MALAVIYA MISSION TEACHER TRAINING CENTRE
INDIAN INSTITUTE OF TECHNOLOGY MANDI

ज्ञान-विज्ञान विमुक्तये

MALAVIYA MISSION SCHEME
TEACHER'S
TRAINING PROGRAMME

Starting Date: 30th November 2026
Ending Date: 05th December 2026
Last Application Date: 21st November 2026

FACULTY DEVELOPMENT PROGRAM ON

"Theory and Application of Statistical Learning and Stochastic Processes"

MODE	DURATION	ORGANIZER
ONLINE	6 Days	IIT MANDI

About the Course –

The purpose of this course is to provide participants with a basic mathematical understanding of the foundations of statistical learning and stochastic processes, with particular emphasis on their applications in physical systems. The programme is designed to equip participants with both theoretical knowledge and practical skills in probability, stochastic modelling, statistical inference, machine learning, deep learning, and Physics Informed Neural Networks (PINNs) for addressing contemporary scientific and engineering challenges. The course will feature lectures delivered by eminent experts from leading institutions across India, exposing participants to recent advances in statistical learning, stochastic modelling, and data-driven scientific computing. In addition to the lectures, participants will solve selected tutorial problems and computational exercises using Python and MATLAB, enabling them to gain hands-on experience in implementing mathematical models and analysing complex physical phenomena. Overall, the programme aims to strengthen participants' mathematical, analytical, and computational capabilities, thereby fostering interdisciplinary research and promoting the effective application of modern data-driven methodologies in science and engineering.

The course begins with the fundamentals of probability theory. It then introduces the theory of stochastic processes, including the mathematical foundations of Markov chains with their applications. The programme further introduces the fundamentals of machine learning and deep learning, covering supervised, unsupervised, along with widely used algorithms, model evaluation techniques, artificial neural networks, and modern deep learning architectures. It also highlights recent advances in Physics Informed Neural Networks (PINNs) and their applications in mathematical modelling, fluid dynamics, etc. Through expert lectures, interactive discussions, tutorials, and hands-on computational sessions, participants will develop the mathematical, statistical, and computational skills required for interdisciplinary research and modern scientific applications.

Participants Eligibility Criteria –

Faculty members working in universities and colleges that are included under Section 2(f) of the UGC Act. The teachers of colleges that do not yet come within the purview of Section 2(f), but have been affiliated to a university for at least three years, will be permitted to participate in the courses. These conditions are applicable only for Residential Training Programmes/Courses

Salient Features of the Course –

1. The FDP will be of **6 working days and 36 contact hours (six hours a day, six days a week).**
2. The course will comprise **24 expert lectures**, along with discussions, illustrative sessions and academic interactions.
3. Participant evaluation will be conducted through MCQ-based assessments and presentations.
4. A Certificate will be issued to those who have attended all the sessions and have qualified the Assessment examination.

Important Dates –

Starting Date	Ending Date	Application Deadline Date
30th November 2026	**05th December 2026**	**21st November 2026**

NOTE –

1. No Registration Fees.
2. Fill the NOC in the prescribed format.
3. Attendance is mandatory in all the sessions.

Course Coordinator-

Dr. Tanmay Kayal

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Programme Director-

Prof. Atul Dhar

MMTTC, Indian Institute of Technology Mandi (H.P)

MMTTC Contact Details-

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Registration Links –

MMTTP Website: Link

Step by Step Process: Link

NOC Format: Link