi College, Dyal Singh College, PGDAV (Eve.) College, etc.



Student Internships

Students from our department join internships in various organizations every year. Few of them are mentioned below.

- ❑ Vigyan Prasar Internship
- ❑ URI, as illustrator intern
- ❑ Auor Studio, as research and analysis intern
- ❑ Mahika Mishra Foundation, as content manager and Instagram manager
- ❑ INGLU, as social media marketing intern
- ❑ Rancike Leraning, as subject matter expert
- ❑ Digiplus, as subject matter expert
- ❑ Childwise NGO, as teacher volunteer
- ❑ A Sanitary Gift, as content writer
- ❑ U&I Organization, as teacher volunteer

Students' Placement and Internship

Year	Number of Students Selected for Internship (Final Year +Alumni Batch)	Number of Students Selected for Placement (Final Year +Alumni Batch)
2021-22	13	16
2020-21	17	5
2019-20	8	5
2018-19	2	0

Alumni- Higher Education



Apoorva Nambiar
PhD in Technology and
Development
IIT Mumbai



Pratibha Bisht
Master of Fashion
Management
National Institute of
Fashion Technology



Shreya Jaju
M.Sc. Statistics
Panjab University

Mahima Yadav
M.Sc. Mathematics
IIT Roorkee
Research Assistant,
RUHR University,
Germany



Mansi Awasthi
M.Sc. Computer
Science
NIT Trichy



Namrata Mongia
M.Sc. Mathematics
Miranda House, DU



Nikita Hans
Master of Data Science
Monash University



Tanya Kalra
MBA
Delhi School of
Management, DTU



Garima Kumar
PGDM
XLRI, Jamshedpur

Alumni- Higher Education

M.Sc. Mathematics

53

M.Sc. Statistics

4

M.Phil./ Ph.D.

10

PGDM

4

**M.Sc. Mathematics
and Computing**

3

**M.Sc. Computer
Science**

3

M.A. Economics

2

**M.Sc. Operational
Research**

2

Data Science

2

**M.Sc. Actuarial
Science**

1

**Master of Fashion
Management**

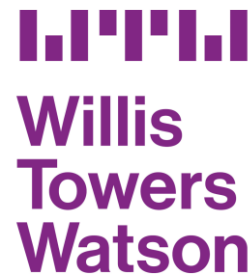
1

**Financial Risk
Management**

1

Alumni Placement

Our students have been placed in various reputed organizations, few of which are as below



Alumni- Placement



Richa Kumar
Procurement Officer
Indian Air Force



Srishti Rana
Lieutenant
Indian Army



Komal
Assistant Professor
PGDAV College, DU

Shivangi Bisht
Associate Manager
Punjab National Bank



Stuti
IT Analyst
Tata Consultancy
Services



Parul Jain
Department Head of
Mathematics
St. Xavier High School,
Gurugram



Pinkee Dalal
Probationary Officer
State Bank of India



Sushma
Personal Assistant
The High Court of
Judicature at Patna



Priti Sangwan
Data Scientist
Dunnhumby

Strengths

- ❑ Well qualified and dedicated faculty
- ❑ We have good inter and intra departmental coordination
- ❑ Classroom delivery is done in bilingual mode for easy understanding of all
- ❑ Teachers worked very hard to connect with the students in distress during pandemic and dedicated time even after scheduled classes
- ❑ Faculty is well versed with technology and constantly update their ICT skills
- ❑ Student evaluation is conducted in an effective manner through out the semester via tests, assignments and presentations
- ❑ Our library is well equipped with course related books
- ❑ We've purchased mathematical software, Wolfram Mathematica 12

Opportunities and Challenges

Opportunities

- ❑ Students get various opportunities to enrol themselves in post graduate programs at reputed universities and organisations
- ❑ With increased use of ICT tools in teaching learning process, technical skills of all people involved has increased

Challenges

- ❑ Catering to need of students from different streams
- ❑ Managing different academic calendars for all three years during pandemic
- ❑ To involve more students for research and innovation project
- ❑ Using digital mode during pandemic

Future Plans

- ❑ To form department alumni association
- ❑ Encourage more involvement of students in summer internship programmes and research projects
- ❑ To inculcate the spirit of social responsibility amongst students by actively associating with social projects for betterment of society
- ❑ To organise more inter-departmental activities

NEP: Framework and Implementation

- ❑ Applications of mathematics are extensive and diverse, and by introducing multidiscipline curriculum and credit based mechanism NEP has significant provision and provides a platform to build, nurture, foster, encourage and multiply mathematical thinking.
- ❑ Big data analytics, artificial intelligence, machine learning are key technologies of today and mathematics is the core of all these technologies.
- ❑ The proposed curriculum includes pool of application based papers like Python, statistical software packages, R-software, etc. which helps in developing the computation capabilities and intuitive reasoning among students.
- ❑ Our teachers are already well versed with most of the ICT tools and computer languages.
- ❑ Teachers are attending various workshops, refresher courses, orientation, FDPs for the proposed syllabus.

