**IS: SYLLABUS:**

JNTU

UNIT – I

Security Attacks ( Interruption, Interception, Modification and fabrication), security services (Confidentiality Authentication, Integrity, Non-repudiation, access Control and Availability) and Mechanisms, A Model for Internet work security, Internet Standards and RFCs, Buffer over flow & format string Vulnerabilities, TCP session hijacking, ARP attacks route table modification, UDP hijacking and man in –the-middle attacks.

UNIT – II

Conventional Encryption principles, Conventional encryption algorithms, Cipher block modes of operation, location of encryption devices, key distribution Approaches of Message Authentications, Secure Hash Functions and HMAC.

UNIT – III

Public Key Cryptography principles, public key cryptography algorithms, digital signatures, digital Certificates, Certificate Authority and key Management Kerberos, X.509 Directory Authentication Services.

UNIT – IV

Email privacy: Pretty Good Privacy (PGP) and S/MIME.

UNIT – V


UNIT – VI

Web Security Requirements, Secure Socket Layer (SSL) and Transport layer Security (TLS), Secure Electronic Transaction (SET).

UNIT – VII

Basics Concepts of SNMP, SNMPv1 Community facility and SNMPV3, Intruders, Viruses and related threats.

UNIT – VIII
3. SUGGESTED BOOKS:

TEXT BOOKS:


T2: “Hack Proofing your Network” by Ryan Russell, Dan Kaminsky, Rain Forest Puppy, Joe Grand, David Ahmad, Hal Flynn Ido Dubrawsky, Steve W.Manzuik and Ryan Permeh, Wiley Dremtech

REFERENCES:


MC:
SYLLABUS

UNIT - I
GSM : Mobile services, System architecture, Radio interface, Protocols, Localization and calling, Handover, Security, and New data services.

UNIT - II
(Wireless) Medium Access Control: Motivation for a specialized MAC (Hidden and exposed terminals, Near and far terminals), SDMA, FDMA, TDMA, CDMA.

UNIT - III
Mobile Network Layer: Mobile IP (Goals, assumptions, entities and terminology, IP packet delivery, agent advertisement and discovery, registration, tunneling and encapsulation, optimizations), Dynamic Host Configuration Protocol (DHCP).

UNIT - IV
Mobile Transport Layer : Traditional TCP, Indirect TCP, Snooping TCP, Mobile TCP, Fast retransmit/ fast recovery, Transmission /time-out freezing, Selective retransmission, Transaction oriented TCP.

UNIT - V
Database Issues : Hoarding techniques, caching invalidation mechanisms, client server computing with adaptation, power-aware and context-aware computing, transactional models, query processing, recovery, and quality of service issues.

UNIT - VI
Data Dissemination: Communications asymmetry, classification of new data delivery mechanisms, push-based mechanisms, pull-based mechanisms, hybrid mechanisms, selective tuning (indexing) techniques.

UNIT - VII
Mobile Ad hoc Networks (MANETs): Overview, Properties of a MANET, spectrum of MANET applications, routing and various routing algorithms, security in MANETs.

UNIT - VIII
Protocols and Tools: Wireless Application Protocol-WAP. (Introduction, protocol architecture, and treatment of protocols of all layers), Bluetooth (User scenarios, physical layer, MAC layer, networking, security, link management) and J2ME.
SUGGESTED BOOKS:

TEXT BOOKS


REFERENCE BOOKS:


BOOKS REFERRED BY FACULTY:

NP:

SYLLABUS

UNIT-I
Introduction to Network Programming: OSI model, Unix standards, TCP and UDP & TCP connection establishment and Format, Buffer sizes and limitation, standard internet services, Protocol usage by common internet application.

UNIT-II
Sockets: Address structures, value – result arguments, Byte ordering and manipulation function and related functions Elementary TCP sockets – Socket, connect, bind, listen, accept, fork and exec function, concurrent servers. Close function and related function.

UNIT-III
TCP client server: Introduction, TCP Echo server functions, Normal startup, terminate and signal handling server process termination, Crashing and Rebooting of server host shutdown of server host.

