SARDAR PATEL UNIVERSITY
S. Y. B. Sc. (Information Technology)
(3rd Semester)
Syllabus with Effect from: June-2012
Course:- US03CINT01
(Fundamentals of Information Technology)

Credits : 3
Lectures Per week : 3 Hours

Unit 1 : An overview of Technology Convergence and File Organization
- What is "Technology Convergence"
- The Merger of computer and Communication Technologies
- Why You need to know about Information Technology
- Computer and communication System Elements like People, Procedure, Hardware, Software, Communication, Data and Information
- File Processing : Sequential, Direct Access
- The Ethics of Information Technology
- Data Storage Hierarchy, Key Fields
- File Management
    - Types of File : Master File, Transaction
    - Batch Processing, Online Processing
- Types Of Database Organization : Hierarchical Database, Network Database , Relational Database, Object Oriented Database

Unit 2 : Organization and Information Technology Support
- Information System Infrastructure and Architecture
- Organizations : Structure and IT Support
- The Evolution and Types of Information Technology
- IT Support at Different Organization Levels
- Managing Information Technology in organization.

Unit 3 : Data, Knowledge and Decision Support
- Management and Decision Making
- The Data Management Life Cycle
- Decision Support System
- Enterprise Decision Support
- Data Visualization Technologies
- Knowledge Management and Organizational Knowledge
- Knowledge Discovery and Analysis

Unit 4 : Telecommunications: The use of Online resources and Information Security Issues
- The Uses of Communication and Connecting
- Telephone related Communication, Video / Voice communication
- Online Information Services
- The Internet
- World Wide Web
- Shared Resources like Work Group Computing , EDI, Intranets & Extranet
- New Internet Technologies : Phone, Radio, TV & 3D

- The Information Superhighway
- Security Issues : Threats to Computers & Communications System
- Security : Safeguarding Computers & Communications
- Quality-Of-Life Issues : The Environment, Mental Health & The Work Place
- The Promised Benefits of the Information Revolution

MAIN REFERENCE BOOKS:

1) **Using Information Technology** – By. Brian K. Williams, Stacey C. Sawyer, Sarah E. Hutchinson
   Publication : Tata McGraw-Hill

2) **Introduction to Information Technology** – By. Efraim Turban, R. Kelly Rainer, Jr, Richard E. Potter
   Publication : JOHN WILEY & SONS, INC

3) **Fundamentals of Information Technology** - By . Alexis Leon, Mathews LeonPublications : Leon TECHWord