A Tribute



Late Dr. Narender Kumar
(08.09.2010 - 23.05.2021)

- ❑ He was a very bright scholar and a great academician.
- ❑ He completed his PhD in 2021 from Jamia Milia Islamia in 'Mathematical Modelling'.
- ❑ He mentored an innovation project titled "Analysis of Communication and Research Collaboration Network among Delhi University Teachers"
- ❑ He was an active member of important college committees like website, purchase, canteen, and sports committee.
- ❑ He was a great mentor always encouraging his students to work on innovative ideas.
- ❑ He had a positive attitude towards life and passion to contribute towards society.



Thank You

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Manpreet Kaur	Two Weeks Short Term Online Training Program (STTP) on Advances in Linear Algebra: Technology based Innovations	Department of Mathematics, Jaypee Institute of Information Technology, Noida	14-06-2021 to 16-06-2021
Arshmeet Kaur Arora	Online Faculty Development program on "Introduction to Python programming"	ICT Academy	24-05-2021 to 28-05-2021
Manpreet Kaur	Online Faculty Development program on "Introduction to Python programming"	ICT Academy	24-05-2021 to 28-05-2021
Arshmeet Kaur Arora	Online Faculty Development Program on "Introduction to Big Data"	ICT Academy	19-04-2021 to 23-04-2021
Sapna Malhotra	Online Faculty Development Program on" applications of Mathematics in business and Social Sciences"	Miranda House, University of Delhi	18-03-2021 to 24-03-2021

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Pooja Gupta	Online Faculty Development Program on" applications of Mathematics in business and Social Sciences"	Miranda House, University of Delhi	18-03-2021 to 24-03-2021
Ramakant Prasad	Refresher Course in Mathematics	Ramanujan College, University of Delhi	16-03-2021 to 30-03-2021
Deepika Dhall	Online Teacher's Enrichment Workshop on "Differential Equations and its Applications"	Deshbandhu College, University of Delhi	15-03-2021 to 28-03-2021
Bharti Sharma	Online Teacher's Enrichment Workshop on "Differential Equations and its Applications"	Deshbandhu College, University of Delhi	15-03-2021 to 28-03-2021

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Manpreet Kaur	Online Teacher's Enrichment Workshop on "Differential Equations and its Applications"	Deshbandhu College, University of Delhi	15-03-2021 to 28-03-2021
Manpreet Kaur	Online Faculty Development program on "Matlab for Engineering and Scientific Computation	B K Birla Institute of Engineering and Technology, Pilani	22-02-2021 to 26-02-2021
Sapna Malhotra	Online Faculty Development Program on "Intellectual Property Rights"	IQAC, Hansraj College, University of Delhi	10-02-2021 to 17-02-2021
Pooja Gupta	Online Faculty Development Program on "Intellectual Property Rights"	IQAC, Hansraj College, University of Delhi	10-02-2021 to 17-02-2021
Sapna Malhotra	Online Faculty Development Program on "Student centric Pedagogic Methods	Janki Devi Memorial College, University of Delhi	27-01-2021 to 02-02-2021

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Pooja Gupta	Online Faculty Development Program on "Student centric Pedagogic Methods	Janki Devi Memorial College, University of Delhi	27-01-2021 to 02-02-2021
Ramakant Prasad	Data Analysis with Statistical Methods	Ramanujan College in Association with Inaian Accounting Association, NCR Chapter	21-12-2020 to 03-01-2021
Pooja Gupta	Applications of Algebra and Number Theory In Network Security.	Mahatma Hansraj Faculty Development Centre, Hansraj College , DU.	22-12-2020 to 29-12-2020
Sapna Malhtora	Applications of Algebra and Number Theory In Network Security.	Mahatma Hansraj Faculty Development Centre, Hansraj College , DU.	22-12-2020 to 29-12-2020

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Pooja Gupta	Moving Towards New Normal Through Effective Online Teaching.	Kalindi College, DU in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College , DU.	1-12-2020 to 7-12-2020
Sapna Malhtora	Moving Towards New Normal Through Effective Online Teaching.	Kalindi College, DU in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College , DU.	1-12-2020 to 7-12-2020
Bharti Sharma	Recent Advances in Mathematics and Statistics	Department of Mathematics, Institute of Science and centre for learning and Sustainability, GITAM, Visakhapatnam, Andhra Pradesh	03-08-2020 to 8-08-2020

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Bharti Sharma	Introduction to Computer Algebra System: Maxima (An Open Source Software)"	Hansraj College, University of Delhi	27-06-2020 to 18-07-2020
Bharti Sharma	Python Programming	IQAC, A. N. College, Patna	25-06-2020 to 09-07-2020
Bhawna Kapoor	Digital Teaching Techniques	One week online certificate course organised by ICT Academy	29-06-2020 to 04-07-2020
Bharti R. Talwar	Digital Teaching Techniques	One week online certificate course organised by ICT Academy	29-06-2020 to 04-07-2020
Arshmeet Kaur	Digital Teaching Techniques	One week online certificate course organised by ICT Academy	29-06-2020 to 04-07-2020

