

Maharashtra DSE (Direct Second Year Engineering) Syllabus for B.Tech Lateral Entry

Maharashtra DSE (Direct Second Year Engineering) admission is conducted for Diploma and B.Sc. holders who wish to enter directly into the 2nd year of B.Tech/B.E. programs in Maharashtra. The syllabus focuses on Mathematics, Science, and Engineering subjects relevant to different branches.

Section-Wise Syllabus for Maharashtra DSE

The syllabus consists of two major sections:

- Engineering Mathematics (50 Marks)
 - Engineering Subjects (50 Marks)
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Section 1: Engineering Mathematics (50 Marks)

This section tests mathematical reasoning and problem-solving abilities.

Mathematics Topics

- Algebra – Matrices, Determinants, Quadratic Equations
 - Trigonometry – Identities, Heights & Distances
 - Differential Calculus – Limits, Derivatives, Applications of Derivatives
 - Integral Calculus – Definite & Indefinite Integrals
 - Probability & Statistics – Mean, Variance, Probability Theorems
 - Coordinate Geometry – Straight Lines, Circles, Parabolas
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Section 2: Engineering Subjects (50 Marks)

This section is based on diploma-level engineering subjects, varying based on specialization.

Civil Engineering

- Strength of Materials – Stress & Strain, Bending Moment
- Surveying – Leveling, Contouring, Linear & Angular Measurement
- Fluid Mechanics – Fluid Properties, Flow through Pipes
- Building Design – RCC, Steel Structures

Mechanical Engineering

- ✔ Thermodynamics – Laws of Thermodynamics, Heat Engines
- ✔ Strength of Materials – Stress & Strain, Bending Moment
- ✔ Manufacturing Processes – Welding, Casting, Machining
- ✔ Fluid Mechanics – Bernoulli's Theorem, Flow through Pipes

Electrical & Electronics Engineering

- ✔ Circuit Theory – AC & DC Circuits, Network Theorems
- ✔ Electrical Machines – Transformers, Induction Motors
- ✔ Power Systems – Transmission & Distribution
- ✔ Digital Electronics – Logic Gates, Flip-Flops

Computer Science & IT

- ✔ Programming – C, C++, Java Basics
 - ✔ Data Structures – Arrays, Linked Lists, Stacks & Queues
 - ✔ Computer Networks – OSI Model, TCP/IP Basics
 - ✔ Operating Systems – Basics, Process Management
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Maharashtra DSE Exam Pattern

Subject	Marks
Engineering Mathematics	50 Marks
Engineering Subjects	50 Marks
Total	100 Marks

 Exam Duration: 1 Hour

 Marking Scheme: +1 for Correct Answer, No Negative Marking

Preparation Tips for Maharashtra DSE

 **Revise Diploma Subjects:** Focus on core engineering subjects from your diploma syllabus.

 **Strengthen Mathematics Concepts:** This section is scoring, so regular practice is essential.

 **Solve Previous Year Papers:** Helps understand the exam pattern and question types.

 **Attempt Mock Tests:** Improves time management and boosts confidence.