



Department of Mathematics

Janki Devi Memorial College



History of the Department

1959 Established with Mathematics as a subject in B.A. (Pass)

1974 Introduced B.A. (Hons.) Mathematics

1995 Started M.A. (Mathematics)

2009 B.Sc. (Hons.) Mathematics/M.Sc. (Mathematics)*

* In 2009, B.A. (Hons.) Mathematics/M.A. (Mathematics) merged into B.Sc. (Hons.) Mathematics/M.Sc. (Mathematics)



The Vision and Strategy

Imparting quality Mathematics education and inculcating the spirit of research through innovative teaching.

Department is committed to providing an education that combines rigorous academics with the joy of discovery.

To provide an environment where students can learn, become competent users of Mathematics, and understand the use of Mathematics in other disciplines.



Highlights of the Department

IT-Our Strength

Use of Innovative Teaching Tools

FDP's and Workshops for Faculty

Career Counseling Sessions

**Public Lectures and Workshops
for Students**

**Department contributes a section
in College Magazine-JANKI**

**Annual Inter-College festival-
SIGMA**

Movie Screenings

Remedial Classes

Online Classes

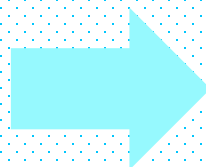


Courses Offered

We offer the following Courses:

1.

**B.Sc. (Hons.)
Mathematics**



Semester 1:

1. Calculus (Including Practicals)
2. Algebra

Semester 3:

1. Theory of Real Functions
2. Group Theory-I
3. Multivariate Calculus (Including Practicals)
4. LaTeX and HTML (SEC*-1)

Semester 5:

1. Metric Spaces
2. Group Theory-II
3. Numerical Methods (Including Practicals) (DSE*-1)
4. Discrete Mathematics (DSE*-2)

Semester 2:

1. Real Analysis
2. Differential Equations (Including Practicals)

Semester 4:

1. Partial Differential Equations (Including Practicals)
2. Riemann Integration & Series of Functions
3. Ring Theory & Linear Algebra-I
4. Computer Algebra Systems and Related Softwares (SEC*-2)

Semester 6:

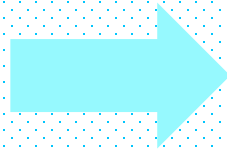
1. Complex Analysis (Including Practicals)
2. Ring Theory and Linear Algebra-II
3. Probability Theory & Statistics (DSE*-3)
4. Linear Programming and Theory of Games (DSE*-4)



Courses Offered

2.

Courses Offered to B.A. (Prog.)



Core Course (For students who take Mathematics as main discipline):

Semester 1: Calculus
Semester 2: Algebra
Semester 3: Analytical Geometry and Applied Algebra
Semester 4: Analysis

DSE Course (For students who take Mathematics as main discipline):

Semester 5: Calculus
Semester 6: Numerical Analysis

SEC:

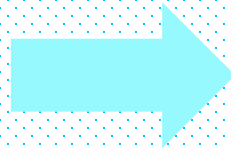
Semester 3: Computer Algebra Systems
Semester 4: Mathematical Typesetting System: LaTeX
Semester 5: Statistical Software: R
Semester 6: Transportation and Network Flow Problems



Courses Offered

3.

Generic Elective (GE) Courses



To Departments other than Mathematics:

Semester 1: Calculus
Semester 2: Linear Algebra
Semester 3: Differential Equations
Semester 4: Numerical Methods

To B.A. (Prog.) (Offered to those students who do not opt Mathematics as main discipline):

