

# SENIOR SCHOOL CURRICULUM

## 2017-18

---

### IT APPLICATION

---

#### Introduction to Computer Applications

##### A. Preamble

Computer is now affecting every sphere of human activity. It is instrumental in bringing revolutionary changes in industry, scientific research and education. This is not only the demand of time but also the demand of almost each and every subject to have an associated computer learning to equip a student with start-of-art technology to prove himself/herself a better candidate than those without computer knowledge.

Since the CBSE has been foremost in giving best to its clientele, a single paper as per requirement of industry has been designed in such a way that it can be taken as an independent subject along with any combination of vocational packages.

This paper has been designed keeping in view the need and demand of computer industry.

##### B. Objectives

The course is designed to fulfil the following objectives:-

- Familiarisation with computer-dominated technological world.
- To impart adequate know how to the students to be able to take up entry level jobs in the area of Data Processing.
- Exposure of utility and applications of computers.
- To get acquaintance with the basics of Computer Science and lay foundation for higher education/careers in computers in conformance with industry requirements.
- Application of computers in the specific areas such as accounting & auditing, stores accounting, office management & secretarial practice, textile designing etc.
- Algorithmic approach to problem solving.
- To use computer effectively and efficiently by acquiring working knowledge of PC softwares.
- Familiarisation with Data Processing environment and Data Processing terminology.

##### C. Career Opportunities/ job roles

- Field Service Technician.
- IT Support Specialist.
- Executive (Web Development).
- Data Processing Assistant/Documentation Assistant.
- Programming Assistant.

The rapid changes in the area of Information Technology have significantly affected the fields of business, finance, trade, governance and communications which have not only resulted in global competitiveness in various fields but simultaneously have pushed the global technical advancements. The feasibility of easy access to information, data processing and modes of communication has made visible changes in the modes of administration at all levels. Due to

the increasing demands for a deeper understanding of information technology, computer aided learning has necessitated curricular reforms incorporating basic competency and skills in the fields of information technology.

The course intends to develop skills related to web applications and advanced web designing. Knowledge of network safety and security, digital designing, multimedia anchoring, web content creation, interactive web page creating and troubleshooting will be imparted. The curriculum is designed to develop appropriate technical knowledge as well as the professional skills of the students, so that they are equipped to take gainful employment in the said vocation.

## CLASS–XI ELECTIVE IT TOOLS (795) THEORY

*Time: 2.5 Hours*

*Marks: 50*

Unit Code	Unit Title	Total Hours	Total Marks
ITDC–301	Computer Organization & OS: User perspective. <ul style="list-style-type: none"> <li>• Understanding of Hardware.</li> <li>• Basics of Operating System.</li> </ul>	15	8
ITDC–302	Networking and Internet. <ul style="list-style-type: none"> <li>• Network Safety concerns.</li> <li>• Network Security tools and services.</li> <li>• Cyber Security.</li> <li>• Safe practices on Social networking.</li> </ul>	10	7
ITDC–303	Office automation tools: <ul style="list-style-type: none"> <li>• Spreadsheet.</li> <li>• Word processing.</li> <li>• Presentation.</li> </ul>	40	10
ITDC–304	Multi Media Design: (Open Source Design Tools). <ul style="list-style-type: none"> <li>• Interface and Drawing Tools in GIMP.</li> <li>• Applying Filters.</li> <li>• Creating and handling multiple layers.</li> <li>• Using Stamping and Smudging tools.</li> <li>• Importing pictures.</li> </ul>	35	10
ITDC–305	Troubleshooting: Hardware, Software and Networking. <ul style="list-style-type: none"> <li>• Commonly encountered problems.</li> <li>• (Monitor: No display, KB/Mouse not responding, monitor giving beeps, printer not responding, check for virus, Delete temporary files if system is slow, adjust mouse speed).</li> </ul>	10	7
ITDC–306	Work Integrated Learning IT – ISM <ul style="list-style-type: none"> <li>• Identification of Work Areas.</li> <li>• Work Experience.</li> </ul>	14	8
		<b>124</b>	<b>50</b>

