# Department of Mathematics

## 2016-17



Miranda House University of Delhi



## **About Us**

Miranda House, one of the premier women institutions of Delhi University, is amongst the most prestigious colleges of the country. The Mathematics Department exists since inception of the college, established by the founder principal Ms. Veda Thakurdas who was the first woman to obtain a Master's degree in Mathematics from Punjab University in 1930. The department has made a name for itself for its academic excellence. Students are selected in accordance with the university admission criteria. The department has a sanctioned strength of 70 students and the students admitted, have high academic records. The department has had an illustrious faculty since its origin and we are proud that the custom still continues.



Ms. Veda Thakurdas



## **Courses Offered**

- UG:
  - B.Sc. (H) Mathematics
  - o Interdisciplinary Courses
    - B.A. Programme
    - B.Sc. Physical Science

• PG:

• M.Sc. Mathematics



## Faculty

Name	Qualification	Specialization	Yrs. of Exp.
Dr. Shashi Aggarwal	Ph.D.	Multi-Objective Programming	32
Dr. Manjari Srivastava	Ph.D.	Vector Optimization and Variational Inequalities	29
Dr. Sunila Sharma	Ph.D.	Mathematical Programming	26
Dr. Ritu Gupta	Ph.D.	Multi-Objective Programming	17
Dr. Meetu Bhatia Grover	Ph.D.	Mathematical Programming	15
Ms. Bhawna Bansal Gupta	M.Phil.	Operator Theory	08
Dr. Daulti Verma	Ph.D.	Functional Analysis	11
Ms. Apeksha	M.Sc.	Wavelets	07
Ms. Monika Arora	M.Phil.	Harmonic Analysis	10
Dr. Jyoti Talwar	Ph.D.	Numerical Analysis	02
Dr. Durvesh Kumar Verma	Ph.D.	Approximation Theory	02
Mr. Bikram Singh	M.Phil.	Complex Analysis	05
Ms. Shweta Gandhi	M.Phil.	Commutative Algebra	02
Mr. Naveen Gupta	M.Phil.	Complex Analysis	01
Dr. Rekha Gupta	Ph.D.	Multi-Objective Programming	01
Mr. Mrityunjaya Kumar	M.Sc.	Computational Science	
Mr. Mohit Kumar Macchal	M.Sc.	Algebra	
Mr. Mohd. Sarik Idrisi	M.Phil.	Algebra	
Mr. Manoj Rawal	M.A.	Topology	

The department has well-qualified and dedicated faculty members (3 associate professors and 15 assistant professors). The faculty members are active in research and are also involved in D.U. Innovation Projects and Experimental Workshops for undergraduate science students at D.S. Kothari Centre established at Miranda House.

	The college has	instituted the	following	awards for	Mathematics	students:
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Awar	ds	Criteria
1.	D. N. Gulati Memorial Prize	Highest cumulative marks in I and II semester
2.	Kasturi Memorial Prize	Highest marks in Mathematics at the end of III year
3.	Prem Gulati Memorial Prize	I position in B.Sc. (H) Mathematics and M.Sc. (F)
4.	Seema Bhasin Medal	Highest marks in B.Sc. (H) Mathematics II year
5.	Urmila Sharma Memorial Prize	Highest marks in combined I year and II year of B.Sc. (H) Mathematics
6.	Usha Thiagarajan Memorial Prize	I position in I year and II year exams respectively
7.	R.R.P. Sharma Memorial Award	Outstanding PwD student

Students of Mathematics from Miranda House are pursuing higher studies and research in prestigious Indian and International Institutions like Delhi University, IIT, IIM, LSE etc. and are excelling in other reputed fields. To mention a few: Kritika Jyotsana is in Indian Administrative Services (IAS); Nivedita Bhattacharjee is an Assistant Commissioner, IRS; Dr. Aparna Mehra is an Associate Professor at IIT Delhi; Aanchal Aggarwal is a Research Staff Member at IBM, University of Houston, Texas; Iti Mittal is accounts manager at Google, New York; Madhulika Saxena is at Prudential PLC and Anamika Pundir has cleared SSCW NT (JAG). Every year few students clear NET/ GATE examination.

