Department of Information Technology

Lesson Plan

Cloud Computing (IT-418-N)

Class : B.Tech. 8th Sem.

Lecture No.	Topics Name
L1	**UNIT-1: Overview of Computing Paradigm**
L2	Recent trends in Computing
L3	Grid Computing
L4	Cluster Computing
L5	Distributed Computing
L6	Utility Computing
L7	Cloud Computing
L8	evolution of cloud computing
L9	Business driver for adopting cloud computing.
L10	Cloud Computing (NIST Model)
L11	History of Cloud Computing
L12	Cloud service providers
L13	Properties,Characteristics & Disadvantages,
L14	Pros and Cons of Cloud Computing, Benefits of Cloud Computing,
L15	Cloud computing vs. Cluster computing vs. Grid computing, Role of Open Standards.
L16	**UNIT-2: Cloud Computing Architecture**
L17	Cloud computing stack
L18	Comparison with traditional computing architecture (client/server)
L19	Services provided at various levels
L20	How Cloud Computing Works
L21	Role of Networks in Cloud computing, protocols used
L22	Role of Web services
L23	Service Models (XaaS) -Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS)
L24	Deployment Models-Public cloud, Private cloud, Hybrid cloud, Community cloud.
L25	**UNIT-3: Service Management in Cloud Computing**
L26	Service Level Agreements (SLAs), Billing & Accounting
L27	comparing Scaling Hardware: Traditional vs. Cloud
L28	Economics of scaling: Benefitting enormously
L29	Managing Data-Looking at Data
L30	Scalability & Cloud Services
L31	Database & Data Stores in Cloud,Large Scale Data Processing.
L32	Case study: Eucalyptus, Microsoft Azure, Amazon EC2.
L33	**UNIT -4: Cloud Security**
L34	Infrastructure Security, Network level security
L35	Host level security, Application level security
L36	Data security and Storage, Data privacy and security Issues
L37	Jurisdictional issues raised by Data location, Identity & Access Management
L38	Access Control, Trust, Reputation
L39	Risk, Authentication in cloud computing
L40	Client access in cloud, Cloud contracting Model, Commercial and business considerations.

Department of Information Technology
Lesson Plan
Information Security (IT-406 N)
Class : B.Tech. 8th Sem.

Lecture No.	Topics Name
L 1	**Unit 1:- Attacks on Computers and Computer Security**
L 2, L3	Introduction
L 4	The need for security
L 5, L6	Security approaches, Principles of security
L 7	Types of Security attacks, Security services, Security Mechanisms
L 8	A model for Network Security
L 9	plain text and cipher text,
L 10	transposition techniques, symmetric and asymmetric key cryptography
L 11	stenography, key range and key size,
L 12	encryption and decryption
L 13	possible types of attacks
L 14, L15	substitution techniques
L 16, L17	**Unit II: Symmetric key Ciphers: Block Cipher principles**
L 18	Block Cipher principles
L 19, L20	Differential and Linear Cryptanalysis
L21	Block cipher modes of operation
L 22	Stream ciphers, RC4, Location and placement of encryption function
L 23	Key distribution. Asymmetric key Ciphers: Principles of public key crypto systems,
L 24, L25	Algorithms (RSA, Diffie-Hellman, and ECC)
L 26	Key Distribution
L 27, L28	**UNIT – III Message Authentication Algorithms and Hash Functions**
L 29	Authentication requirements, Functions
L 30	Message authentication codes
L 31, L32, L34	Hash Functions, Secure hash algorithm
L 35	HMAC, CMAC
L 36	Digital signatures, knapsack algorithm
L 37	Authentication Applications: Kerberos, X.509 Authentication Service
L 38	Public – Key Infrastructure, Biometric Authentication
L 39, L40	**UNIT IV E-Mail Security: Pretty Good Privacy, S/MIME**
L 41, L42	Web Security: Web security considerations
L 43	Secure Socket Layer and Transport Layer Security
L 44, L45	Secure electronic transaction
L 46, L47	Intruders, virus and Firewalls: Intruders
L 48, L49	Intrusion detection, password management
L 50	virus and related threats
L 51	Firewall design principles, types of firewalls

Lesson Plan

Subject:- Human Computer Interaction
Class:-B.Tech IT 8th Semester

Week	LECTURE	TOPIC
1.	1.	**Human I/O channels**
	2.	**Human Memory**
		Reasoning and problem solving
2.		**The computer: Devices**
		Computer Memory
		Interaction: Models
3.		**Frameworks of Interaction models**
		Ergonomics
		Ergonomics styles
4.		**Ergonomics elements**
		Interactivity- Paradigms.
		Interactive Design basics e
5.		**Design basics process**
		Navigation
		screen design
6.		**Iteration and prototyping**
		HCI in software process – software life cycle
		Usability engineering
7.		**Prototyping in practice – design rationale**
		Design rules – principles
		Design rules standards,
8.		**Design rules guidelines**
		Evaluation Techniques
9.		**Universal Design.**
10		**Cognitive models**
		Socio-Organizational issues stake holder requirements
		Stake holder requirements
11		**Communication and collaboration models**
		Hypertext
		Multimedia
12.		**WWW**
		Mobile Ecosystem
		Mobile Ecosystem Platforms
13.		**Application frameworks**
		Types of Mobile Applications
		Widgets
14.		**Applications& Games**
		Mobile Information Architecture
		Mobile 2.0& Mobile Design
15.		**Elements of Mobile Design & Tools**
		Designing Web Interfaces
		Drag & Drop

16		**Direct Selection**
		Contextual Tools
		Overlays, Inlays
		Virtual Pages
		Process Flow
		.Case Studies