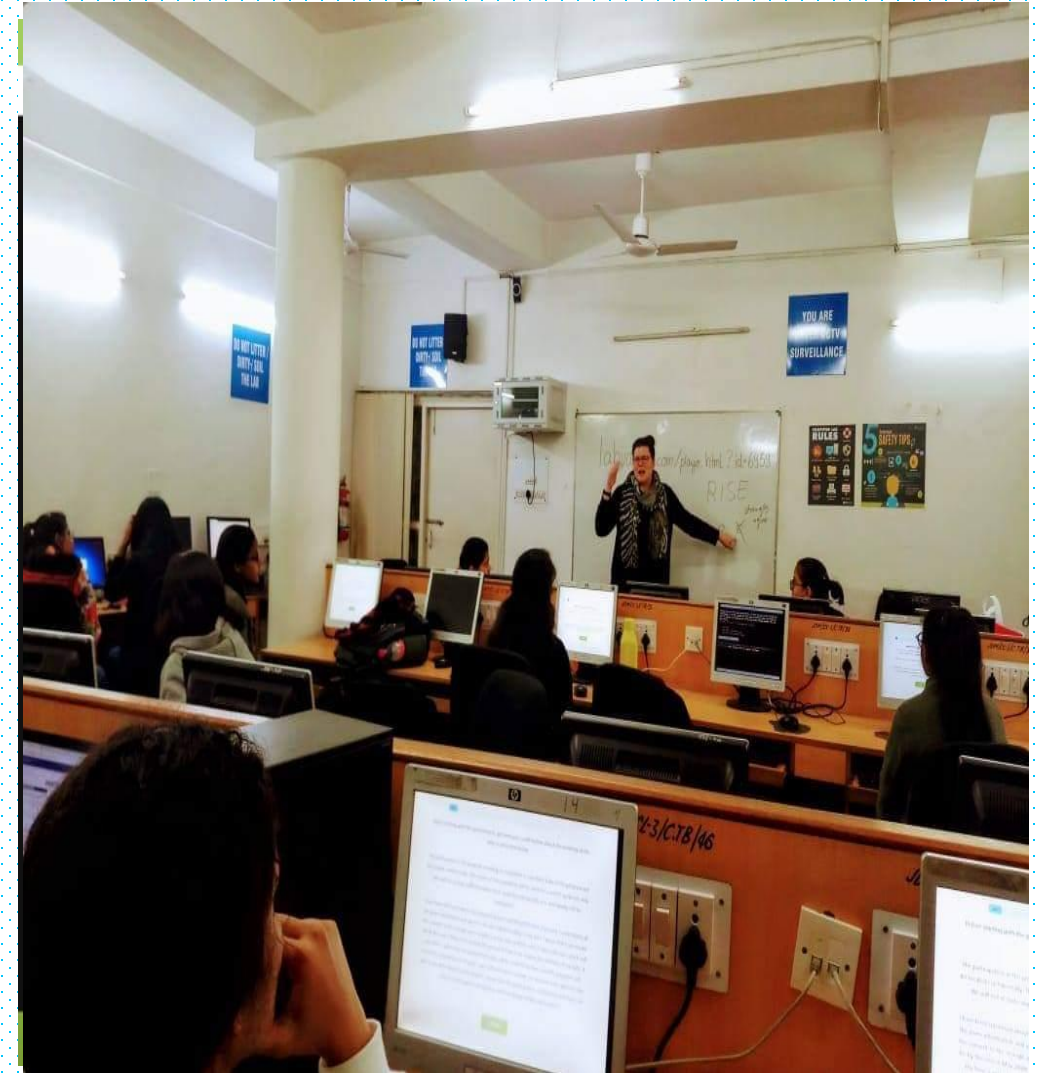
Semester 5: General Mathematics-1
Semester 6: General Mathematics-2

As our College is affiliated to Delhi University so Curriculum is framed by the University itself.



Departmental Activities (2019-2020)

- ❑ **Teacher's Enrichment Workshop (TEW)** funded by the National Centre for Mathematics, a joint centre of IIT Bombay and TIFR, Mumbai for faculty members of various universities was held during 18th-23rd November, 2019.
- ❑ A Public lecture on **Education for Development and Human Excellence** by Professor P.B. Sharma, Vice Chancellor, Amity University was organized on 23rd January, 2020 as a part of **Distinguished Speaker Series**.
- ❑ A workshop (on Google Hangouts Meet) entitled **MS-Excel: Basics and Intermediate** was conducted on 9th, 10th, 16th and 17th May, 2020.
- ❑ **RISE – A Bystander Intervention Certificate Program** in collaboration with the University of Muenster, Germany was conducted on 3rd, 5th, 6th and 10th February, 2020.





Departmental Activities (2019-2020)

- ❑ A workshop entitled **Young Leaders Programme** in collaboration with Indian School of Business was held on 5th March, 2020.
- ❑ A webinar entitled **Data Analysis** was conducted in collaboration with Young Engine on 27th April, 2020.
- ❑ A Talk on “**Mathematics in the Entertainment Industry: The Art and Science of Animation**”, by Dr. Jag Mohan Rai, Associate Professor, P.G.D.A.V College was held on 7th November, 2019.
- ❑ A Seminar on “**Emerging Careers**” by Ms. Margarita Soma, career counselor at Pearl Academy was held on 7th November, 2019.





Departmental Activities (2019-2020)

- ❑ A Training Session on “**Introduction to Wolfram Mathematica 12.0**” by Mr. Devashish Bhattacharya from Scube Scientific, exclusive partner of Wolfram Research was organized on 2nd August, 2019.
- ❑ Two events were held during the Annual Cultural Inter College Festival, ‘Symphony-2020’ which are as follows:
 1. **Paper-Mania** on 9th January, 2020
 2. **MathBola–The Mathematical Tambola** on 10th January, 2020
- ❑ The Movie “**The Man Who Knew Infinity**” was screened for the students on 21st September, 2019 which is based on the dynamic life story of the great Indian Mathematician – Srinivasa Ramanujan.