UNIT-IV
I/O Multiplexing and socket options: I/O Models, select function, Batch input, shutdown function, poll function, TCP Echo server, getsockopt and setsockopt functions. Socket states, Generic socket option IPV6 socket option ICMPV6 socket option IPV6 socket option and TCP socket options.

UNIT-V
Elementary UDP sockets: Introduction UDP Echo server function, lost datagram, summary of UDP example, Lack of flow control with UDP, determining outgoing interface with UDP.

UNIT-VI
Elementary name and Address conversions: DNS, gethost by Name function, Resolver option, Function and IPV6 support, uname function, other networking information.

UNIT-VII
IPC: Introduction, File and record locking, Pipes, FIFOs streams and messages, Name spaces, system IPC, Message queues, Semaphores.

UNIT-VIII
Remote Login: Terminal line disciplines, Pseudo-Terminals, Terminal modes, Control Terminals, rlogin Overview, RPC Transparency Issues.

Text Book:

REFERENCES:
1. UNIX SYSTEMS PROGRAMMING USING C++ T CHAN, PHI.
NP:

JNTU SYLLABUS:

UNIT – I

Conventional Software Management: The waterfall model, conventional software Management performance.


UNIT-II


The old way and the new: The principles of conventional software Engineering, principles of modern software management, transitioning to an iterative process.

UNIT – III

Life cycle phases: Engineering and production stages, inception, Elaboration, construction, transition phases.

Artifacts of the process: The artifact sets, Management artifacts, Engineering artifacts, programmatic artifacts.

UNIT – IV

Model based software architectures: A Management perspective and technical perspective.


UNIT – V

Checkpoints of the process: Major mile stones, Minor Milestones, Periodic status assessments.

Iterative Process Planning: Work breakdown structures, planning guidelines, cost and schedule estimating, Iteration planning process, Pragmatic planning.

UNIT - VI


UNIT-VII

**Project Control and Process instrumentation:** The seven core Metrics, Management indicators, quality indicators, life cycle expectations, pragmatic Software Metrics, Metrics automation.

**Tailoring the Process:** Process discriminants.

UNIT – VIII

**Future Software Project Management:** Modern Project Profiles, Next generation Software economics, modern process transitions.

**Case Study:** The command Center Processing and Display system- Replacement (CCPDS-R)

**SUGGESTED BOOKS:**

**TEXT BOOKS:**

T1: Royce Walker, *Software project Management*-Pearson Education, 2005

**REFERENCE BOOKS**


R2: Henre Joel, *Software project Management*-Pearson Education.

SPM:

JNTU SYLLABUS:

UNIT - I

Conventional Software Management: The waterfall model, conventional software Management performance.


UNIT-II


The old way and the new: The principles of conventional software Engineering, principles of modern software management, transitioning to an iterative process.

UNIT – III

Life cycle phases: Engineering and production stages, inception, Elaboration, construction, transition phases.

Artifacts of the process: The artifact sets, Management artifacts, Engineering artifacts, programmatic artifacts.

UNIT – IV

Model based software architectures: A Management perspective and technical perspective.


UNIT – V

Checkpoints of the process: Major mile stones, Minor Milestones, Periodic status assessments.

Iterative Process Planning: Work breakdown structures, planning guidelines, cost and schedule estimating, Iteration planning process, Pragmatic planning.

UNIT - VI


UNIT-VII

**Project Control and Process instrumentation:** The seven core Metrics, Management indicators, quality indicators, life cycle expectations, pragmatic Software Metrics, Metrics automation.

**Tailoring the Process:** Process discriminants.

UNIT – VIII

**Future Software Project Management:** Modern Project Profiles, Next generation Software economics, modern process transitions.

**Case Study:** The command Center Processing and Display system- Replacement (CCPDS-R)

**SUGGESTED BOOKS:**

**TEXT BOOKS:**

T1: Royce Walker, ‘*Software project Management*’-Pearson Education, 2005

**REFERENCE BOOKS**


R2: Henre Joel, ‘*Software project Management*’-Pearson Education.

