

MHT CET Syllabus PDF 2025

MHT CET 2025 Physics Syllabus

Class 11 Topics:

- Vectors: Concepts Of Vectors, Addition, Subtraction, And Multiplication Of Vectors.
- Error Analysis: Types Of Errors, Accuracy, Precision, And Significant Figures.
- Motion In A Plane: Projectile Motion, Uniform Circular Motion.
- Laws Of Motion: Newton's Laws, Friction, Circular Motion Dynamics.
- Gravitation: Universal Law Of Gravitation, Acceleration Due To Gravity, Kepler's Laws.
- Thermal Properties Of Matter: Heat, Temperature, Specific Heat, Calorimetry, Thermal Expansion.
- Sound: Wave Motion, Speed Of Sound, Doppler Effect.
- Optics: Reflection, Refraction, Lenses, Mirrors, Optical Instruments.
- Electrostatics: Electric Charges, Coulomb's Law, Electric Field And Potential.
- Semiconductors: Intrinsic And Extrinsic Semiconductors, Diodes, Transistors.

Class 12 Topics:

- Circular Motion: Angular Displacement, Velocity, Acceleration, Centripetal Force.
- Gravitation: Gravitational Potential Energy, Escape Velocity, Satellites.
- Rotational Motion: Moment Of Inertia, Torque, Angular Momentum, Conservation Laws.
- Oscillations: Simple Harmonic Motion, Damped And Forced Oscillations, Resonance.
- Elasticity: Stress, Strain, Hooke's Law, Modulus Of Elasticity.
- Surface Tension: Molecular Theory, Angle Of Contact, Capillarity.
- Wave Motion: Transverse And Longitudinal Waves, Superposition Principle.
- Stationary Waves: Formation, Nodes, Antinodes, Harmonics.
- Wave Theory Of Light: Huygens' Principle, Interference, Diffraction.
- Interference And Diffraction: Young's Double-Slit Experiment, Diffraction Grating.
- Electrostatics: Capacitance, Dielectrics, Energy Stored In Capacitors.
- Current Electricity: Ohm's Law, Kirchhoff's Laws, Electrical Instruments.
- Magnetism: Magnetic Field, Earth's Magnetism, Magnetic Properties Of Materials.
- Electromagnetic Inductions: Faraday's Laws, Lenz's Law, Self And Mutual Induction.
- Electrons And Photons: Photoelectric Effect, De Broglie Waves, Bohr's Model.
- Atoms, Molecules, And Nuclei: Atomic Models, Nuclear Reactions, Radioactivity.
- Semiconductors: Junction Diodes, Rectifiers, Transistors, Logic Gates.
- Communication Systems: Modulation, Demodulation, Bandwidth, Satellite Communication.

MHT CET Chemistry Syllabus

Class 11 Topics:

- Some Basic Concepts Of Chemistry: Mole Concept, Stoichiometry, And Laws Of Chemical Combination.
- Structure Of Atom: Quantum Mechanical Model, Electronic Configuration.
- Chemical Bonding: Ionic, Covalent, And Metallic Bonds, Vsepr Theory, Hybridization.
- States Of Matter: Gases And Liquids: Ideal Gas Laws, Real Gases, Liquefaction Of Gases.
- Redox Reactions: Oxidation Numbers, Balancing Redox Reactions.
- Elements Of Groups 1 And 2: Properties, Reactions, And Uses Of Alkali And Alkaline Earth Metals.
- Adsorption And Colloids (Surface Chemistry): Physisorption, Chemisorption, Colloidal State, Emulsions.
- Hydrocarbons: Alkanes, Alkenes, Alkynes, Aromatic Hydrocarbons.
- Basic Principles Of Organic Chemistry: Nomenclature, Isomerism, Electronic Effects.
- Chemistry In Everyday Life: Drugs, Detergents, Food Additives.

Class 12 Topics:

- Solid State: Crystal Lattices, Unit Cells, Packing Efficiency, Defects.
- Solutions And Colligative Properties: Concentration Terms, Raoult's Law, Boiling Point Elevation.
- Chemical Thermodynamics And Electrochemistry: First Law, Enthalpy, Gibbs Energy, Electrochemical Cells.
- Chemical Kinetics: Rate Laws, Order Of Reaction, Activation Energy.
- General Principles And Processes Of Isolation Of Elements: Metallurgy, Refining Methods.
- P-Block Elements: Group 13 To 18 Elements, And Their Compounds.
- D- And F-Block Elements: Transition Elements, Lanthanides, Actinides.
- Coordination Compounds: Nomenclature, Isomerism, Bonding Theories.
- Halogen Derivatives Of Alkanes And Arenes: Preparation, Properties, And Reactions.
- **Alcohols, Phenols, And E

MHT CET Biology Syllabus

Class 11 Topics:

- Biomolecules: Study Of Carbohydrates, Proteins, Lipids, Nucleic Acids, Enzymes, And Their Roles In Biological Processes.
- Respiration And Energy Transfer: Mechanisms Of Aerobic And Anaerobic Respiration, Glycolysis, Krebs Cycle, Electron Transport Chain, And Atp Synthesis.
- Human Nutrition: Nutrients, Their Functions, Dietary Requirements, Malnutrition, And Related Disorders.
- Excretion And Osmoregulation: Excretory Systems In Humans And Other Organisms, Formation Of Urine, Osmoregulatory Mechanisms.