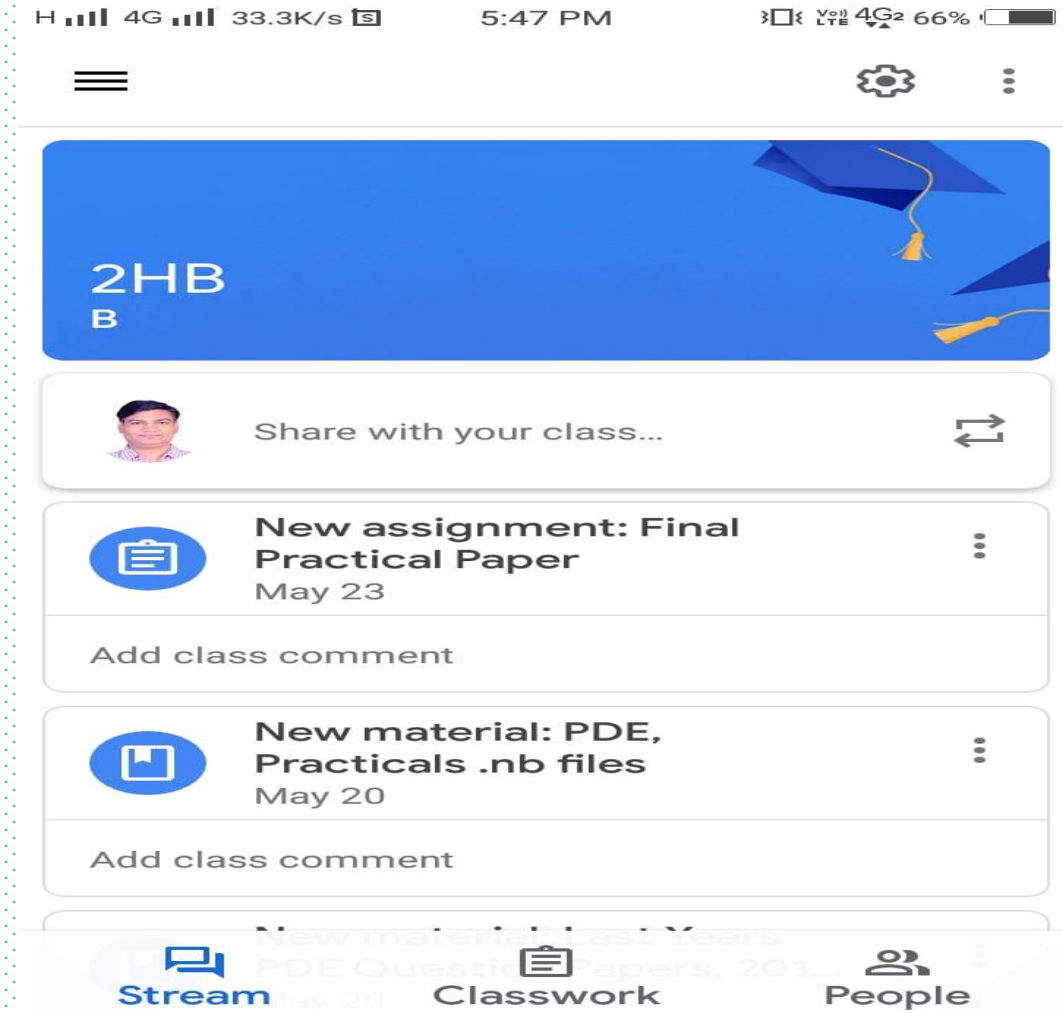




Pedagogy (Teaching-Learning ways)

Apart from traditional chalk and board method, we use modern techniques like:

- Use of **Innovative teaching aids, like OHP (Over Head Projector)**, to make the lectures more interactive and student-friendly.
- Use of **Multi-Media Softwares like Mathematica, Maxima, R, Octave, Latex & Html** in Teaching-Learning Process
- **Online Teaching:** Due to COVID-19 pandemic, the faculty members took classes through IT tools such as Google Classroom, Google Hangouts, Zoom etc. Students have also been given Mathematica Cloud Access so that they could use the software from their own device.





Faculty

Qualification	Associate Professor		Assistant Professor		Total
	Permanent	Ad-hoc	Guest		
Ph.D. & M.Phil.	2	1	0	3	
Ph.D.	1*	3	0	4	
M.Phil.	0	4	0	4	
M.Sc./M.A.	0	3	1**	4	
Total	3	11	1	15	

*Retired in September 2020

**From January 2020 till June 2020

At present, there are 13 faculty members (2 Associate Professors and 11 Assistant Professors) in the department.



