Unit 1
Introduction: Basic objectives of cryptography, secret-key and public-key cryptography, one-way and trapdoor one-way functions, cryptanalysis, attack models, classical cryptography. Block ciphers: Modes of operation, DES and its variants, RCS, IDEA, SAFER, FEAL, BlowFish, AES, linear and differential cryptanalysis. Stream ciphers: Stream ciphers based on linear feedback shift registers, SEAL, unconditional security.

Unit 2
Message digest: Properties of hash functions, MD2, MD5 and SHA-1, keyed hash functions, attacks on hash functions. Public-key parameters: Modular arithmetic, gcd, primality testing, Chinese remainder theorem, modular square roots, finite fields.

Unit 3

Unit 4

Unit 5
Network issues: Certification, public-key infrastructure (PKI), secured socket layer (SSL), Kerberos. Advanced topics: Elliptic and hyper-elliptic curve cryptography, number field sieve, lattices and their applications in cryptography, hidden monomial cryptosystems, cryptographically secure random number generators.

Reference Books:
1. William Stallings, Cryptography and Network Security, PHI
3. Calabrese, Info security intelligence-cryptography principles appl., Cengage Learn
MCIT - 202 Distributed Computing

Unit 1 INTRODUCTION

Unit 2 PROCESSES AND DISTRIBUTED OBJECTS
Interprocess Communication - The API for the Internet Protocols - External Data Representation and Marshalling - Client-Server Communication - Group Communication - Case Study - Distributed Objects and Remote Invocation - Communication Between Distributed Objects - Remote Procedure Call - Events and Notifications - Java RMI - Case Study.

Unit 3. OPERATING SYSTEM ISSUES – I

Unit 4. OPERATING SYSTEM ISSUES – II
Name Services - Domain Name System - Directory and Discovery Services - Global Name Service - X.500 Directory Service - Clocks, Events and Process States - Synchronizing Physical Clocks - Logical Time And Logical Clocks - Global States - Distributed Debugging - Distributed Mutual Exclusion – Elections – Multicast Communication Related Problems.

Unit 5. DISTRIBUTED TRANSACTION PROCESSING
Transactions - Nested Transactions - Locks - Optimistic Concurrency Control - Timestamp Ordering - Comparison - Flat and Nested Distributed Transactions - Atomic Commit Protocols - Concurrency Control in Distributed Transactions - Distributed Deadlocks - Transaction Recovery - Overview of Replication And Distributed Multimedia Systems

Reference Books:
2. Sape Mullender, Distributed Systems, Addison Wesley,
3. A Fleishman, Distributed Systems- Software Design and Implementation, S Verlag
5. AS Tanenbaum, Maarten van, Distributed System Principles Paradigms, Pearson
7. Flynn, Understanding Operating System, Cengage (Thomson)
UNIT 1
Flynn’s and Handler’s Classification of parallel computing structures. Pipelined and Vector Processors.

UNIT 2
Data and control hazards and method to resolve them. SIMD multiprocessor structures.

UNIT 3
Interconnection networks. Parallel Algorithms for array processors, Search algorithms, MIMD multiprocessor systems,

UNIT 4
Scheduling and load balancing in multiprocessor systems, Multiprocessing control a algorithms.

Reference Books:
1. Advance Computer Architecture, Parthsarthy, Cengage (Thomson)
3. Computer Architecture and Parallel Processing- Hwang And Briggs, TMH.


Reference Books :
1. Rajsekaran & Pai – Neural Networks, fuzzylogic & Genetic algorithms, PHI
3. Hagan, Dernuth & Beale, Neural network design, Thomson learning, VP.
UNIT 1

UNIT 2
Cell coverage for signal & Traffic: Introduction, obtaining the mobile point to point model, Propagation over water or flat open areas, Foliage loss, Propagation in near in distance, long distance Propagation obtain path less from a point to point Prediction model, call-site antenna Heights & Signal coverage calls, mobile to mobile Propagation.

UNIT 3
Co channel Interference reduction: Co channel interference , exploring co channel interference area, in a system, Real time co channel interference measurement at mobile radio Transceivers, Decision of an omni directional antenna system, Design of a directional antenna system,. Lowering the antenna height, reduction of co channel interference by mean of a notech in the tilted antenna Pattern, Power control.

UNIT 4
Frequency management &channel Assignment: Frequency management, Frequency-spectrum utilization, set up channels definition of channel assignment, fixed channel assignment, non fixed channel assignment algorithms How to operate north additional spectrum, Traffic & channel assignment, Perception of call blocking from the subscribers.

UNIT 5
Handoffs & Dropped calls: Value of Implementing Handoffs, initiation of a hand off, Delaying ahandoff, Forced Handoffs, Queuing of Handoffs, power difference handoff, Mobile assisted handoff & soft Handoff, call site Handoff only, intersystem Handoff, introduction to dropped call rate, Formula of Dropped call rate, Finding the values of g & u.

UNIT 6

Reference Books:
2. Wireless Network, Kaveh Pahalwan
3. Adhoc Networking by Charles E. Perkins, Addison Wisely