

## **Department of Mathematics**

### **Academic Audit Report 2023-2024**

Department of Mathematics, Miranda House is affiliated to the Department of Mathematics, University of Delhi. In academic session 2022-23, UGCF (under NEP 2020) was started with full vigor for the first years, while LOCF was followed for second and third years. Within the guidelines and mandated structure, the Department discusses and holds meetings from time to time for academic flexibility in order to achieve holistic development of students.

1. For the implementation of academic framework we have various committees so that the planning is done well in advance.
2. The committees at department level are workload committee, time table committee and lab committee.
3. The department of Mathematics also has the responsibility for this academic session 2023-2024 to make the college time table as per the roster, which is department wise.
4. We have offered value addition courses Vedic Mathematics and skill enhancement courses IT skills and data analysis I and IT skills and data analysis II. It included an innovative assessment consisting of motivations of various mathematicians, presentations, quizzes, assignments, tests etc.
5. Beyond the prescribed academic syllabi, the department conducts various events like career counseling sessions, departmental seminars, workshops, FDP's etc. Following is the list of events conducted:
  - An interactive session on mindfulness by Dr. Sitender Sehrawat, Founder Mindful souls and flow trance foundation on 15th September, 2022.
  - A seminar on career counselling for pursuing MBA as career option on 29th September, 2022 by Mr. Navneet Anand, Head, MBA division, career launcher.
  - A seminar on fundamentals of Real Analysis by H. Ananthnarayan on 19th November, 2022.
  - A seminar on insurance analytics and fraud detection by Jasika Singh, Alumni of MH on 13th January, 2023.
6. Department recognizes and appreciates the changes in the advancement of technology. In order to fulfill this, the Department had organized workshops on Data Science to inspire students for interdisciplinary research like
  - Introduction to Data Science and its applications using python by Dr. Pankaj Singh from Texas A&M University, Houston on 20<sup>th</sup> September, 2022, was organized by Dr. Monika Arora as the coordinator.
  - A two day capacity building workshop for students was organized on software MATHEMATICA, from 22-23 May 2023. The speaker of the talk was Dr. Brij Mohan, Assistant Professor, department of Mathematics, Hansraj College.
  - A week long Capacity building workshop for teachers on Mathematical Data Science and Applications by Dr. Niteesh Sahni was organized from 15 June to 21 June 2023 with Dr. Monika Arora as the convener and Mr. Mohit Macchal and Mr. Mohd. Sarik Idrisi as the coordinators of the workshop.
  - Capacity building training programme on Mathematical Computing in Python from 20-24 July, 2023 by Dr. Niteesh Sahni and Ms. Priti Rai Jain with Dr. Monika Arora as the Convener and Mr. Mohit Macchal and Mr. Mohd. Sarik Idrisi as the coordinators of the workshop.

- The department is a regular participant of the DSKC summer internship programme viz. “Flavour of Research” in every summer vacation. One of our department group got the best prize for the poster presentation for the year 2022-2-23.

### **Challenges before the department**

The department has been facing many challenges in terms of technology and funds in conducting various events for the department, teachers and students. Dearth of funds is an important factor which hampers the conduct of events.

Another important challenge that the department faces is the lack of computers in the Mathematics computer lab, lack of licenced softwares and a permanent lab attendant. This makes conducting the practicals a challenging task for students and teachers when we are in top rankings, Miranda House is NIRF ranked one college for past seven consecutive years. The rankings should match with the structures available with the college.

### **Future Plans**

The department envisions as one of the leading departments in Research and research technology in the college in the recent future provided the challenges mentioned are met on time and department has a designated space that entails smooth coordination between research and related activities. The department would continue to upskill with the latest trends that come up in the syllabus and continue to train the teachers for smooth teaching and learning of the department.

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