Faculty Members



Dr. Sharda Sharma Gautam
Associate Professor
(M.Phil., Ph.D.)
Specialization: Operator
Theory (Functional Analysis)
Experience: 39 Years 11 Months



Dr. Neelam Sharma
Associate Professor (Retired in
September 2019)
(Ph.D.)
Specialization: Coding Theory
Experience: 40 Years 7 Months



Dr. Ritu Arora (T.I.C)
Associate Professor
(M.Phil., Ph.D.)
Specialization: Algebraic Coding
Theory
Experience: 26 Years 5 Months



Ms. Teena Kohli
Assistant Professor (Ad-hoc)
(M.Phil., Pursuing Ph.D.)
Specialization: Functional Analysis
and Frame Theory
Experience: 11 Years



Faculty Members



Mr. Laxmi Kant
Assistant Professor (Ad-hoc)
(M.Sc.)
Specialization: Applied
Mathematics
Experience: 9 Years 10 Months



Dr. Tanu Gupta
Assistant Professor (Ad-hoc)
(M.Phil., Ph.D.)
Specialization: Reliability
Theory and Optimization
Experience: 12 Years



Ms. Sonia
Assistant Professor (Ad-hoc)
(M.Phil.)
Specialization: Algebra
Experience: 8 Years



Ms. Chanpreet Kaur
Assistant Professor (Ad-hoc)
(M.Phil.)
Specialization: Algebra
Experience: 7 Years 10 Months



Faculty Members



Dr. Amarjeet Singh
Assistant Professor (Ad-hoc)
(Ph.D.)
Specialization: Numerical
Optimization
Experience: 5 Years



Ms. Karishma Ahlawat
Assistant Professor (Ad-hoc)
(M.Sc.)
Specialization: Complex Analysis
Experience: 4 Years 6 Months



Mr. Vikas Jorwal
Assistant Professor (Ad-hoc)
(M.Sc.)
Specialization: Applied
Mathematics and Computing
Experience: 4 Years 6 Months



Ms. Geeta
Assistant Professor (Ad-hoc)
(M.Phil., Pursuing Ph.D.)
Specialization: Operator Theory
Experience: 4 Years



Faculty Members



Dr. Rashmi Rani

**Assistant Professor (Ad-hoc)
(Ph.D.)**

**Specialization: Elasticity and
Numerical Methods**

Experience: 3 Years



Dr. Arti Sharma

**Assistant Professor (Ad-hoc)
(Ph.D.)**

**Specialization: Commutative
Algebra**

Experience: 2 Years 1 Month



Ms. Mahima Sachdeva

**Assistant Professor (Guest)
(January'20-June'20)
(M.Sc.)**

**Specialization: Real Analysis, Linear
Algebra, Differential Equations**

Experience: 6 Months



Faculty Publications

Dr. Arti Sharma

- **Sharma, Arti and Gaur, Atul . "Maximal labeling of graphs." *Discrete Mathematics, Algorithms and Applications* 11.04 (2019): 1950044.**
- **Sharma, Arti and Gaur, Atul. "Energy of a Maximal Graph." *Palestine Journal of Mathematics* (accepted)**



Seminars/FDP's Workshops/Conferences/Webinars (Attended by the Faculty)

Faculty	Number of Seminars/FDP's/Workshops /Conferences/Webinars Attended	Faculty	Number of Seminars/FDP's/Workshops /Conferences/Webinars Attended
Dr. Ritu Arora	9	Dr. Amarjeet Singh	2
Dr. Sharda Gautam	5	Ms. Karishma Ahlawat	2
Ms. Teena Kohli	8	Mr. Vikas Jorwal	6
Dr. Tanu Gupta	3	Ms. Geeta	2
Mr. Laxmi Kant	2	Dr. Rashmi Rani	1
Ms. Sonia	4	Dr. Arti Sharma	5
Ms. Chanpreet Kaur	1		



