

About VIT

Vellore Institute of Technology (VIT) was founded in 1984 as Vellore Engineering College by the Chancellor Dr. G. Viswanathan. From its humble beginning, the institution has grown steadily to that of having more than 39,000 students. VIT attracts students from all the 29 states of India and from more than 50 countries because of its excellence. The credentials of VIT in academics and research have placed VIT in the 13th position among the engineering institutions and VIT Business School in the 17th position among the business schools in India by NIRF, Govt. of India. The world ranking body called QS (Quacquarelli Symonds) has given 4 STAR rating to VIT and with that VIT becomes the first institution in India to have the 4 STAR rating. In addition to this, the consortium of industries, FICCI has adjudged VIT as the “Excellence in Faculty”. VIT has the record of publishing maximum number of SCOPUS indexed research articles in 2016, among Indian Universities and also overtaking all the premier institutions. VIT has also completed 4 cycles of NAAC accreditation and has been rated as “A++” grade institution. In addition, VIT also has obtained the coveted ABET accreditation by US agency. VIT has introduced many innovations in academic processes such as FFCS (Fully Flexible Credit System), PBL (Project Based Learning) for better learning and fully digitized academic portals that assist students in equipping themselves for 2020 market place.



Organizing Committee

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Faculty Coordinators

**Dr. S. Balakrishnan, Dr. Samir Ranjan Meher,
Dr. Dhritiman Gupta**



VIT[®]

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

Value Added Course

Mathematical Foundation for Physics

(VAC1918)

(30 lecture hours course)

Organized by

**Department of Physics
School of Advanced Sciences
Vellore Institute of Technology
Vellore 632 014
Tamil Nadu**



VIT – A place to learn; A chance to grow

**Recognized as Institution of Eminence (IoE) by
Government of India**

SAS

School of Advanced Sciences (SAS) consists of Mathematics, Physics and Chemistry departments. It offers M.Sc. in Physics and Chemistry, M.Phil. and Ph.D. programmes in all 3 disciplines. It comprises of well qualified and research oriented faculty members whose are experts in the frontier areas in Sciences. Faculty members of SAS have received research projects from various funding agencies such as DST, CSIR, DRDO, NBHM, BRNS, IGCAR, AERBA, NRB and ARDB. The School has also been recognized by DST for support under the FIST programme.

About Physics Department

The Physics Department offers credit based core and elective courses in basic Physics to undergraduate first year engineering (B.Tech) students. The Department also offers 5 years Integrated MSc Physics and 2 years MSc Physics programmes.

Department is equipped with different laboratories viz., Thin Films/Sensors/Energy Conservation; Crystal Growth; Gel Dosimetry/Laser Spectroscopy; Nonlinear Fiber Optics/Photonics; Bio Physics; Condensed Matter Physics; Material Science; Medical Physics/Nuclear Physics; X-Ray Crystallography; Ultrasonics; Thin Film Technology; Bio-Materials; Surface Engineering; Synthesis and Characterization of Nanomaterials. Physics Department is strengthened with 45 Faculty members.

List of topics covered in the course

Unit I: Differential Calculus

Limits and differentiation-Derivative of functions-Derivative interactive graphs-Differential Equations in Physics

Unit II: Integral Calculus

Finite sums- Limits of finite sums-Definite integrals-Integration of functions-Fundamental theorem of calculus

Unit III: Determinant and Matrix

Basics of determinants and matrices-Types of matrices- Simultaneous linear equations-Eigenvalue and eigenvectors-Matrices in Physics

Unit IV: Vector Calculus

Differentiation of vectors-Gradient, divergence, curl-Integration of vectors-line, surface and volume integral

Unit V: Few Basic Functions in Physics

Plotting of functions-Beta and Gamma Function-Riemann Zeta Function-Dirac Delta Function

Unit VI: Probability and Statistics

Probability, Multiplicity, Combinatorics-Bernoulli Distribution-Poisson and Gaussian Distribution-Boltzmann, Power Law, Lorentzian Distribution

This course is suitable for the PG level students

For online Registration & Payment for Value Added Course

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

Registration Form

Name: _____

Reg. No.: _____

Programme & Branch: _____

VIT - E-mail: _____

Mobile No: _____

- Registration fee is Rs. 350 per participant.
- Last date for registration is **12th May 2022**
- Upon successful completion of the course, certificate will be provided.
- 3 lecture hours per week during the period, May 2022 to September 2022

For further details and query, kindly contact

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