Class 12 Topics:

- Genetics And Evolution:
 - Gene: Nature, Expression, And Regulation: Structure Of Genes, Genetic Code, Transcription, Translation, Gene Expression, And Regulation Mechanisms.

- Genetic Basis Of Inheritance: Mendelian And Non-Mendelian Inheritance Patterns, Chromosomal Theory Of Inheritance, Linkage, And Crossing Over.
- Biotechnology And Its Applications:
 - Biotechnology: Process And Application: Principles Of Biotechnology, Genetic Engineering, Cloning, Applications In Medicine, Agriculture, And Industry.
 - Microbes In Human Welfare: Role Of Microorganisms In Food Processing, Antibiotics, Bioremediation, And Other Industrial Applications.
- Plant Physiology:
 - Photosynthesis: Light And Dark Reactions, C3 And C4 Pathways, Factors Affecting Photosynthesis.
- Enhancement In Food Production: Plant Breeding, Tissue Culture, Single-Cell Protein, Biofortification, And Sustainable Agriculture Practices.

MHT CET Mathematics Syllabus:

Class 11 Topics:

- Trigonometry Ii: Trigonometric Equations, Properties Of Triangles, Solution Of Triangles, And Inverse Trigonometric Functions.
- Straight Line: Various Forms Of The Equation Of A Line, Angle Between Two Lines, Distance Of A Point From A Line.
- Circle: Equation Of A Circle, Tangent And Normal To A Circle, Chord Properties.
- Measures Of Dispersion: Range, Mean Deviation, Variance, Standard Deviation, And Coefficient Of Variation.
- Probability: Basic Concepts, Conditional Probability, Bayes' Theorem, And Random Variables.
- Complex Numbers: Algebra Of Complex Numbers, Polar Form, De Moivre's Theorem, And Roots Of Complex Numbers.
- Permutations And Combinations: Fundamental Principles Of Counting, Permutations, Combinations, And Their Applications.
- Functions: Types Of Functions, Domain, Range, Composition Of Functions, And Inverse Functions.
- Limits: Concept Of Limits, Evaluation Of Limits Using Standard Results And L'hôpital's Rule.
- Continuity: Definition, Continuity Of Functions, And Properties.

Class 12 Topics:

- Mathematical Logic: Statements, Logical Connectives, Truth Tables, And Tautologies.
- Matrices: Types Of Matrices, Operations, Determinants, Inverse Of A Matrix, And Applications In Solving Linear Equations.
- Trigonometric Functions: Graphs, Identities, And Equations Involving Trigonometric Functions.
- Pair Of Straight Lines: Combined Equation, Angle Between Lines, And Conditions For Parallelism And Perpendicularity.
- Circle: Revisiting Properties, Tangents, And Normals.
- Conics: Equations And Properties Of Parabola, Ellipse, And Hyperbola.

- Vectors: Vector Algebra, Dot And Cross Product, And Applications In Geometry.
- Three-Dimensional Geometry: Planes, Lines, Spheres, And Their Equations In 3d Space.
- Line: Equations Of Lines In Space, Skew Lines, And Shortest Distance Between Lines.
- Plane: Equations Of Planes, Angle Between Planes, And Distance Of A Point From A Plane.
- Linear Programming Problems: Formulation, Graphical Method, And Simplex Method.
- Continuity: Advanced Concepts And Applications.
- Differentiation: Techniques, Applications In Finding Maxima And Minima, And Rate Of Change Problems.
- Applications Of Derivative: Tangents And Normals, Increasing And Decreasing Functions, And Optimization Problems.
- Integration: Indefinite And Definite Integrals, Techniques Of Integration, And Applications In Finding Areas And Volumes.
- Applications Of The Definite Integral: Area Under Curves, Area Between Curves, And Volume Of Solids Of Revolution.
- Statistics: Probability Distributions, Mean And Variance Of Random Variables, And Binomial Distribution.
- Probability Distribution: Discrete And Continuous Distributions, Expectation, And Variance.
- Bernoulli Trials And Binomial Distribution: Concepts, Properties, And Applications.