Result Analysis

Result: Academic session 2018 – 2019

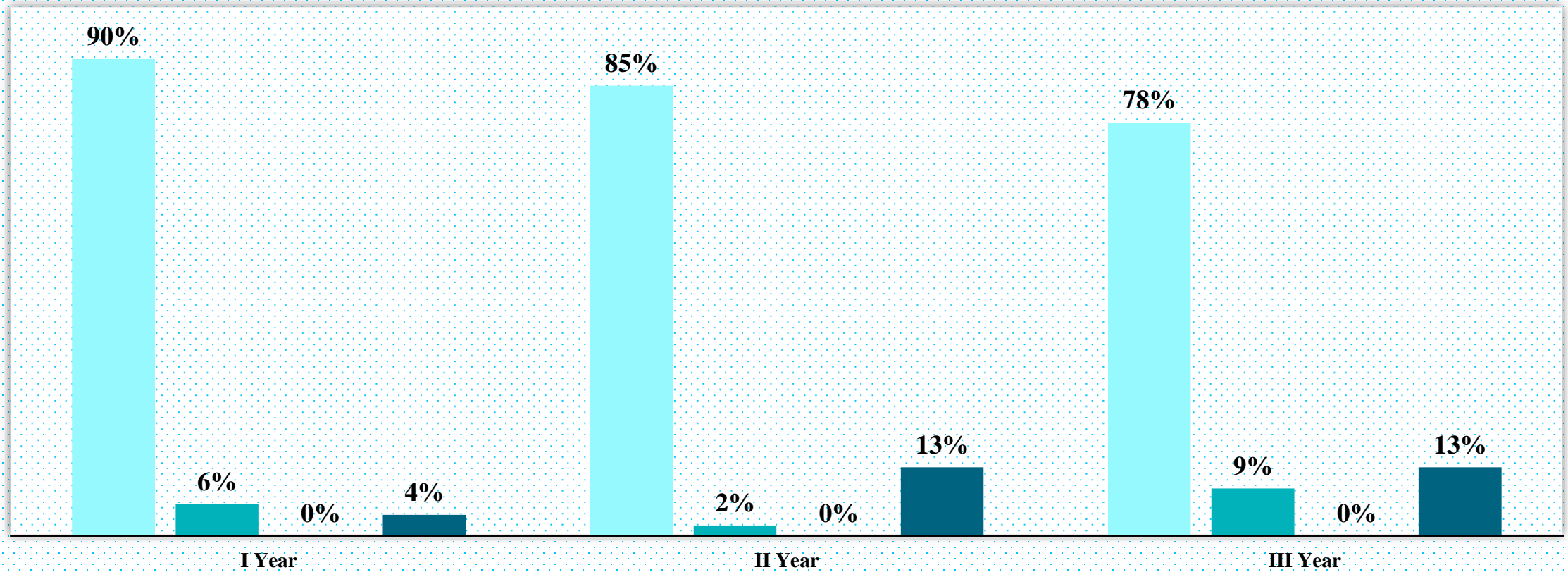
Year	Division			
	I	II	III	IV
Ist	90%	6%	0%	4%
IInd	85%	2%	0%	13%
IIIrd	78%	9%	0%	13%



Result Analysis (Graphical Representation)

Result: Academic Session 2018-2019

I Division II Division III Division IV Division





Students' Research Projects (funded by the college)

Under the able mentorship of faculty members, the students of the department are engaged in the following research projects:

S.No.	Project	Students Involved	Mentor
1.	Wind Farm Layout Optimization using Whale Optimization Algorithm	Athira Ranjan, II Year Kanika Balyan, II Year Shreya Kalkhandey, II Year Suraksha Jaggi, II Year Urvy Jain, II Year Vidhi Mittal, II year	Dr. Amarjeet Singh
2.	Mathematics in Architectural Works	Sangeeta, II Year Vidushi, II Year Jyoti, II Year Krati, II Year	Ms. Karishma Ahlawat



Students' Research Projects (funded by the college)

S.No.	Project	Students Involved	Mentor
3.	A descriptive assessment of Demographic and Clinical-pathological factors in Breast Cancer patients	Nikita Kohli, III Year	Mr. Vikas Jorwal
4.	Big Data Analytics for smart cities	Esha Srivastava, III Year	Mr. Vikas Jorwal
5.	Black Scholes Model for option pricing using Differential Equations	Yashna Arora, III Year	Mr. Vikas Jorwal
6.	Heat Conduction and Energy Conservation	Neha Sura, II Year Priyanka Phogat, II Year	Dr. Arti Sharma



Students' Accomplishments

Students of the Department actively participate in diverse range of events ranging from academics, fun, theatre to sports and have secured winning positions. A few to mention are as follows:

- ❑ Secured **1st position in Video Making competition on the World Environment Day** organized by the NSS, Bhagini Nivedita College, University of Delhi
- ❑ Secured **1st position in Aarambh- Street Play Comp.** at IIT Delhi
- ❑ Received **1st prize in Tug of War in Annual NCC fest. of College of Vocational Studies**, University of Delhi
- ❑ Secured **2nd position in Inter College Handball Tournament** of University of Delhi
- ❑ Secured **2nd position in Inter College Street Play Competition title “O Baith Kaaga”**
- ❑ Secured **2nd position in Inter College Quiz Competition** organized by the Finance and Investment Cell, Janki Devi Memorial College
- ❑ Secured **2nd position Inter College diary writing Competition** organized by NSS
- ❑ Secured **3rd position in Quiz Competition 2019** organized by Inquization-The Quiz Society of college
- ❑ Secured **3rd position in Inter College quiz competition** organized by the NSS unit of DDU College

One of our students, Sarina Sihag from II year was awarded by **Lieutenant Governor** for being best **Parasailor** in the **PM Rally, Republic Day Camp** during 16th-28th January, 2020.



