



VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Vellore-632014, Tamil Nadu, India

**SCHOOL OF ADVANCED SCIENCES
DEPARTMENT OF MATHEMATICS**

VIT MATHEMATICS SUMMER PROGRAMME 2026 (VMS-2026)

on

Understanding Mathematics behind Artificial Intelligence

4th May 2026 to 8th May 2026

ABOUT THE INSTITUTION

Vellore Institute of Technology was founded in 1984 in the name of Vellore Engineering College by the Chancellor Dr. G. Viswanathan. VIT attracts students from all the states of India and from more than 60 different countries due to its academic excellence. In recognition of its excellence in academics, research and extra-curricular initiatives, the University status was conferred in 2001 by Ministry of Human Resource Development (MHRD), Government of India. Currently, VIT has 5 campuses located in Vellore, Chennai, Amravati, Bhopal and Bengaluru. The National Institutional Ranking Framework (NIRF) has ranked VIT as 21st in Overall Category, 14th in Research Category, 16th in Engineering Category and 14th in University Category, announced by the Ministry of Education, Government of India for the year 2025. VIT has accreditation by NAAC (India), IET (UK) and ABET (USA), and follows a world class academic process. VIT is the first University in India to get 4-Star Rating from QS - World University Rankings Organization. VIT has been ranked with 691th place by QS - World University Rankings, ranked among the top 501-600 institutions by Shanghai ARWU Ranking of World Universities, ranked as 173rd by Times Higher Education (THE) World Young University Rankings, and also ranked as 156th best institution in Asia by QS - Asia University Rankings.

ABOUT THE SCHOOL

The School of Advanced Sciences (SAS), which was established in the year 1984, comprises of Mathematics, Physics, and Chemistry departments. The vision of the School is to provide quality teaching and research, which would make an impact at a global level. The School consists of a total of 232 experienced and enthusiastic faculty members. The research activities, publications and fruitful interactions with the industry are testimonials to the expertise of the faculty members in VIT. The School offers Masters Programs in Data Science, Business Statistics, Physics and Chemistry; Integrated Masters Programs in Mathematics, Data Science, Physics and Chemistry. The School offers Ph.D. programs in emerging research areas in Mathematics, Chemistry and Physics.

ABOUT THE DEPARTMENT

The Department of Mathematics at VIT was established in 1984. The department strives to be recognized for excellence among academic institutions in India and abroad. Currently, the Mathematics department has 136 faculty members who support the other engineering departments through teaching and also actively involved in academic research in different areas. The department offers Ph.D. programs in Mathematics, Statistics and Data Science in addition to M.Sc. (Data Science), M.Sc. (Business Statistics), Integrated M.Sc. (Mathematics) and Integrated M.Sc. (Data Science) programs. The department emphasizes on offering a comprehensive undergraduate, graduate, and research curriculum. The department focuses on research that is core of its field, promote cutting-edge, original research, and strengthen our role as a hub for top quality research in the world. We emphasis on higher education and mathematics research in emerging areas such as AI, ML and Data science. For this purpose, we will adopt flexible approaches for reorganization and establishment of new initiatives within the department. The Department of Mathematics, School of Advanced Sciences (SAS), Vellore Institute of Technology, Vellore has obtained QS world university subject ranking in "Mathematics" as 104th place (International) and 5th place (National). The department has been supported by DST-FIST, Government of India with the financial assistance of Rs. 2.71 Crores.

ABOUT THE WORKSHOP

The Five-Day Workshop on Understanding the Mathematics Behind Artificial Intelligence is designed with a clear and purposeful vision — to explore the fundamental mathematical concepts that form the backbone of modern artificial intelligence and machine learning algorithms. In an era where AI is transforming every sector of society, from healthcare and finance to education and engineering, a solid grounding in the mathematics that drives these systems has never been more essential. A central aim of this workshop is to bridge the gap between theoretical mathematics and its practical applications in AI — a divide that has long challenged students, educators, and professionals alike. Through carefully designed sessions, participants will explore key areas including linear algebra, which governs how data is represented and transformed; probability and statistics, which enable machines to reason under uncertainty and learn from data; and optimization techniques, which lie at the heart of how AI models are trained and refined. Beyond building technical knowledge, the workshop is committed to equipping participants with a deeper and more intuitive understanding of how mathematical frameworks drive intelligent systems, empowering them to design, evaluate, and analyze AI models with greater confidence, creativity,

and critical thinking. At its broadest level, the workshop aspires to foster interdisciplinary collaboration — bringing together mathematicians, computer scientists, engineers, and researchers from diverse fields — creating a shared language rooted in mathematics, sparking meaningful dialogue, and advancing innovation at the intersection of mathematics and artificial intelligence.



ORGANIZING COMMITTEE

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Founder & Chancellor, VIT

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Department of Mathematics, SAS, VIT, Vellore

Dr. B. Sripathy

VIT - A PLACE TO LEARN; A CHANCE TO GROW

Eligibility to Register: Higher Secondary (Grade 11 and Grade 12) Students who have studied Mathematics as one of their subjects. Preference will be given to the local students. Registration fee is Rs.750/- (Excluding GST). It includes registration kit, lunch and refreshments for all five days of the summer programme. Certificate will be provided to all the participants.

Main Objectives of VMS-2026

1. Understanding Mathematical Concepts through Python
2. Understanding the underlying Mathematics in Artificial Intelligence

Outcomes of VMS-2026:

At the completion of VMS-2026, a student will have:

1. Improved mathematical understanding.
2. Familiarity with mathematical libraries such as Numpy, Sympy and Matplotlib.
3. Ability to model real world problems mathematically.

Last Date for Registration and Payment: 30th April, 2026

Payment link: <https://events.vit.ac.in/>

Registration link: <https://forms.gle/faGjukMUV5qdhNJY8>

Registration amount: Rs.750/- (Excluding GST). It includes registration kit, lunch and refreshments for all five days. Certificate will be provided to all the participants.

Contact Details:

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