WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION · CLASS XII

WBCHSE HS Syllabus

Class XII now runs on a two-semester structure — Semester III and Semester IV — spanning Science, Commerce and Arts & Humanities, alongside compulsory languages and a growing list of skill-based electives. This companion is built to give students, parents and teachers a fast, visual sense of what each subject actually covers, how marks are split between theory and practicals, and where the newer vocational subjects fit in, before diving into the official syllabus documents for exam-level detail.

SCIENCE

Physics · Chemistry · Biology · Mathematics · Computer App.

COMMERCE

Accountancy · Business Studies · Economics

ARTS & HUMANITIES

History · Pol. Science · Geography · Sociology · more

LANGUAGES

Bengali · English · Hindi · Urdu · Nepali · Santali

SEMESTER SYSTEM · SEM III + SEM IV

UNOFFICIAL STUDY OVERVIEW — 2026

How the HS Course Is Built

Class XII under WBCHSE now runs on a **semester system** — Semester III arrives in the first half of the academic year and Semester IV in the second, together replacing the older model of a single, high-stakes year-end paper. Splitting the syllabus across two semesters means students carry a lighter load into each exam, get an earlier, clearer read on their own progress, and have a real chance to course-correct before the final semester rather than discovering gaps too late. Every student registers under one of three broad streams — Science, Commerce, or Arts & Humanities — and layers on compulsory language papers plus, where a school offers it, an additional elective or vocational subject for extra credit and broader skill exposure. The pages that follow walk through each stream in turn: what subjects sit inside it, how the units are grouped across the two semesters, and how theory, practical work and internal assessment are weighted for every paper.

3	2	100	30%
STREAMS OFFERED	SEMESTERS (III & IV)	MARKS PER SUBJECT	MINIMUM PASS MARK

Science

Physics, Chemistry, Biological Science, Mathematics, plus computer & applied electives. Built for engineering, medical and pure-science aspirants.

Commerce

Accountancy, Business Studies, Economics, Costing & Taxation, Statistics. Built for finance, management and business careers.

Arts & Humanities

History, Political Science, Geography, Sociology, Education, Philosophy and more — the widest subject choice of the three streams.

MARKING PATTERN

Practical subjects (Physics, Chemistry, Biology, Computer Application, Geography, etc.) — 70 marks theory + 30 marks practical/project.

Non-practical subjects (History, Political Science, Economics, Accountancy, Languages, etc.) — 80 marks theory + 20 marks internal assessment / project.

Students must score at least **30% in every subject separately** and **30% in aggregate** to pass; a failed subject can be cleared through the compartmental/supplementary exam.

Physics & Chemistry

Ph Physics

SEM III + IV · 70 THEORY / 30 PRACTICAL

Covers electricity, magnetism, optics and modern physics — from field theory and circuits through to the quantum ideas behind semiconductors, building the foundation for engineering and physical-science careers.

- Electric Charges & Fields
- Electrostatic Potential & Capacitance
- Current Electricity
- Moving Charges & Magnetism
- Magnetism & Matter
- Electromagnetic Induction
- Alternating Current
- Electromagnetic Waves
- Ray Optics & Optical Instruments
- Wave Optics
- Dual Nature of Radiation & Matter
- Atoms & Nuclei
- Semiconductor Electronics

Ch Chemistry

SEM III + IV · 70 THEORY / 30 PRACTICAL

Blends physical, inorganic and organic chemistry — states of matter, electrochemistry and reaction rates alongside the periodic table's transition elements and the organic compounds behind everyday materials and medicines.

- Solid State
- Solutions
- Electrochemistry
- Chemical Kinetics
- p-Block Elements
- d- & f-Block Elements
- Coordination Compounds
- Haloalkanes & Haloarenes
- Alcohols, Phenols & Ethers
- Aldehydes, Ketones & Carboxylic Acids
- Amines
- Biomolecules
- Polymers & Everyday Chemistry

Both subjects carry a **project (≈7 marks)** and lab experiments within the practical component — verifying laws, titrations and instrument-based measurements form the bulk of practical assessment. Keep a clean, dated lab record through the year; examiners score the practical file and viva alongside the experiment itself.