Students' Accomplishments

Students attended various Workshops, Seminars, Webinars and Talks organized within and outside the college. Some of them are as follows:

- ❑ **Online Workshop on MS-Excel : Basics and Intermediate** organized by the Department of Mathematics
- ❑ **National Workshop on Real Analysis and its Application** organized by the Department of Mathematics, Atma Ram Sanatan Dharma College, DU
- ❑ **Workshop on Number Theory and Cryptography** organized by the Department of Mathematics, St. Stephen's College
- ❑ **Webinar on Job Skills to Succeed in a Post Pandemic World** conducted by the ICT Academy
- ❑ **Workshop on Cancer Awareness: Prevention and Survival** organized by the Alumnae Association of the College
- ❑ **Good Air Summit** at Jawaharlal Nehru Stadium, Delhi, November 2019
- ❑ **20th Bharat Rang Mahotsav** organized by the National School of Drama
- ❑ **Participated in Panel Discussion on Role of Youth and Technology to promote Multi-Sectoral Action in Road Safety** organized by the Ministry of Road Transport and Highways



Students' Accomplishments

Our students also participated in various Quizzes and Competitions as follows:

- ❑ **Madhav Mathematics Competition**, conducted by S. P. College, Pune and Homi Bhabha Centre for Science Education, T.I.F.R., Mumbai held nationwide
- ❑ **Ek Bharat Shreshtha Bharat Quiz** organized by the Ministry of Tourism & MyGov in May, 2020
- ❑ **Entrepreneurship Quiz – 2019** organized by MyGov & Ministry of Skill Development & Entrepreneurship
- ❑ **Quiz on Anti-Drug Abuse** organized by the Narcotics Control Bureau & MyGov
- ❑ **Online National level Quiz on Awareness on Coronavirus Pandemic** in India organized by the Department of Pharmacy, S.N. Medical College, Agra, Uttar Pradesh
- ❑ **Poster Making Competition** organized by the Nav Jeevan Prayas Foundation on the occasion of World Day Against Child Labour
- ❑ **E-Quiz competition on Undergraduate Level Mathematics** organized by the Department of Mathematics, Govt. Degree College, Rampur
- ❑ **E-Quiz on COVID-19 Pandemic** organized by the Oriental College of Pharmacy, Bhopal



Students' Accomplishments

Students have also utilized their time by successfully completing the following online certification courses:

- Data Science Math Skills organized by Duke University
- Python for Data Science and AI authorized by IBM and offered through Coursera
- Data Science Methodology authorized by IBM and offered through Coursera
- Tools for Data Science authorized by IBM and offered through Coursera
- Intro to Machine Learning organized by Kaggle
- Intermediate Machine Learning organized by Kaggle
- Digital Marketing Course by Google Digital Garage
- Data scientist toolkit course by Hopkins University
- Machine Learning Explainability organized by Kaggle
- Power BI Masters organized by iNeuron
- Tableau Masters organized by iNeuron
- Data Science Architecture organized by iNeuron
- Completed Basics of Android from LearnVern
- Introduction to Mathematical Thinking by Stanford University.
- Effective Thinking through Mathematics by University of Texas at Austin & EdX.
- R Programming course by Hopkins University
- Spanish A1 by Language Fluent



Students' Accomplishments

While gaining practical exposure in the real time operations of the concerned organizations, students of our department have successfully worked as interns with

- INGLU as Social Media Marketing Intern
- Sankalp NGO as Media Marketing Intern
- Vrikshikt Foundation as Marketing & Social Media Interaction Intern
- Youth Empowerment Foundation
- Expert Solutions
- International Model United Nations
- Stringers



Students' Accomplishments

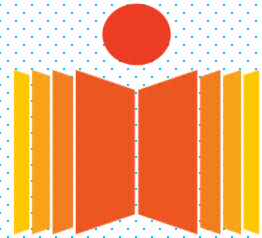
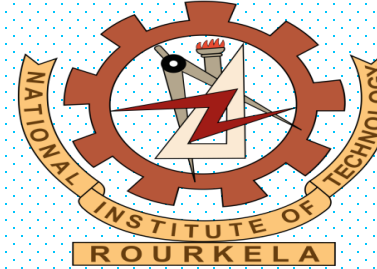
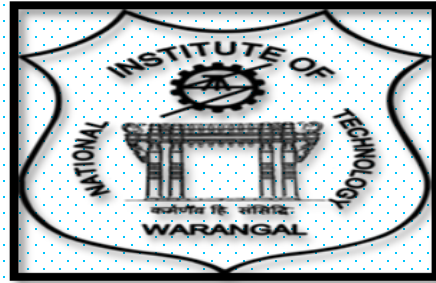
Students of our department are actively engaged in community service which provides them an opportunity to become responsible members of the society. They are also active members of NSS unit of our college. Some of the volunteering activities that requires mention are as follows:

- Volunteered in teaching basic English and Computers to children in NSS-adopted slum in collaboration with Kalakar Trust
- Volunteered in conducting surveys at Anand Parbat Transit Camp Alum adopted by the College NSS Unit
- Volunteered in District Youth Parliament, organized at Rajkiya Pratibha Vikas Vidyalaya, Link Road Karol Bagh
- Volunteered in teaching dance sequences to the girls of the Deaf Association
- Volunteered in International Conference on Safer Mobility 2019 organized by United Nations Institute of Training and Research and NITI Aayog in collaboration with the Ministry of Road Transport and Highways
- Volunteered in The Earth Saviours Foundation (NGO)