## PRACTICAL

*Time: 2.5 Hours*

*Marks: 50*

Details	Marks Distribution
---------	--------------------

Programs / Practical Questions. <ul style="list-style-type: none"> <li>• Spreadsheets, Word, Presentation (10 Marks).</li> <li>• Multimedia Design (10 Marks).</li> <li>• Troubleshooting (5 Marks).</li> </ul>	30
Project / Practical File	10
Viva Voce	10
<b>Total</b>	<b>50</b>

**CLASS–XI  
ELECTIVE  
WEB APPLICATIONS (796)  
THEORY**

*Time: 2.5 Hours*

*Marks: 50*

Unit Code	Unit Title	Total Hours	Total Marks
ITDC–310	Multimedia Authoring- Animation Tools. <ul style="list-style-type: none"> <li>• Animation Concepts.</li> <li>• Frames and Layers.</li> <li>• Motion and Shape, Tweening.</li> <li>• Importing AV Files.</li> <li>• Publishing.</li> </ul>	30	15
ITDC–311	Digital Content Creation- Adding Styles to Web Pages (CSS). <ul style="list-style-type: none"> <li>• Review of HTML.</li> <li>• Adding Style Sheets.</li> <li>• External style sheets.</li> <li>• CSS Properties – border, box, font, margin, padding.</li> <li>• CSS classes.</li> </ul>	30	10
ITDC–312	Web Scripting- JavaScript. <ul style="list-style-type: none"> <li>• Creating interactive Web Pages with scripts.</li> <li>• Variables and Operators.</li> <li>• Decision making using if and switch.</li> <li>• Iterations - loops.</li> <li>• Window Object.</li> <li>• Location Object.</li> <li>• History Object.</li> <li>• Popup Boxes – alert, confirm.</li> </ul>	50	15
ITDC–313	Work Integrated Learning IT – <b>WA-I</b> . <ul style="list-style-type: none"> <li>• Identification of Work Areas.</li> <li>• Work Experience.</li> </ul>	14	10
		<b>124</b>	<b>50</b>

**PRACTICAL**

*Time: 2.5 Hours*

*Marks: 50*

Details	Marks Distribution
Programs / Practical Questions.	30

<ul style="list-style-type: none"> <li>• Animation Tools (15 Marks).</li> <li>• HTML (10 Marks).</li> <li>• Web Scripting - Java Script (5 Marks).</li> </ul>	
Project / Practical File	10
Viva Voce	10
<b>Total</b>	<b>50</b>

**CLASS–XI**  
**GENERAL FOUNDATION COURSE (501)**  
(Common for Engineering & Technology Based Courses)

(Refer to page 7)

**CLASS–XII**  
**ELECTIVE**  
**DATABASE MANAGEMENT APPLICATIONS (795)**  
**THEORY**

*Time: 2.5 Hours*

*Marks: 50*

Unit Code	Unit Title	Total Hours	Total Marks
ITDC–401	Database Concepts – RDBMS Tool. <ul style="list-style-type: none"> <li>• Basics of RDBMS.</li> <li>• SQL – Creating and Opening Database.</li> <li>• Creating and populating tables.</li> <li>• Modifying the content and structure of table.</li> <li>• Ordering and Grouping.</li> <li>• Operating with multiple tables.</li> </ul>	50	10
ITDC–402	Operating Web Based Applications. <ul style="list-style-type: none"> <li>• Online Reservation Systems.</li> <li>• E-Governance.</li> <li>• Online Shopping and Bill payments.</li> <li>• Online Tutorials and Tests.</li> <li>• Project Management – Web Based Application development.</li> <li>• Project essentials and tips.</li> <li>• Case Study - Online Game.</li> <li>• Case Study - Online Quiz.</li> <li>• Case Study – Online Bill Calculator.</li> </ul>	30	15
ITDC–403	Fundamentals of Java programming, Introduction to Java, Object Oriented Programming, Java Language Elements, Operators, Control Flow, Array, Class Design, Exception Handling, Assertions, Threads , Wrapper Classes, String Manipulation.	30	15
ITDC–404	Work Integrated Learning IT – DMA. <ul style="list-style-type: none"> <li>• Identification of Work Areas.</li> <li>• Work Experience.</li> </ul>	14	10
		<b>124</b>	<b>50</b>