Where this leads: Physics and Chemistry together anchor entrance exams like JEE and WBJEE for engineering, and form half the NEET syllabus for medical aspirants. Even outside those paths, they build the analytical habits — measurement, error-checking, structured problem-solving — that carry into almost any technical field.

Biology, Mathematics & Computing

Bi Biological Science

SEM III + IV · 70 THEORY / 30 PRACTICAL

Traces life from reproduction and genetics through evolution to ecosystems — the core syllabus for medical, life-sciences and biotechnology aspirants, with a strong practical component in microscopy and field observation.

- Reproduction in Organisms
- Sexual Reproduction in Flowering Plants
- Human Reproduction & Health
- Principles of Inheritance & Variation
- Molecular Basis of Inheritance
- Evolution
- Human Health & Disease
- Microbes in Human Welfare
- Biotechnology — Principles & Applications
- Organisms & Populations
- Ecosystem & Biodiversity
- Environmental Issues

Mt Mathematics

SEM III + IV · 80 THEORY / 20 INTERNAL

Builds on Class XI algebra and calculus with matrices, integration, vectors and probability — the quantitative backbone for engineering, data science, economics and any career built on structured problem-solving.

- Relations & Functions
- Inverse Trigonometric Functions
- Matrices & Determinants
- Continuity & Differentiability
- Application of Derivatives
- Integrals & Their Applications
- Differential Equations
- Vector Algebra
- Three-Dimensional Geometry
- Linear Programming
- Probability

Cs Modern Computer Application (Optional)

SEM III + IV · 70 THEORY / 30 PRACTICAL

An optional add-on for students who want direct, hands-on computing skills — programming logic, databases and networking — alongside the core science subjects.

- Programming Fundamentals
- Data Structures Basics
- Database & RDBMS Concepts
- Networking Fundamentals
- Web Technologies
- Boolean Algebra & Logic Gates

Choosing between Biology and Computer Application: Students aiming for medical entrance exams (NEET) generally need Biology as a core subject, while those leaning towards engineering, software or data-driven careers often benefit more from the Computer Application elective alongside Mathematics. A few schools allow both — check local availability before finalising your combination.

Accountancy, Business & Economics

Ac Accountancy

SEM III + IV · 80 THEORY / 20 INTERNAL

Teaches the language of business records — from partnership and company accounts to reading financial statements and cash flow — the technical grounding behind every finance, audit and CA career.

- Accounting for Partnership — Basics
- Reconstitution of Partnership
- Dissolution of Partnership Firm
- Accounting for Share Capital
- Issue & Redemption of Debentures
- Financial Statement Analysis
- Cash Flow Statement
- Computerised Accounting

Bs Business Studies

SEM III + IV · 80 THEORY / 20 INTERNAL

Introduces how organisations are actually run — management principles, planning, marketing and consumer rights — practical groundwork for future entrepreneurs, managers and MBA-track students.

- Nature & Significance of Management
- Principles of Management
- Business Environment
- Planning & Organising
- Staffing & Directing
- Controlling
- Financial Management
- Marketing Management
- Consumer Protection

Ec Economics

SEM III + IV · 80 THEORY / 20 INTERNAL

Splits into macroeconomic theory — national income, money and government budgets — and the real story of India's development, from poverty and employment to infrastructure and reform.

- National Income & Related Aggregates
- Money & Banking
- Government Budget
- Balance of Payments
- Indian Economic Development
- Poverty & Human Capital
- Rural & Urban Development
- Employment & Infrastructure

Additional commerce electives include **Costing & Taxation, Statistics, and Banking, Financial Services & Insurance (BFSI)** — offered subject to school availability. These extra papers let students specialise a little earlier, whether that's sharpening quantitative skills through Statistics or getting a head start on the financial-services sector through BFSI.

Where this leads: The Commerce stream feeds directly into B.Com, BBA, CA, CS and CMA pathways, and gives a genuine head start on any business, banking or entrepreneurship career — most of what's taught here (reading a balance sheet, understanding a budget, knowing how markets work) is useful well beyond the exam hall.

