

VIT Lateral Entry Syllabus for B.Tech 2nd-Year Admission

The VIT Lateral Entry program allows Diploma holders and B.Sc. graduates to gain direct admission into the 2nd year of B.Tech programs at Vellore Institute of Technology (VIT). The syllabus primarily focuses on Mathematics, Analytical & Logical Reasoning, and Core Engineering Subjects based on the diploma stream.

Section-Wise Syllabus for VIT Lateral Entry

The exam consists of three major sections:

- Mathematics (40 Marks)
 - Analytical & Logical Reasoning (20 Marks)
 - Core Engineering Subjects (60 Marks)
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Section 1: Mathematics (40 Marks)

This section evaluates mathematical proficiency and problem-solving skills.

Mathematics Topics

- Algebra – Matrices, Determinants, Quadratic Equations
 - Differential Calculus – Limits, Differentiation, Applications
 - Integral Calculus – Definite & Indefinite Integrals
 - Vector Algebra – Dot & Cross Products, Applications
 - Probability & Statistics – Mean, Variance, Probability Theorems
 - Coordinate Geometry – Straight Lines, Circles, Conic Sections
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Section 2: Analytical & Logical Reasoning (20 Marks)

This section assesses logical and reasoning ability.

Topics Covered

- Number Series – Missing Numbers, Patterns
- Coding-Decoding – Letter & Number-Based Coding
- Blood Relations – Family Tree Problems
- Syllogisms – Logical Deductions & Venn Diagrams
- Seating Arrangement – Linear & Circular Arrangements
- Logical Puzzles – Statement & Conclusion, Assumptions

Section 3: Core Engineering Subjects (60 Marks)

This section includes branch-specific questions for diploma holders and general science topics for B.Sc. holders.

Mechanical Engineering

- Thermodynamics – Laws of Thermodynamics, Heat Transfer
- Strength of Materials – Stress, Strain, Bending Moment
- Manufacturing Processes – Casting, Welding, Machining
- Fluid Mechanics – Bernoulli's Theorem, Pipe Flow

Electrical & Electronics Engineering

- Circuit Theory – AC/DC Circuits, Network Theorems
- Electrical Machines – Transformers, Motors
- Power Systems – Transmission & Distribution Basics
- Digital Electronics – Logic Gates, Boolean Algebra

Civil Engineering

- Strength of Materials – Stress, Strain, Elasticity
- Structural Analysis – Bending, Shear Force Diagrams
- Surveying – Leveling, Contouring, GPS Basics
- Fluid Mechanics – Properties of Fluids, Pipe Flow

Computer Science & IT

- Programming – C, C++, Java Basics
- Data Structures – Arrays, Linked Lists, Trees
- Computer Networks – OSI Model, TCP/IP Basics
- Operating Systems – Basics of Memory & Process Management


VIT Lateral Entry Exam Pattern

Subject	Marks
Mathematics	40 Marks
Analytical & Logical Reasoning	20 Marks
Core Engineering Subjects	60 Marks

Subject	Marks
Total	120 Marks

 Exam Duration: 2.5 Hours

 Marking Scheme: +4 for Correct Answer, -1 for Incorrect Answer

 Preparation Tips for VIT Lateral Entry

 Revise Core Engineering Concepts: Diploma/B.Sc. subjects have maximum weightage.

 Strengthen Mathematics & Logical Reasoning: These sections are scoring if practiced well.

 Solve Previous Year Papers: Helps in understanding question patterns.

 Take Mock Tests: Improves time management and accuracy.