

# JEE Main & Advanced Study Roadmap

## EDUCATIONAL BACKGROUND

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Year: final year btech

Attempts to Clear JEE: 1

JEE Main Score: 210 / 300

JEE Advanced Rank (AIR): 7850

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## INTRODUCTION: WHY JEE IS CHALLENGING

JEE Main & Advanced is one of India's toughest competitive exams, with lakhs of students competing for a few thousand IIT/NIT seats. Cracking JEE requires 2 years of dedicated conceptual learning, consistent practice, and regular self-analysis. Based on my experience, here is a detailed subject-wise strategy, book list, timetable, and tips to help you succeed.

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## Subject-Wise Roadmap

### PHYSICS

Physics in JEE is concept-heavy and application-based. It demands strong fundamentals and practice.

#### **Class 11 Topics (Weightage: ~45%)**

Mechanics (Laws of Motion, Work, Energy, Power, Rotation)

Properties of Matter & Fluids

Thermodynamics & Kinetic Theory

Oscillations & Waves

#### **Class 12 Topics (Weightage: ~55%)**

Electrostatics & Current Electricity

Magnetism & EMI

AC, Optics & Modern Physics

TIPS:

- Understand concepts from HC Verma & DC Pandey.
  - Solve advanced-level problems (Irodov for Advanced).
  - Do previous year papers and improve speed in calculations.
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### CHEMISTRY

Chemistry is scoring if prepared smartly.

#### **Physical Chemistry**

Focus: Numerical practice (N Awasthi, C. Mukherjee)

Topics: Thermodynamics, Equilibrium, Electrochemistry, Kinetics

#### **Inorganic Chemistry**

Focus: NCERT-based theory & periodic table trends

Topics: Coordination Compounds, p/d/f-block, Bonding

Book: NCERT + JD Lee (selectively)

#### **Organic Chemistry**

Focus: Reaction mechanisms & practice (MS Chouhan, Solomon & Fryhle)

Topics: Named reactions, Stereochemistry, Aromatic compounds

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### MATHEMATICS

Math is crucial for Advanced—it requires problem-solving stamina.

#### **Class 11 Topics**

Sets, Relations, Functions

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Trigonometry, Sequences  
Coordinate Geometry, Vectors

### Class 12 Topics

Calculus, 3D Geometry  
Probability & Statistics  
Complex Numbers, Matrices & Determinants

TIPS:

- ✓ Master theory & solve advanced-level problems (Cengage, Arihant series).
- ✓ Practice previous year's advanced-level subjective-type questions.

### Book Resources

**Physics:** HC Verma, DC Pandey, Irodov (Advanced), coaching material

**Chemistry:** NCERT, N Awasthi, JD Lee, MS Chouhan, coaching material

**Math:** Cengage, Arihant, coaching material

### Yearly, Monthly & Weekly Planning

#### YEARLY PLAN

Class 11: Build strong fundamentals; finish the syllabus by December.

Class 12: Revise Class 11 alongside Class 12 topics.

January–April: Revision & Mock tests

#### MONTHLY PLAN

Plan based on weak and strong topics.

Allocate more time to weak subjects.

#### WEEKLY PLAN

Regular revisions of past topics.

Take at least one full mock test per week.

Analyze performance and improve.

### Sample Timetable (Coaching + Self-study)

Time	Task
6:00– 7:00 AM	Revise yesterday's topics
7:00 AM– 1:00 PM	Coaching classes & doubt solving
1:00–2:30 PM	Lunch & rest
2:30– 5:30 PM	Self-study & problem-solving
5:30– 6:30 PM	Break & refresh
6:30– 9:00 PM	Practice PYQs/mock tests
9:00– 10:00 PM	Dinner & light revision
10:00– 12:00 AM	Advanced-level practice/short notes

For self-study students: replace coaching with structured online learning and self-paced theory.

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## **Role of Mock Tests**

- ✓ Simulate actual exam conditions
- ✓ Identify weak areas
- ✓ Develop time management
- ✓ Build confidence & reduce anxiety

Take one mock per week initially, then increase frequency closer to exam.

## **Additional Tips**

- ✓ Stay consistent & motivated
- ✓ Make concise notes for revision
- ✓ Avoid burnout: take breaks & sleep well
- ✓ Discuss doubts with peers/mentors promptly
- ✓ Focus more on accuracy than attempting maximum questions