ABOUT THE INSTITUTE

Delhi Technological University (Formerly known as Delhi College of Engineering) is one of the most well-known engineering institutions of India, with over 82 years of glorious tradition behind it. A non-affiliating, teaching, and research University, DTU is poised to create an environment of synergetic partnership between academia and industry. It aims to cause a major departure from the conventional system of education and research and aspires to imbibe a culture of scientific research in its technology disciplines and technology temper in its scientific research and education by providing a seamless environment for integration of science and engineering. The University also endeavours to provide the thrill of a corporate R&D environment with a planned focus on industrially relevant projects and technology incubation. DTU has consistently been ranked among the top engineering institutions of the country in reputed surveys.

ABOUT THE DEPARTMENT

The Department of Applied Mathematics at Delhi Technological University (DTU) is a prestigious Department that aims to impart sound knowledge of Mathematics, Statistics, and Computing to students through teaching and research. The Department offers various programs including B.Tech. in Mathematics and Computing, M.Sc. and IMSc in Mathematics, and Ph.D. in various areas of Mathematics and Computer Science. The B.Tech. program is an amalgamation of Mathematics with Computer Science and Financial Engineering, designed to meet the needs of sophisticated mathematics for modern scientific investigations and technological developments. The B.Tech. (Mathematics and Computing) programme is NBA accredited. The M.Sc. program caters to students aspiring for research, teaching profession, and industry. The Ph.D. program offers research in areas like Graph Theory and Petrinet Theory, Numerical Simulation, General Relativity and Cosmology, Complex Analysis, Algebra, Approximation Theory, Operations Research, Optimization Techniques, Numerical Analysis, Mathematical Modelling, Natural Language Processing, Image Processing, Network Security and Quantum Information Processing. The Department boasts of highly qualified faculty actively involved in research, projects, and various academic activities. The students from this Department are highly demanded by recruiters of top companies and are also getting admission for higher studies in topmost Universities of India & abroad.

CHIEF PATRON

Prof. Prateek Sharma
Vice-Chancellor, DTU

Patron

Prof. Madhusudan Singh,
Registrar, DTU

CHAIR PERSON

Prof. Ramesh Srivastava
HOD, (AM)

COORDINATOR

Dr. Nilam
Dr. Vivek Kumar Aggarwal

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Associate Professor
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DTU.

ORGANIZING COMMITTEE

Dr. Dinesh Udar
Dr. Satyabrata Adhikari

One Week Faculty Development Program on Mathematical Modeling and Simulation Using Python – Level 1

ORGANIZED BY

Department of Applied Mathematics
Delhi Technological University
Bawana Road, Shahbad Daulatpur,
Delhi–110042

Overview:

The Faculty Development Program (FDP) on **"Mathematical Modeling and Simulation Using Python – Level 1"** is designed to provide educators, researchers, and professionals with a foundational understanding of mathematical modeling and the simulation of complex systems using Python. Python's robust libraries and tools make it an ideal language for scientific computing, offering an accessible platform for solving real-world mathematical problems.

The FDP, scheduled to take place from **2nd December to 6th December 2024**, is aimed at equipping participants with essential skills in mathematical modeling, algorithm development, and simulation techniques, which are critical across various domains of engineering, science, and mathematics.

Objectives:

- **Introduction to Mathematical Modeling:** To familiarize participants with the concepts of mathematical modeling and its role in solving real-world problems.

- **Understanding Python for Mathematical Simulations:** To equip participants with the tools and libraries in Python, such as NumPy, SciPy, Matplotlib, and SymPy, essential for modeling and simulations.

- **Algorithm Design for Modeling:** To provide a step-by-step approach to designing algorithms for solving mathematical models and simulating dynamic systems.

- **Hands-on Simulation:** To offer practical, hands-on sessions where participants will learn to implement models and simulations using Python.

- **Real-World Applications:** To demonstrate the application of mathematical modeling and simulation in various fields such as engineering, biology, economics, and data science.

Target Audience:

- Faculty members and educators from institutions offering courses in mathematics, engineering, computer science, and related disciplines.

- Research scholars who wish to strengthen their skills in mathematical modeling and simulation.

- Professionals and industry practitioners looking to incorporate Python for data modeling and simulation.

Learning Outcomes:

By the end of this FDP, participants will:

- Gain a deep understanding of mathematical models and their application.

- Be proficient in using Python for developing algorithms and performing simulations.

- Learn to visualize and interpret complex data through Python libraries.

- Be capable of implementing basic simulations and solving mathematical problems using Python.

Mode: Hybrid (Online & Offline)

REGISTRATION DETAILS

Registration Fees: Rs 1000/- for Outside DTU participants

Details for Registration Fees

Bank Name: State Bank of India

Account no.: 30875679275 (Registrar, DTU)

MICR Code: 110002438

IFSC Code: SBIN0010446

Link for Registration

https://forms.gle/f8RcDLv13P1kFQFZA

Last date of Registration:
29th Nov 2024

Certificate shall be issued to the participants on successful completion of the workshop.
100% attendance is necessary.

SPEAKERS:

1. **Prof. A.K. Misra, BHU**
2. **Prof. K.S. Mathur, JNU**
3. **Prof. Mani Mehra (IIT Delhi)**

IMPORTANT DATES

2nd – 6th December, 2024

VENUE:
Room No. 118
Committee Room,
AB3 First Floor,
Department of Applied Mathematics
Delhi Technological University
Bawana Road
Delhi -110042