

Lesson Plan

Discipline : **Computer Engineering**
Semester : **5th**
Subject : **SOFTWARE ENGINEERING**

Lesson Plan duration : **from Sept, 2020 to Nov 2020)**
Work load per week : **Lecture – 03**

Week	Theory	
	Lecture Day	Topic (Including assessment/test)
1 st	1 st	1. Introduction to Software Engineering (6 hrs.) Introduction, Programme v/s Software
	2 nd	Products Emergence of Software Engineering- Early Computer Programming,
	3 rd	High- level Language Programming, Control flow-based Design
2 nd	4 th	Data Structure Oriented Design,
	5 th	Object Oriented Design
	6 th	Software Life Cycle Models
3 rd	7 th	Requirement of Life Cycle Model, Classic Waterfall Model,
	8 th	Prototyping Model, Evolutionary Model
	9 th	Requirement of Life Cycle Model, Classic Waterfall Model,
4 th	10 th	Prototyping Model, Evolutionary Model
	11 th	Spiral Model
		Comparison of different Life Cycle Models
	12 th	Software Planning (
5 th	13 th	Responsibilities of Software
	14 th	Project Manager - Metrics for Project Size Estimation-
	15 th	LOC(Lines of Code), Function Point Metric
6 th	16 th	Project estimation Techniques
	17 th	Using COCOMO Model,
	18 th	Halstead's Software Science
7 th	19 th	. Requirement Analysis and Specification
	20 th	Requirement gathering and Analysis

	21 st	Software Requirement Specifications (SRS)
8 th	22 nd	Formal Specification Technique
	23 rd	Characteristics of good SRS
	24 th	Software Design and Implementation
9 th	25 th	Characteristics and features of good Software
	26 th	Design Cohesion and Coupling
	27 th	Software design Approaches
10 th	28 th	Function Oriented Design,
	29 th	Object Oriented Design, Structured Coding Techniques
	30 st	Coding Styles, documentation
11 th	31 nd	Software Testing Concept of Testing
	32 rd	Verification v/s Validations
	33 th	Unit Testing, Blackbox Testing
12 th	34 th	White Box Testing
	35 th	Integration testing
	36 th	System testing
13 th	37 th	. Software Quality
	38 th	and Maintenance
	39 th	Introduction to Capability Maturity model
14 th	40 st	ISO9000
	41 nd	Six Sigma
	42 rd	Configuration Management
15 th	43 th	revision
	44 th	revision
	45 th	revision

Lesson Plan

Name of the Faculty : Mr. Dharamvir Saini
Discipline : Computer Engg.
Semester : 5th
Subject : **Computer Networks**
Lesson Plan Duration : 15 weeks (from Sept 2020 to Nov 2020)

Work Load (Lecture / Practical) per week (in hours): Lectures-03, Practical-03

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical Day	Topic
1 st	1 st	Networks Basics	1 st	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network.
	2 nd	Concept of network - Models of network computing		
	3 rd	- Networking models		
2 nd	4 th	- Peer-to-peer Network		Recognition and use of various types of connectors RJ-45, RJ-11, BNC and SCST
	5 th	Server Client Network - Network Services		
	6 th	Concept of switching - Switching Techniques		
3 rd	7 th	OSI Model	2 nd	Recognition of network devices (Switches, Hub, Routers of access points for Wi-Fi)
	8 th	OSI Reference Model		
	9 th	OSI Reference Model		
4 th	10 th	OSI Reference Model		
	11 th	OSI Reference Model		
	12 th	OSI Reference Model		
5 th	13 th	OSI Reference Model		Making of cross cable and straight cable
	14 th	Function of various layers in OSI Reference Model		
	15 th	Function of various layers in OSI Reference Model		
6 th	16 th	- Function of various layers in OSI Reference Model	3 rd	
	17 th	- Function of various layers in OSI Reference Model		