History, Political Science & Geography

Hi History

SEM III + IV · 80 THEORY / 20 INTERNAL

Spans ancient civilisations through medieval courts and colonial rule to independence and the Constitution — a chronological journey through the sources, debates and turning points that shaped modern India.

- Early Societies — Harappa
- Kings, Farmers & Towns
- Kinship, Caste & Class
- Thinkers, Beliefs & Buildings
- Bhakti–Sufi Traditions
- Mughal Court Culture
- Colonialism & the Countryside
- 1857 & the Revolt
- Gandhi & the National Movement
- Partition & Independence
- Framing the Constitution

Ps Political Science

SEM III + IV · 80 THEORY / 20 INTERNAL

Pairs world politics since 1945 with the story of independent India's own political journey — nation-building, planned development, and the shifts that define politics today.

- The Cold War Era
- New Centres of Power
- Contemporary South Asia
- International Organisations
- Security & Globalisation
- Challenges of Nation-Building
- Politics of Planned Development
- Regional Aspirations
- Recent Developments in Indian Politics

Ge Geography

SEM III + IV · 70 THEORY / 30 PRACTICAL

Combines human geography theory with India-specific data on population, resources and industry, plus hands-on map work and statistical techniques in the practical component.

- Human Geography — Population
- Human Settlements
- Economic Activities & Trade
- India — People & Resources
- Agriculture & Industries
- Practical Geography — Maps & Data

Why choose Arts & Humanities: This stream offers the widest subject choice of the three, and trains skills — reading sources critically, constructing an argument, understanding institutions and society — that map directly onto careers in law, civil services, journalism, social research, teaching and public policy. It's often under-valued next to Science and Commerce, but keeps every door open at the undergraduate level.

Sociology · Education · Philosophy

🗣 Sociology

Indian society, social change, patterns of social inequality, environment & society, and social movements in contemporary India.

🎓 Education

Educational psychology, philosophy of education, teacher & society, guidance & counselling, and education in the Indian context.

💭 Philosophy

Logic & reasoning, Indian philosophical schools, ethics, and the philosophy of religion.

COMPULSORY & ELECTIVE LANGUAGES

Every stream carries at least one compulsory language paper alongside its core subjects — students typically study Bengali or English as their First Language, then pick a Second Language from the options below. Together, these papers ensure every HS graduate leaves with strong reading, comprehension and writing ability, regardless of which stream they've chosen.

Bengali (A)
Prose · Poetry · Drama · Grammar & Composition

English (A / B)
Prose · Poetry · Writing Skills · Grammar

Hindi (A / B)
Prose · Poetry · Grammar & Composition

Urdu, Nepali, Santali & others
Prose · Poetry · Grammar & Composition

Language papers are non-practical: **80 marks theory + 20 marks internal assessment**, testing reading comprehension, textual study and writing skills.

Skill & Emerging-Tech Electives

Alongside the traditional streams, WBCHSE has been rolling out applied and vocational electives that any stream can pick up as an additional subject.

Applied Artificial Intelligence

AI concepts, data basics and hands-on tools for everyday problem-solving.

Cybersecurity

Digital safety, threats, data protection and safe online practices.

Science of Well-being

Mental health, healthy habits and evidence-based happiness practices.

Banking, Financial Services & Insurance

Core banking, insurance basics and financial services operations.

Food Processing

Preservation techniques, food safety and processing industry basics.

Telecom

Telecom infrastructure, networks and industry fundamentals.

Agriculture

Crop science, soil health and modern farming practices (formerly Agronomy).

Human Development & Resource Mgmt.

Family resource management and human development studies.

Health & Physical Education

Fitness, sports science and health education fundamentals.

QUICK PREP TIPS

1. **Map the semester split first**
   Know exactly which units fall in Semester III vs IV before you start revising — it shapes your whole study calendar.

2. **Protect practical marks**
   Practical subjects carry up to 30 marks outside the written paper — lab record-keeping and vivas are easy marks to secure early.

3. **Revise with past papers**
   Solve the last three years of question papers per subject to internalise the pattern and pacing.