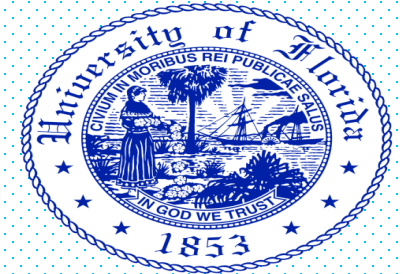


Students' Progression

Alumnae of the department are studying in reputed higher education Institutes as follows:



भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad





Students' Progression

The Alumnae of the department are well placed in well established companies. A few to mention are as follows:





Students' Progression



Risk Management Solutions



S&P Global
Market Intelligence





Best Practices

Institutional Social Responsibilities

- Our department actively contributes towards relief measures during **Natural Disasters** with the help of **Goonj**. Relief Fund, food, clothes, medicines, dry ration etc. are collected and sent to the emergency site.
- Our students regularly take part in various **NSS and NCC** activities within and outside the college.
- **Remedial Classes** are conducted on a regular basis.
- Our department regularly takes **Feedback** from students through monthly Student-Teacher meetings.
- The faculty members are part of various College welfare committees.
- Our Department faculty members have been providing technical support to other departments of the college.



Student-Faculty Meeting held on 23rd October, 2019.



Best Practices

Extension Activities

- The faculty members are conveners and members of various college committees like **Time-Table, College Website, Examination, Attendance, Career Opportunity Cell, E-cell, Magazine, IQAC, Academic Excellence, Library, Canteen, Discipline, ICT & Automation, Prize distribution, Annual Report and Alumnae Association.**
- The department contributes a section in the college magazine *Janki* in which students contribute various articles/ puzzles related to Mathematics.
- The faculty and students enthusiastically take part in the college **Sports Day.**
- Our students actively participate in various **college societies like Nriya, Anubhuti, Bardolators** etc. that enrich their college experience and enable their all- round development.



Students of the department performing at Freshers' Welcome 2019



Best Practices

IT-Our Strength

- The Department conducts **Students' Elections online** using Google Forms to make the process time saving, transparent and eco-friendly.
- **Online Attendance and Internal Assessment** submission is done using the college software.
- Dr. Ritu Arora, Convenor of the Time-Table committee developed a tool on **MS-Excel** that automised the process of Time-Table framing. It generates various reports like **Class wise Time-Table, Teacher wise, Time-Table, Room wise Time-Table**, after feeding the primary information with seamless integration.
- Dr. Ritu Arora, Convenor of the Examination Committee created a tool on MS-Excel to automise the process of assigning **Examination Duties**. It made analyzing and modifying the duty chart easier.

Janki Devi Memorial College, New Delhi Analysis Report - Exams Duty Nov-Dec 2019 Nov-Dec 2019

