

## ABOUT THE UNIVERSITY

Harcourt Butler Technical University, Kanpur (Formerly HBTI, Kanpur) was established in 1921 and has a glorious history. It has always been at the forefront of technological developments and the growth of industries in the country since its inception. The Institute had its decent beginning as the Government Technological Institute, Uttar Pradesh in 1921. The Institute was renamed Harcourt Butler Technological Institute in 1926 in honor of Sir Spencer Harcourt Butler, the then Governor of Uttar Pradesh. Degree courses in Oil Technology and Chemical Engineering were started in 1954, and thereafter number of undergraduate and postgraduate courses were started. On March 26, 1965, it was upgraded from a Government Department status to an autonomous Institution. It was upgraded as Harcourt Butler Technical University, Kanpur on September 01, 2016, by Govt. of Uttar Pradesh. The university spreads across two campuses - East Campus (77 acres) and West Campus (271 acres) situated approximately 3 kilometers apart. The University provides a congenial environment for the holistic growth and all-round development of the students. **The university is accredited A<sup>+</sup> by NAAC.**

For more details, please visit the university website <https://hbtu.ac.in/>

## ABOUT THE DEPARTMENT

The Department of Mathematics has been striving hard for excellent teaching and research in Mathematical Sciences since its inception in 1961. The undergraduate and postgraduate students of various chemical technology and engineering departments are enriched/equipped with the in-depth theoretical back-

ground of sophisticated applied mathematics required for modern scientific investigations and technological developments and practical training in numerical computing by following a need-based designed curriculum. The Department offers BS-MS (Mathematics & Data Science), M.Sc. (Mathematics & Data Science), and doctoral research programs for carrying out research in interdisciplinary areas. The faculty members of the department are actively engaged in research in emerging thrust areas viz. mathematical modelling, ecological and environmental systems, mathematical biology, biomechanics, fluid mechanics of the eye and cerebrospinal fluid, blood flow dynamics, fuzzy rough set, soft computing, spectral methods, partial differential equations, artificial neural networks etc. Facilities for interdepartmental and interdisciplinary research activities have also been evolved.

The Department is well equipped with computing and internet facilities. Several research projects sponsored by different organizations like CSIR, CST UP, UGC, DST, and ICMR have been completed. Also, various conferences, faculty development programmes, seminars, workshops, summer, and winter schools have been organized by the department. Apart from this, faculty members of the department also regularly visit to deliver lectures at conferences and seminars outside. The experienced and dedicated team of faculty members have presented and published good numbers of research papers. Nearly 70 students have been awarded Ph.D. degrees under the supervision of faculty members of the department, and at present 15 students are registered for Ph.D. Program.

For more details, please visit the department link <https://hbtu.ac.in/mathematics-department/>

Two Days Workshop

(Online Mode)

*on*

# Mathematical and Statistical Methods in Engineering, Science and Management

7 – 8 July 2025

*organised by*



Department of Mathematics  
School of Basic and Applied Sciences  
Harcourt Butler Technical University  
Kanpur

Convenors

Prof. R. N. Tripathi

Prof. Rekha Bali

## CHIEF PATRON

Prof. Samsher  
Hon'ble Vice Chancellor, HBTU, Kanpur

## PATRON

Prof. Manoj Kumar  
Dean, SOBAS, HBTU, Kanpur

## CHAIRMAN

Prof. R. N. Tripathi  
Head, Mathematics Department

## CONVENORS

Prof. R. N. Tripathi, Mathematics Department  
Prof. Rekha Bali, Mathematics Department

## COORDINATOR

Dr. U. P. Singh, Mathematics Department

## ORGANISING SECRETARIES

Dr. Shivam Shreevastava, Mathematics Department  
Dr. Abhinava Srivastav, Mathematics Department  
Dr. R. S. Yadav, Mathematics Department

## Important Dates

Information Circulation	June 24, 2025
Last date to Apply	July 04, 2025
Intimation of selection	July 05, 2025
Date of Workshop	July 7-8, 2025

Note: Number of participants is limited for this Workshop. Applications will be accepted on first cum-first serve basis.

## OBJECTIVES

Welcome to our two-days workshop on Mathematical and Statistical Methods in Engineering, Science and Management. The main objectives of this workshop are:

- To introduce the fundamentals of Applied Statistics for Decision Making.
- To provide concepts of Correlation and Multivariate Regression Analysis.
- To introduce fundamentals of Operations Research.
- To provide understanding of Parametric and Non-Parametric Methods and ANOVA.
- To familiarize the use of Fuzzy logic and Machine learning in the field of Science, Engineering and Management.

## WHO SHOULD ATTEND

This workshop is designed to benefit a diverse group of participants from academia and industry. Individuals at various stages of their academic and professional careers will find the sessions informative and valuable. The workshop is ideal for:

- **Undergraduate Students (UG):** To build a strong foundation in mathematical and statistical tools that are essential for advanced studies and practical problem-solving in engineering, science, and management domains.
- **Postgraduate Students (PG):** To enhance analytical skills and gain exposure to applied statistical methods, enabling them to undertake research projects and thesis work with a solid methodological base.
- **Doctoral Scholars (Ph.D. Candidates):** To deepen their understanding of advanced techniques such as multivariate analysis, fuzzy logic, operations

research and machine learning for interdisciplinary research applications.

- **Faculty Members:** To update and broaden their methodological toolkit for teaching and guiding student research effectively, especially in the fields of operations research, statistical modeling, and decision science.
- **Industry Professionals and Researchers:** To learn and apply data-driven decision-making methods and optimization tools in real-world scenarios within science, engineering, and management sectors.

## Fee and Certification

There will be no fee for the participation in this workshop. E-Certificates will be issued only on the successful completion (at least 80 % attendance) of the workshop.

## How to Apply

Please apply for the workshop by visiting the link given below. Selected applicants for the workshop will be intimated via email about the session timings of the workshop. <https://forms.gle/5Wh6kEK8wC5HB3vW7>

## Resource Persons

The workshop sessions will be conducted by faculty members from various organisations across the country.

## Contact

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