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical Day	Topic
	18 th	- Function of various layers in OSI Reference Model		<p>Install and configure a network interface card in a workstation</p> <p>Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation</p>
7 th	19 th	Introduction to TCP/IP	4 th	Managing user accounts in windows and LINUX
	20 th	Concept of physical and logical addressing - IPV4 addressers- Address space, .		
	21 st	Notations, Classful Addressing, Classless Addressing, Network Address Translation		
8 th	22 nd	- Different classes of IP addressing, special IP address		
	23 rd	- Different classes of IP addressing, special IP address		
	24 th	- Sub netting and super netting		
9 th	25 th	- Sub netting and super netting		
	26 th	- Loop back concept - IPV4 and IPV6 packet Format		
	27 th	- Loop back concept - IPV4 and IPV6 packet Format		
10 th	28 th	Network Architecture	5 th	<p>Study and Demonstration of sub netting of IP address</p> <p>Use of Netstat and its options.</p> <p>Connectivity troubleshooting using PING, IPCONFIG, IFCONFIG</p>
	29 th	Ethernet Specification and Standardization:		
	30 th	10 Mbps (Traditional Ethernet),		
11 th	31 st	10 Mbps (Fast Ethernet) and 1000 Mbps (Gigabit Ethernet), Introduction to Media)		
	32 nd	Connectivity (Leased lines, ISDN, PSTN, RF,		
	33 rd	DSL, VSAT, Optical and IPLC		
12 th	34 th	Connectivity devices		

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical Day	Topic
	35 th	Network connectivity Devices 100 - NICs - Hubs, bridges - Repeaters, switches - Routers - Gateways		
	36 th	Multiplexers - Modems		
13 th	37 th	Network Trouble Shooting Techniques	6 th	Installation of Network Operating System (NOS) Visit to nearby industry for latest networking techniques
	38 th	Trouble Shooting process - Trouble Shooting Tools:, ,		
	39 th	PING,IPCONFIG		
14 th	40 th	PING,IPCONFIG		
	41 st	IFCONFIG, NETSTAT		
	42 nd	TRACEROOT, Wiresharp/ Dsniffer/ Pcop		
15 th	43 rd	IEEE 802.11- Architecture		
	44 th	IEEE 802.11- Architecture		
	45 th	Bluetooth- Architecture		

Lesson Plan

Name of the faculty: Dharamvir Saini

Discipline: Computer Science

Semester: 5th

Subject: Computer Programming using Python

Lesson Plan Duration: (from Sept 2020 to November 2020)

Week	Theory		Practical	
	Lecture Day	Topic (including assignment / test)	Practical Day	Topic
1 st	1	Brief History of Python Python Versions	1	Getting started with Python and IDLE in interactive and batch modes
	2	Installing Python Environment Variables Executing Python from the Command Line IDLE	2	Implementation of string methods Lower Count Replace
	3	Editing Python Files Python Documentation		
2 nd	4	Getting Help Dynamic Types Python Reserved Words	3	Create a string containing at least five words and store it in a variable. 1. Print out the string. 2. Convert the string to a list of words using the string split method.
	5	Naming Conventions Basic Syntax Comments String Value	4	Sort the list into reverse alphabetical order using some of the list methods (you might need to use dir(list) or help(list) to find appropriate methods).
	6	String Methods The format Method String Operators Numeric Data Types		
3 rd	7	Conversion Functions Simple Output Simple Input The % Method	5	Print out the sorted, reversed list of words.

	8	The % Method The print Function Indenting Requirements The if Statement	6	Write a program that determines whether the number is prime.
	9	Relational and Logical Operators Bit Wise Operators		
4th	10	The while Loop Break and continue	7	Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?
	11	The for Loop Introduction Lists Tuples	8	Swap two integer numbers using a temporary variable. Repeat the exercise using the code format: a, b = b, a. Verify your results in both the cases.
	12	Sets Dictionaries Sorting Dictionaries Copying Collections Summary		
5th	13	Introduction Defining Your Own Functions Parameters	9	Programming exercises on formatting input/output using printf and scanf and their return type values
	14	Function Documentation Keyword and Optional Parameters	10	Programming exercises on formatting input/output using printf and scanf and their return type values
	15	Passing Collections to a Function Variable Number of Arguments Scope Functions - "First Class Citizens"		
6th	16	Passing Functions to a Function map filter	11	Find the largest of n numbers, using a user defined function largest().
	17	Mapping Functions in a Dictionary Lambda Inner Functions Closures	12	Write a function myReverse() which receives a string as an input and returns the reverse of the string.
	18	Modules Standard Modules - sys Standard Modules - math		
7th	19	Standard Modules - time The dir Function Exceptions Errors Runtime Errors	13	. Check if a given string is palindrome or not.
	20		14	WAP to convert Celsius to Fahrenheit .
	21	Copying Collections		
8th	22	Summary	15	Find the ASCII value of charades
	23	Functions Introduction	16	WAP for simple calculator