OK			Teachers												
Duty No.	Date	Day	No. of Stud.	Std.	Plan	Assigned Including OS	Surp./ (Short)	TIC-code	TIC-Name	TIC-Deptt	(Plan - Std)	P	A	DS-Teacher	
1	27E	WED	1250	81	83	83	-	68	Dr. (Ms.) Poonam Sharma	Commerce	2	33	50	Dr. (Ms.) Poonam Sharma	
2	28M	THU	402	28	28	28	-	65	Dr. (Ms.) V. Rajyalakshmi	Sociology	-	10	18	Dr. (Ms.) V. Rajyalakshmi	
3	28E	THU	344	24	24	24	-	27	Dr. (Ms.) Poonam Yadav	Hindi	-	10	14	Dr. (Ms.) Poonam Yadav	
4	29M	FRI	226	16	16	16	-	39	Dr. (Ms.) Ritu Arora	Maths	-	7	9	Dr. (Ms.) Ritu Arora	
5	29E	FRI	215	15	15	15	-	52	Dr.(Ms.) Shilpa Choudhary	Economics	-	6	9	Dr.(Ms.) Shilpa Choudhary	
6	30M	SAT	412	28	28	28	-	136	Dr. (Ms.) Prerna Arora	Music	-	11	17	Dr. (Ms.) Prerna Arora	
7	30E	SAT	304	21	21	21	-	65	Dr. (Ms.) V. Rajyalakshmi	Sociology	-	10	11	Dr. (Ms.) V. Rajyalakshmi	
8	2M	MON	207	15	15	15	-	114	Ms Mamta	Sanskrit	-	7	8	Ms Mamta	
9	2E	MON	311	22	22	22	-	34	Ms. Sipu Jayaswal	Philosophy	-	7	15	Ms. Sipu Jayaswal	
10	3M	TUE	585	39	39	39	-	39	Dr. (Ms.) Ritu Arora	Maths	-	13	26	Dr. (Ms.) Ritu Arora	
11	3E	TUE	280	20	20	20	-	101	Ms. Natasha Nongbri	History	-	7	13	Ms. Natasha Nongbri	
12	4M	WED	80	7	6	6	-				(1)	2	4		
13	4E	WED	783	52	53	53	-	134	Ms. Nirmala Muralidhar	HDPE	1	21	32	Ms. Nirmala Muralidhar	
14	5M	THU	538	36	36	36	-	7	Ms. Indu Jain	English	-	15	21	Ms. Indu Jain	
15	5E	THU	300	21	21	21	-	136	Dr. (Ms.) Prerna Arora	Music	-	9	12	Dr. (Ms.) Prerna Arora	
16	6M	FRI	408	28	28	28	-	27	Dr. (Ms.) Poonam Yadav	Hindi	-	9	19	Dr. (Ms.) Poonam Yadav	
17	6E	FRI	64	6	6	6	-					2	4		
18	7M	SAT	603	40	41	41	-	34	Ms. Sipu Jayaswal	Philosophy	1	12	29	Ms. Sipu Jayaswal	
19	7E	SAT	458	31	32	32	-	39	Dr. (Ms.) Ritu Arora	Maths	1	10	22	Dr. (Ms.) Ritu Arora	
20	9M	MON	730	48	49	49	-	134	Ms. Nirmala Muralidhar	HDPE	1	20	29	Ms. Nirmala Muralidhar	
21	9E	MON	316	22	22	22	-	7	Ms. Indu Jain	English	-	9	13	Ms. Indu Jain	
22	10M	TUE	78	7	6	6	-				(1)	3	3		
23	10E	TUE	672	45	46	46	-	68	Dr. (Ms.) Poonam Sharma	Commerce	1	20	26	Dr. (Ms.) Poonam Sharma	
24	11M	WED	130	11	11	11	-	52	Dr.(Ms.) Shilpa Choudhary	Economics	-	4	7	Dr.(Ms.) Shilpa Choudhary	
25	11E	WED	48	5	4	4	-				(1)	2	2		
26	12M	THU	605	40	40	40	-	34	Ms. Sipu Jayaswal	Philosophy	-	11	29	Ms. Sipu Jayaswal	
27	12E	THU	100	8	7	7	-				(1)	2	5		
28	13M	FRI	621	41	41	41	-	68	Dr. (Ms.) Poonam Sharma	Commerce	-	13	28	Dr. (Ms.) Poonam Sharma	
29	13E	FRI	214	15	15	15	-	7	Ms. Indu Jain	English	-	3	12	Ms. Indu Jain	

Analysis of Examination Duties using MS-Excel



Best Practices

Activities under *Radian-ce* (The Mathematics Society)

- Online MS-Excel workshop
- Bystander Intervention Certificate Program
- Career Guidance Sessions
- Inspirational Movie Screenings
- Events at *Symphony* (The Annual Fest of the College)



SWOC Analysis



- **Well qualified and dedicated faculty**
- **Believe in team work and encourage our students to develop creative and analytical thinking.**
- **Effective teaching-learning process.**
- **Evaluation is done on regular basis in which students are graded on the basis of class tests, assignments and presentations.**
- **Supports slow learners (weaker students) through remedial and tutorial classes.**
- **The faculty constantly update their ICT skills by attending different workshops, FDP's and computer courses.**



SWOC Analysis

Weaknesses

- Due to shortage of faculty, we are not able to give diverse options in DSE or GE papers which defeats the nature of Choice Based Credit System (CBCS).
- Because of non availability of science courses in JDMC, our students are forced to take Humanities and Commerce papers as their GE's which ultimately affects their overall score and puts them at a disadvantage compared to students with science GE's.
- Due to the shortage of computers, we are unable to offer papers with practical's in GE. Also since our lab is heavily packed so those students who do not have prior knowledge of computers don't get much time to sharpen their skills.



SWOC Analysis



- Use of softwares like Mathematica and R have made students solve and understand complex problems and to construct mathematical model for the same.
- Students have immense opportunities to apply for various post-graduate courses.
- With the advent of online teaching due to the current pandemic, the students were taught using various online platforms like Zoom, Google Meet, Google Classroom which further enhanced their technical skills such as they learned how to create and share documents, incorporate audio/video materials into assignments.



SWOC Analysis



- We frequently get students who lack computer knowledge or mathematical aptitude and students from Hindi medium background, so given a packed semester schedule and shortage of computer labs, the faculty and students struggle to get to the level of competence required.
- Due to the existing pandemic, the classes are to be held online, this becomes a challenge because of connectivity issues and also some students do not have any device to connect.



Future Plans

- **To organize Seminars/Workshops/Webinars covering topics related to Applications of Mathematics.**
- **To increase interaction with other departments through teaching of GE courses.**
- **To impart skill-based training through Application Courses.**
- **To make Mathematics more interesting for the students, more innovative pedagogical techniques will be adopted.**
- **Strengthen Radian-ce, The Mathematics Society.**
- **Motivate students for student research projects.**

THANK YOU