MAD:

SYLLABUS

UNIT-I

UNIT-II
Fundamental concepts in video and digital audio: Types of video signals, analog video, digital video, digitization of sound, MIDI, quantization and transmission of audio.

UNIT-III
**Action Script I:** ActionScript Features, Object-Oriented ActionScript, Datatypes and Type Checking, Classes, Authoring an ActionScript Class

UNIT-IV
**Action Script II:** Inheritance, Authoring an ActionScript 2.0 Subclass, Interfaces, Packages, Exceptions.

UNIT-V
**Application Development:** An OOP Application Framework, Using Components with ActionScript MovieClip Subclasses.

UNIT-VI

UNIT-VII
Basic Video Compression Techniques: Introduction to video compression, video compression based on motion compensation, search for motion vectors, MPEG, Basic Audio Compression Techniques.

UNIT-VIII
SUGGESTED BOOKS:

TEXT BOOKS:


T2: Colin Moock, ‘Essentials ActionScript 2.0’. SPD O, REILLY.

REFERENCE BOOKS:

ES:

JNTU SYLLABUS:

UNIT –I
Embedded computing: Introduction, complex Systems and Microprocessor. The Embedded system Design process, Formalisms for system Design, Design Examples

(Chapter 1 from Text Book 1, Wolf)

UNIT –II
The 8051 Architecture: Introduction, 8051 Micro controller Hardware, Input/output ports and circuits, External memory, Counter and timers, serial data, input output interrupts,

(Chapter 3 from Text Book 2, Ayala)

UNIT –III
Basic Assembly language programming concepts: The Assembly language programming process, programming Tools and Techniques, Programming the 8051. Data Transfer and logical instructions

(Chapter 4, 5 and 6 from Text Book 2, Ayala)

UNIT –IV
Arithmetic operations, Decimal Arithmetic, jump and call instructions, Further details on interrupts

(Chapter 7 and 8 from Text Book 2, Ayala)

UNIT -V
Applications: Interfacing with keyboards, Displays, D/A and A/D conversions, Multiple interrupts, Serial Data Communication

(Chapter 10 and 11 from Text Book 2, Ayala)

UNIT -VI
Introduction to Real - Operating systems: Tasks and task states, tasks and data, semaphores and shared data; Message queues, Mailboxes and pipes, Timer functions, events memory management interrupt Routines in an RTOS environment

(Chapter 6 and 7 from Text Book 3, Simon)

UNIT -VII
Basic Design using a real-time operating system: Principles, semaphores and queues, hard Real-Time scheduling considerations, saving memory and power, An examples RTOS like uc-os (open source);
Embedded software development tools; Host and target machines, linker/locators for embedded software, getting embedded software into the target system; Debugging techniques. Testing of Host machine, using laboratory Tools, An example system

(Chapter 8, 9,10 and 11 from Text Book 3, Simon)

UNIT -VIII

Introduction to advanced architectures: ARM and SHARC processor and memory organization and instruction level parallelism; networked embedded systems: Bus protocols, I2C bus and CAN bus; internet-enabled systems, Design Example- Elevator controller

(Chapter 8 from Text Book 1, Wolf)

SUGGESTED BOOKS:

TEXT BOOKS:

T1 : Wayne wolf, Elsevier 'Computers and components’ 1st Edition
T2 : Kenneth J. Ayala, Thomson ‘The 8051 Micro controller’

REFERENCE BOOKS:

R1 : Labrosse, Via CMP Publishers ‘Embedding system building blocks’
R2 : Raj Kamal, TMH ‘Embedded systems’
R3 : Ajay V Deshmukh, TMH ‘Micro Controllers’
R4 : Frank Vahid, Tony Givargis, John Wiley. ‘Embedded System Design’
R5 : Raj kamal, Pearson Education ‘Micro Controllers’
R6 : David E. Simon, Pearson Education ‘An Embedded Software Primer’