

INFORMATION SECURITY AND AUDITING**Course Code:** 15CS2203**L P C**
3 0 3**Course Outcomes:**

Upon successful completion of this course, the students:

- CO1:** Recognize propensity of errors and remedies in processes involving information technology.
- CO2:** Consummate knowledge of risk and controls in IT operation in industry.
- CO3:** Determine IT security guidelines for various type of industries.
- CO4:** Evaluate asset safeguarding, data integrity, system effectiveness and system efficiency.

UNIT- I: (10-Lectures)**COMPUTER AUDITING-** System Access control, Data Access Control, Security Administration, System Design.**UNIT- II:** (10-Lectures)**HARDWARE SECURITY CONTROLS** - The Total System Needs Securing, Levels of Hardware Controls, Operating System Controls, Access Controls. General-Purpose Operating Systems Security, Sources of Additional Information.**UNIT- III:** (10-Lectures)**SOFTWARE CONTROLS** - Software Security and Controls, Types of Software Intrusions, Configuration Management, Modularity and Encapsulation, Protecting Information, Selecting Security Software, Analysis of Software Products.**UNIT- IV:** (10-Lectures)**DATABASE SECURITY** - Introduction to Databases, Security Requirements of Databases, Designing Database Security, Methods of Protection, Security of Multilevel Databases, The Future of Databases.

Network and Telecommunication Security - Telecommunications and Networks, Security Considerations, Cases in Point, Special Communications, Security Considerations.

UNIT – V: (10-Lectures)

MICROCOMPUTER SECURITY-Microcomputer Problems and Solutions, The Microcomputer Environment, Security of Microcomputers, Internal Data Security, The Threats to Micros, Developing a Micro Security Plan, Establishing a Micro-to-Mainframe Link , Portable Microcomputer Security , Password Protection, Security of Special Micro Applications.

TEXT BOOKS:

1. Deborah Russell, Computer Security Basics, O'Reilly & Associate, 1991.
2. Karen A. Forcht, Computer Security Management, Boyd & Fraser Publishing Co., 1994.

REFERENCE:

Donald A. Watne, Peter B.B. Turney, Auditing EDP Systems, 2nd Edition, PH 1990