

**Department of Computer Science**  
**Kalindi College, University of Delhi**

**Course Details: 2021-22**

**i) B.Sc. Hons Computer Science Course**

**1<sup>st</sup> Year**

Semester	Core	Generic Elective (for Interdisciplinary Hons)	AECC (One paper in one semester)
I	<ul style="list-style-type: none"> <li>● Programming Fundamentals using C++</li> <li>● Computer System Architecture</li> </ul>	GE-1 Programming Using Python (Theory and Practical)	Environmental Science, English/MIL Communication.
II	<ul style="list-style-type: none"> <li>● Programming in JAVA</li> <li>● Discrete Structures</li> </ul>	GE-2 Database Management Systems (Theory and Practical)	

**2<sup>nd</sup> Year**

Semester	Core	Generic Elective (for Interdisciplinary Hons)	SEC (Any one)
III	<ul style="list-style-type: none"> <li>● Data Structures,</li> <li>● Operating Systems</li> <li>● Computer Networks</li> </ul>	GE-3 Computer Networks (Theory and Practical)	a) Web Design and Development b) Programming in Python
IV	<ul style="list-style-type: none"> <li>● Design and Analysis of Algorithms</li> <li>● Software Engineering</li> <li>● Database Management Systems</li> </ul>	GE-4 Information Security and Cyber Laws (Theory and Practical)	a) Android Programming b) Introduction to R Programming

### 3<sup>rd</sup> Year

Semester	Core	DSE-I (Any one)	DSE-II (Any one)
V	<ul style="list-style-type: none"><li>• Internet Technologies</li><li>• Theory of Computation</li></ul>	a) Data Analysis and Visualization b) System Programming c) Combinatorial Optimization	a) Digital Image Processing b) Microprocessor
VI	<ul style="list-style-type: none"><li>• Artificial Intelligence</li><li>• Computer Graphics</li></ul>	a) Information Security b) Data Mining c) Advanced Algorithms	a) Machine Learning b) Deep Learning c) Unix N/w programming d) Project Work / Dissertation

### ii) For B.Sc. Programme Course

#### 1<sup>st</sup> Year

Semester	Core	AECC
I	Problem Solving Using Computers	Environmental Science / (English/MIL Communication)
II	Database Management Systems	Environmental Science / (English/MIL Communication)

#### 2<sup>nd</sup> Year

Semester	Core	SEC (Any one)
III	Operating Systems	a) Data Analysis using Python Programming b) Introduction to R Programming
IV	Computer System Architecture	a) Programming in C++ b) Programming in Java

### 3<sup>rd</sup> Year

Semester	DSE (Any one)	SEC (Any one)
V	Data Structures / Digital Image Processing	a) Web Design using HTML b) Advanced Programming in Java
VI	Computer Networks / Analysis of Algorithms /Project Work + Dissertation	a) Android Programming b) PHP Programming

### iii) For B.A. Programme Course

#### 1<sup>st</sup> Year

Semester	Core
I	Computer Fundamentals
II	Database Management Systems

#### 2<sup>nd</sup> Year

Semester	Core	SEC (Any one)
III	Computer Network and Internet Technology	a) Word Processing and Presentation Software b) PHP Programming
IV	Multimedia Systems and Applications	a) Data Handling Using Spreadsheet b) Web Designing using HTML 5

#### 3<sup>rd</sup> year

Semester	DSE (Any one)	SEC (Any one)	GE - Interdisciplinary Programme Courses (Any one)
V	a) Programming in Java b) Programming in Python	a) Open-Source Software b) Desktop Publishing	IT Fundamentals

<b>VI</b>	a) Information Security and Cyber Laws b) Project Work + Dissertation	a) System Administration and Maintenance b) Android Programming c) Data Visualization using R	a) Multimedia and Web Design b) Data Science using R c) Data Science using Python
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