

Important Class 11 & 12 Topics for AI/ML in BTech CSE

Focus Subjects for AI/ML (from Class 11 & 12):

Mathematics (Most Important)

Math is the backbone of AI/ML, especially topics related to logic, probability, vectors, and calculus.

Class 11:

- Sets, Relations & Functions
- Trigonometry (Basics)
- Complex Numbers (Basics)
- Sequences & Series
- Permutations & Combinations
- Binomial Theorem
- Straight Lines and Conic Sections (Geometry/Vector)
- Introduction to Probability
- Statistics

Class 12:

- Relations and Functions
- Matrices & Determinants (VERY important for ML)
- Inverse Trigonometry
- Continuity and Differentiability
- Applications of Derivatives
- Integrals & Differential Equations
- Vectors & 3D Geometry

- Probability
- Linear Programming

Focus on logic, matrices, vectors, calculus, and probability-they directly connect with ML and Data Science.

Physics (Some Important Concepts Only)

Physics isn't directly used in AI/ML, but logical thinking and applied math skills from physics are useful.

From Class 11 & 12:

- Units, Dimensions & Vectors
- Kinematics
- Work, Energy, Power
- Oscillations & Waves (Optional)
- Current Electricity
- Semiconductors (Optional but helpful)

Understand logic-building chapters and basic electricity.

Chemistry (Least Important for AI/ML)

AI/ML does not require chemistry.

Optional Chapters (for awareness only):

- Class 11: Mole Concept, Atomic Structure
- Class 12: Chemistry in Everyday Life

Summary:

Subject | Chapters to Master

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Maths | Matrices, Vectors, Calculus, Probability, Linear Programming, Functions, PnC

Physics | Vectors, Units, Electricity, Logic-based motion

Chemistry | Optional (Not required for AI/ML)