## PRACTICAL

*Time: 2.5 Hours*

*Marks: 50*

Details	Marks Distribution
Programs / Practical Questions. <ul style="list-style-type: none"><li>• SQL Queries (15 Marks).</li><li>• JAVA Programs (10 Marks).</li><li>• Operating Web Based Application (5 Marks).</li></ul>	30
Project / Practical File	10
Viva Voce	10
<b>Total</b>	<b>50</b>

## CLASS–XII ELECTIVE WEB APPLICATIONS (796) THEORY

*Time: 2.5 Hours*

*Marks: 50*

Unit Code	Unit Title	Total Hours	Total Marks
ITDC–410	Movie Editing Tools. <ul style="list-style-type: none"><li>• Familiarization of interface components.</li><li>• Importing pictures.</li><li>• Importing Audio and Video Files.</li><li>• Splitting and Joining Movie Clips.</li><li>• Adding Titles and publishing.</li></ul>	30	10
ITDC–411	Customizing and Embedding Multimedia components in Web Pages. <ul style="list-style-type: none"><li>• Compatible Multimedia file formats for Web Pages.</li><li>• Embedding Audio file.</li><li>• Embedding Video file.</li><li>• Embedding Flash file.</li></ul>	40	15
ITDC–412	Web Scripting – Java Script. <ul style="list-style-type: none"><li>• Java Script review.</li><li>• Functions – user defined.</li><li>• String Object.</li><li>• Math Object.</li><li>• Array Object.</li><li>• Events.</li><li>• Case Studies.</li></ul>	30	15
ITDC–413	Work Integrated Learning IT – WA-II. <ul style="list-style-type: none"><li>• Advanced Features of Web Design.</li><li>• Code view, Add-ins / Snippets and Page Transitions.</li><li>• Dynamic Web templates.</li><li>• SEO - Search Engine Optimization.</li><li>• Forms - Advanced.</li><li>• Publishing webpages or websites-I.</li></ul>	24	10

	<ul style="list-style-type: none"> <li>• Publishing webpages or websites-II.</li> <li>• Authoring tools.</li> <li>• CSS templates.</li> </ul>		
		<b>124</b>	<b>50</b>

## PRACTICAL

*Time: 2.5 Hours*

*Marks: 50*

Details	Marks Distribution
Programs / Practical Questions. <ul style="list-style-type: none"> <li>• Movie Editing Tools (15 Marks).</li> <li>• Customizing and Embedding, Multimedia Components in Web Pages (10 Marks).</li> <li>• Web Scripting - Java Script (5 Marks).</li> </ul>	30
Project / Practical File	10
Viva Voce	10
<b>Total</b>	<b>50</b>

## CLASS–XII

### GENERAL FOUNDATION COURSE (501) (Common for Engineering & Technology Based Courses)

#### LIST OF RECOMMENDED BOOKS

1. Information Technology (IT) Student Handbook for level I, Published by CBSE.
2. IT Tools, Student Handbook, Level–III by CBSE.
3. Web Application–I, Student Handbook, Level–III by CBSE.
4. Database Management Application, Level–IV by CBSE.
5. Web Application–II, Student Handbook, Level–IV by CBSE.

#### LIST OF EQUIPMENTS/TOOLS

*Batch Size: 25 Students*

1. Hardware
  - a) Computers : 25
  - b) Printers : 2
2. Internet Connection
3. Software
  - (a) Microsoft Office / Open Office
    - (i) Word Processing
    - (ii) Spread Sheet
    - (iii) Digital Presentation
    - (iv) MS Access

- (b) Internet Browser
  - (c) Java SDK
  - (d) Database Software
  - (e) Movie editing tools
4. UPS/ Power Backup
  5. Storage Media (Pen Drive / CDs)