

COMPUTER SYLLABUS

Class – 8

8th Class Computer Syllabus – An Overview

In Class 8, the NCERT Computer Science syllabus focuses on enhancing students' understanding of advanced computing concepts and practical applications. Here's a comprehensive breakdown of the topics and sub-topics typically covered:

Here our chapters for ITSE Examination :-

Chapter – 1 (*Introduction to Computers*)

Chapter – 2 (*Operating System Concepts*)

Chapter – 3 (*Advanced Word Processing*)

Chapter – 4 (*Spreadsheets for Data Analysis*)

Chapter - 5 (*Presentation Skills*)

Chapter - 6 (*Internet and Web Technologies*)

Chapter – 7 (*Multimedia and Graphics Design*)

Chapter – 8 (*Introduction to Programming*)

Chapter - 9 (*Web Development*)

Chapter - 10 (*Cyber Safety and Ethics*)

Chapter - 11 (*Practical Applications and Projects*)

Chapter – 1 (Introduction to Computers)

Topics and Sub – Topics :-

- **Evolution and Classification of Computers**
 - History and generations of computers.
 - Classification based on size, functionality, and purpose: Supercomputers, Mainframes, Minicomputers, Microcomputers.
- **Computer System Overview**
 - Components and functions: CPU, Memory, Storage devices, Input and Output devices.
 - Differences between hardware and software.

Chapter – 2 (Operating System Concepts)

Topics and Sub – Topics :-

- **Functions of an Operating System**
 - Managing hardware resources.
 - Providing user interface and utility programs.
- **Types of Operating Systems**
 - Single-user and multi-user systems.
 - Batch, time-sharing, and real-time operating systems.
- **File Management**
 - Creating, organizing, and managing files and folders.
 - Understanding file systems and directories.

Chapter – 3 (Advanced Word Processing)

Topics and Sub – Topics :-

- **Document Creation and Formatting**

- Using advanced formatting tools: Styles, templates, and themes.
- Creating complex documents with sections, columns, and headers/footers.
- **Inserting and Managing Graphics and Media**
 - Adding and formatting images, shapes, and charts.
 - Inserting and linking multimedia elements.
- **Reviewing and Collaborating**
 - Track changes, comments, and document comparison.
 - Protecting documents and managing permissions.

Chapter – 4 (Spreadsheets for Data Analysis)

Topics and Sub – Topics :-

- **Advanced Spreadsheet Operations**
 - Complex data entry and formatting techniques.
 - Using functions for data manipulation (SUM, AVERAGE, COUNTIF, VLOOKUP).
- **Data Analysis and Visualization**
 - Creating and customizing advanced charts and graphs.
 - Using pivot tables and pivot charts for data summarization.
- **Working with Large Data Sets**
 - Sorting, filtering, and validating data.
 - Importing and exporting data from various sources.

Chapter - 5 (Presentation Skills)

Topics and Sub – Topics :-

- **Designing Professional Presentations**
 - Creating engaging slides with advanced layouts and design elements.
 - Using slide masters and themes for consistency.
- **Multimedia Integration**
 - Embedding and linking audio, video, and animations.
 - Using transitions and animations effectively.

- **Presentation Delivery**

- Tips for effective presentation techniques.
- Printing and sharing presentations in different formats.

Chapter - 6 (Internet and Web Technologies)

Topics and Sub – Topics :-

- **Understanding Internet Technologies**

- Basics of how the internet works: IP addresses, DNS, and protocols.
- Differences between the Internet and the World Wide Web.

- **Web Browsing and Searching**

- Effective use of search engines and advanced search techniques.
- Evaluating the credibility and reliability of web sources.

- **Online Communication and Collaboration**

- Using email, forums, and social media responsibly.
- Basics of cloud computing and online collaboration tools.

Chapter – 7 (Multimedia and Graphics Design)

Topics and Sub – Topics :-

- **Creating and Editing Digital Images**

- Using graphic design software for image creation and editing.
- Understanding image formats and resolution.

- **Introduction to Audio and Video Editing**

- Basics of audio editing: recording, editing, and mixing sound.
- Video editing: cutting, merging, and applying effects.

- **Multimedia Project Creation**

- Combining text, graphics, audio, and video into cohesive projects.
- Using multimedia software to produce presentations and short films.

Chapter - 8 (Introduction to Programming)

Topics and Sub – Topics :-

- **Programming Fundamentals**
 - Understanding algorithms, flowcharts, and pseudocode.
 - Basic programming constructs: variables, data types, operators.
- **Block-based Programming**
 - Advanced concepts in Scratch or similar tools.
 - Creating interactive projects with loops, conditionals, and variables.
- **Text-based Programming**
 - Introduction to Python or another text-based language.
 - Writing and debugging simple programs.

Chapter - 9 (Web Development)

Topics and Sub – Topics :-

- **HTML and CSS Basics**
 - Understanding HTML tags and structure for creating web pages.
 - Using CSS for styling and layout.
- **Building Simple Websites**
 - Creating multi-page websites with hyperlinks and navigation.
 - Adding images, tables, and forms to web pages.
- **Introduction to JavaScript**
 - Basics of JavaScript for adding interactivity to web pages.
 - Simple scripts for form validation and dynamic content.

Chapter - 10 (Cyber Safety and Ethics)

Topics and Sub – Topics :-

- **Understanding Cyber Threats**

- Recognizing different types of malware and phishing.
- Importance of antivirus software and firewalls.

- **Digital Citizenship and Online Behavior**

- Responsible use of social media and online platforms.
- Understanding digital footprints and privacy.

- **Legal and Ethical Issues in Computing**

- Intellectual property rights and copyright laws.
- Ethical considerations in using and sharing digital content.

Chapter - 11 (Practical Applications and Projects)

Topics and Sub – Topics :-

- **Integrated Projects**

- Applying knowledge from different topics to create comprehensive projects.
- Examples: Creating a newsletter, designing a website, developing a simple game.

- **Hands-on Activities**

- Practical exercises to reinforce learning.
- Group projects to enhance teamwork and collaboration skills.