

**Recent Trends In IT**

<b>Semester VI</b>	<b>Subject Code: BC61703</b>	<b>Lectures: 60</b>
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**Objectives:**

The syllabus aims in equipping students with,

- Upcoming trends in Information technology
- Knowledge of Eco friendly software development

<b>Unit 1: Distributed Databases</b>	<b>10</b>
<ul style="list-style-type: none"> <li>• Standalone v/s Distributed databases</li> <li>• Replication</li> <li>• Fragmentation</li> <li>• Client / Server architecture,</li> <li>• Types of distributed databases</li> </ul> <p><b>Object – Relational Databases</b></p> <ul style="list-style-type: none"> <li>• Abstract Data types</li> <li>• Nested Tables</li> <li>• Varying Arrays</li> <li>• Naming Conventions for Objects</li> </ul>	

<b>Unit 2: Data Warehouse</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• What is Data Warehouse?</li> <li>• A Multidimensional Data Model</li> <li>• Data Warehouse Architecture</li> <li>• Data Warehouse Implementation</li> <li>• Data cube Technology</li> <li>• From Data Warehousing to Data Mining</li> <li>• Data Mining</li> <li>• Functionalities (Data Cleaning, Data Integration and Transformation, Data Reduction)</li> </ul>	

<b>Unit 3: Network Security</b>	<b>14</b>
<ul style="list-style-type: none"> <li>• Introduction to Cryptography</li> <li>• Substitution Ciphers, Transposition Ciphers, One-Time Pads</li> <li>• Two Fundamental Cryptographic Principles</li> </ul>	



<ul style="list-style-type: none"> <li>• Symmetric Key Algorithms (DES-The Data Encryption Standards, AES – The Advances Encryption Standard)</li> <li>• Public Key algorithms(RSA, Other Public Key algorithms)</li> <li>• Digital Signatures</li> <li>• Symmetric-Key Signature</li> <li>• Public key Signature</li> <li>• Message Digests</li> </ul>	
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<b>Unit 4:Mobile Application Development: Overview</b>	<b>08</b>
<ul style="list-style-type: none"> <li>• Mobile Technologies: Android, iOS and Windows</li> <li>• Android Architecture and Features</li> <li>• Android Versions: Froyo, Gingerbread, Ice Cream Sandwich , Jellybean, Kitkat and Marshmallow (Introduction)</li> <li>• Android Development Tool: SDK, Android Studio</li> </ul>	

<b>Unit 5: Computing and Informatics</b>	<b>04</b>
<ul style="list-style-type: none"> <li>• Introduction to computing</li> <li>• Types of computing: Cloud, Green, Soft, Mobile</li> <li>• Case Study</li> </ul>	

**\*Contact hours – 12 hours**

<b>Recommended Text Book:</b>
<ol style="list-style-type: none"> <li>1. <i>Recent Trends in IT</i>, Nirali Publication</li> <li>2. <i>Recent Trends in IT</i>, Vision Publication</li> </ol>

<b>Reference Books:</b>
<ol style="list-style-type: none"> <li>1. Korth, Silberschatz, Sudarshan, <i>Database System Concepts</i>, McGraw Hill</li> <li>2. JiaweiMichelineKamber, <i>Data Mining Concepts and Techniques</i>, MorganKauf Mann Publishers</li> <li>3. William Stallings, <i>Network Security Essentials</i>, Prentice-Hall</li> </ol>