**Special Mention**: Mahenoor Ali is the first ever visually challenged student admitted in B.Sc. (H) Mathematics in the year 2013. She is an exceptionally bright student who received Buti Foundation Award in 2014-15 and 2015-16. She also cleared IIT JAM-2016 with All India Rank 504. She had also been shortlisted for the interview for integrated Ph.D. at IISc. Bengaluru, IISER Mohali and IISER Bhopal. She is currently pursuing her M.Sc. in Mathematics from Indian Institute of Technology (IIT), Delhi.



#### **Result Analysis of B.Sc. (H) Mathematics**





#### **Remedial Processes Followed**

The department has students from different socio-economic backgrounds and about 70% students come from outside Delhi. It is therefore, difficult for some students to adjust to the new college environment. Sometimes they need counseling. The Department assigns each student a mentor, who helps them to deal with the problems they face. Students are at ease in discussing with their respective mentors any problem they're struggling with, be it academic or life-centric. The mentors try their best to help their respective mentee to cope up with their problems by giving them suggestions to handle their difficulties.

#### Activities Organized by the Department

#### Educational Programmes in Current Academic Year

- Algebra Workshop on 2-3 March 2017.
- Talk on Cryptography on 23 February 2017.
- Talk on Sperner's Lemma and Applications on 28 Sept 2016.
- Talk on Mathematics in Technology on 5 Sept 2016.
- Analysis Workshop on 10-12 August 2016.

#### **Distinguished Speakers invited in last 5 years**

- Prof. Pramod Kanwar, Ohio State University, USA
- Prof. Ram Murthy, Queen's College, Canada
- Prof. Kiran R. Bhutani, The Catholic University of America
- Prof. R. K. Sharma, IIT, Delhi
- Prof. R. B. Bapat, ISI, Delhi
- Prof. Geetha Venkataraman, Ambedkar University, Delhi





- Prof. Gadadhar Misra, Indian Institute of Science, Bengaluru
- Prof. Rajendra Bhatia, ISI, Delhi
- Prof. Ajit Iqbal Singh, The Indian National Science Academy, New Delhi
- Dr. Gautam Bharali, Indian Institute of Science, Bangaluru
- Prof. B. Ramakrishnan, HRI, Allahabad

#### **Best Practices**

The Department of Mathematics has always been devoted to the students and their drive to fulfill their dreams in life. For the accomplishment of these goals, the department tries to put its best foot forward to make the students realise their dreams.

- The faculty is dynamic in adapting the new emerging I.T. teaching methods such as introduction to various software like MATLAB, Mathematica, etc. in order to give the students better clarity of abstract concepts of the subject.
- The department regularly organizes activities like talks, seminars and workshops to give the students exposure to the new research areas being explored throughout the world.



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#### **Department Speaks**

- The department has a team of well-qualified, experienced and dedicated teachers who hold excellent academic records and made outstanding contributions in their respective fields of specializations and to the student community at large.
- There is unhindered interaction between teachers and students creating an environment, which is productive for teaching and learning.
- The department makes best efforts to meet the need of students with disabilities. Appropriate mode of instructions and services are provided as per their needs.
- Our students, Ashima Sharma, Neha Budhiraja and Nishika Bhatia, initiated the department's first newsletter Mathletics. It was started as an attempt to show the fun side of Mathematics covering various applications and facts and puzzles. This newsletter is published on a quarterly basis.
- The department also organizes its annual festival ORIGIN, in which students from other colleges participate in various events like paper presentation, discussions, quiz, relay, treasure hunt etc. and lectures by eminent mathematicians.
- The department also encourages students for active participation in sports, NCC, NSS as well as other extracurricular activities. Sadhna Devi (Best NCC Cadet), Shameen Khurana (Best NSS volunteer) and Gargi Bhatt (Best volunteer for Gandhi Study Circle) are some of our students who have excelled in their various extra-curricular fields.











#### **Contact Us:**

Department of Mathematics Miranda House University of Delhi Delhi – 110007

Email: maths.mirandahouse@gmail.com www.mirandahouse.ac.in