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Manpreet Kaur	Digital Teaching Techniques	One week online certificate course organised by ICT Academy	29-06-2020 to 04-07-2020
Anshika Agrawal	Digital Teaching Techniques	One week online certificate course organised by ICT Academy	29-06-2020 to 04-07-2020
Madhu Meena	Essential tools in Optimization	Dr. B.R Ambedkar National Institute of technology, Jalandhar	25-06-2020 to 29-06-2020
Dr. Bharti Sharma	Essential tools in Optimization	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab.	25-06-2020 to 29-06-2020

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Arshmeet Kaur	Institutional Quality Measures for Administration	IQAC, Gargi College, University of Delhi	17-06-2020 to 18-06-2020
Anshika Agrawal	FDP on "Scilab"	National Level Five days FDP in association with IIT Bombay	15-06-2020 to 19-06-2020
Dr. Bharti Sharma	FDP on R Programming	A.N. College, Patna	08-06-2020 to 17-06-2020
Dr. Bharti Sharma	FDP on SCILAB	A.N. College, Patna	22 -05-2020 to 02-06-2020
Madhu Meena	FDP on SCILAB	A.N. College, Patna	22-05-2020 to 02-06-2020

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Dr. Bharti Sharma	Abhyudaya Shikshak Kausahl Karyakram	Skill Faculty of Humanities and Applied Sciences, Shri Vishwakarma Skill University, Dudhola, Palwal	19 -05-2020 to 21-05-2020
Dr. Bharti Sharma	Moodle Learning Management System	Atal Bihari Vajpayee University, Bilaspur in association with IIT, Bombay Spoken Tutorial.,	12 -05-2020 to 17-05-2020
Madhu Meena	LaTeX and Xfig	A.N. College, Patna	11-05-2020 to 17-05-2020
Manpreet Kaur	FDP on "GeoGebra"	One week FDP in association with Remote Learning Through Spoken-Tutorial, IIT, Bombay	06-05-2020 to 12-05-2020

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Madhu Meena	MANAGING ONLINE CLASSES AND CO-CREATING MOOCS	Ramanujan College	20-04-2020 to 06-05-2020
Narender Kumar	Two week Refresher Course	Two week Refresher Course in Computational & Mathematical Sciences	07-02-2020 to 20-02-2020
Ramakant Prasad	Recent advances in research methodology	TLC,Ramanujan college, University of Delhi	17-01-2020 to 28-01-2020
Pooja Gupta	Teachers Enrichment Workshop on Linear Algebra, Coding Theory and Cryptography	JDMC(DU) sponsored by ATM(Joint initiative of TIFR and IIT Bombay)	18-11-2019 to 23-11-2019
Sapna Malhotra	Teachers Enrichment Workshop on Linear Algebra, Coding Theory and Cryptography	JDMC(DU) sponsored by ATM(Joint initiative of TIFR and IIT Bombay)	18-11-2019 to 23-11-2019

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Ramakant Prasad	Teachers Enrichment Workshop on Linear Algebra, Coding Theory and Cryptography	JDMC(DU) sponsored by ATM(Joint initiative of TIFR and IIT Bombay)	18-11-2019 to 23-11-2019
Pooja Gupta	Faculty Development Programme on Biomathematics	Shivaji College, University of Delhi	01-08-2019 to 07-08-2019
Sapna Malhotra	Faculty Development Programme on Biomathematics	Shivaji College, University of Delhi	01-08-2019 to 07-08-2019
Ramakant Prasad	Faculty Development Programme on Biomathematics	Shivaji College, University of Delhi	01-08-2019 to 07-08-2019
Ramakant Prasad	Orientation Programme	HRDC, JamiaMillialIslamia, New Delhi	11-06-2019 to 01-07-2019

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Ramakant Prasad	Network Science: Foundation of Social Network Analysis	Deptt. of Computer Science(DU) Sponsored by TLC Ramanujan College(DU)	03-12-2018 to 08-12-2018
Ramakant Prasad	ICT Integrated Research in Mathematical Sciences	TLC Ramanujan College(DU)	24-09-2018 to 30-09-2018
Narender kumar	Three week Refresher Course	Three week Refresher Course in Computational & Mathematical Sciences	29-08-2018 to 19-09-2018
Ramakant Prasad	Biostatistics: Theoretical and Practical aspects	DDU College (DU), sponsored by Deptt. of Biotechnology under DBT star college scheme	14-03-2018 to 18-03-2018

FDPs/ Refresher Courses Attended

Name of the Teacher	Title of the programme	Details of the program(organization name)	Duration of the program (format dd-mm-yyyy)
Ramakant Prasad	Skill based teacher's training in ICT,IPR and research	TLC, Ramanujan College, University of Delhi	05-03-2018 to 11-03-2018
Narender Kumar	Short Term Course	Short Term Course on Mathematical Modeling (STCMM 2017)	10-10-2017 to 14-10-2017
Manpreet Kaur	Research As Pedagogy a Science Teacher Education Program	Workshop on Research-based Padagogical Tools	09-05-2017, 18-08-2017, 19-08-2017
Sapna Malhotra	Statistical Computing Software R	Keshav Mahavidyalya, University of Delhi	24-3-2017
Pooja Gupta	National Workshop on LaTeX and Website designing	Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi.	11-08-2016 to 12-08-2016