	24	Variable Number of Arguments Scope Functions - "First Class Citizens" Passing Functions to a Function		
9th	25	Function Documentation Keyword and Optional Parameters	17	WAP to convert Celsius to Fahrenheit
	26	Passing Collections to a Function	18	Implementation of string methods Lower Count Replace
	27			
10th	28	Filter Mapping Functions in a Dictionary	19	Sort the list into reverse alphabetical order using some of the list methods (you might need to use dir(list) or help(list) to find appropriate methods).
	29	Modules Standard Modules - sys	20	Write a program that determines whether the number is prime.
	30	Standard Modules - math Standard Modules - time The dir Function		
11th	31	Exceptions Errors	21	Write a program that determines whether the number is prime.
	32	Runtime Errors The Exception Model Exception Hierarchy	22	Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?
	33	Handling Multiple Exceptions Raise Assert		
12th	34	Input and Output Introduction Data Streams Creating Your Own Data Streams	23	Swap two integer numbers using a temporary variable. Repeat the exercise using the code format: a, b = b, a. Verify your results in both the cases.
	35	Access Modes Writing Data to a File Reading Data From a File	24	Find the largest of n numbers, using a user defined function largest().
	36	Additional File Methods Using Pipes as Data Streams Handling IO Exceptions		
13th	37	Classes in Python Principles of Object Orientation Creating Classes	25	Write a function myReverse() which receives a string as an input and returns the reverse of the string.
	38	Instance Methods File Organization Special Methods	26	Check if a given string is palindrome or not.
	39	Inheritance Polymorphism		
14th	40	Regular Expressions Introduction	27	Check if a given string is palindrome or not.
	41	Simple Character Matches Special Characters Character Classes	28	Check if a given string is palindrome or not.

	42	Quantifiers The Dot Character Greedy Matches		
15 th	43	Grouping Matching at Beginning or End Match Objects	29	WAP to convert Celsius to Fahrenheit
	44	Substituting Splitting a String Compiling Regular Expressions Flags	30	Revision
	45	Revision		

Lesson Plan**Name of Faculty: Mr Virender Gupta****Discipline: CSE****Subject: Cloud computing****Lesson Plan duration:**(From Sept 2020 to Nov 2020)**Work load (Lecture/Practical) per week (in hours):** Lecture-03, Practical -03

Week	Theory		Practical	
	Lecture day	Topic (Including assignment/test)	Practical Day	Topic
1	1	Evaluation of cloud computing	1	Introduction to cloud vendors: Amazon, Microsoft, IBM
	2	Cloud computing overview		
	3	Characteristics, Application		
2	5	Benefits of cloud computing	2	practical repeated same as above
	6	challenges of cloud computing		
	7	Revision, class test		
3	9	Cloud computing service models: Iaas, Paas, Saas	3	Setting up virtualization using virtual box/VMware hypervisor
	10			
	11			
4	13	cloud computing deployment models: Public, Private, Hybrid, community	4	practical repeated same as above
	14			
	15			
5	17	Comparison of cloud deployment models	5	Introduction to own cloud
	18	Assignment		
	19	Revision, class test		
6	21	Overview of SLA	6	practical repeated same as above
	22	Types of SLA		
	23	SLA life cycle		
7	25	SLA management process	7	installation and configuration of own cloud
	26	Revision, class test		
	27			
8	29	Overview of virtualization	8	practical repeated same as above
	30	types of virtualization		
	31	Benefits of virtualization		
9	33	Hypervisors	9	installation and configuration of own cloud for Saas
	34	Revision, class test		
	35			
10	37	Infrastructure security	10	practical repeated same as above
	38	Data security		
	39	privacy issues in cloud computing		
11	41	Legal issues in cloud computing	11	Accessing Microsoft AZURE services

	42	Revision		
	43	class test		
12	45	Storage as a service	12	practical repeated same as above
	46	benefits and challenges		
	47	Storage as a network		
13	49	Assignment	13	cloud simulation software introduction: cloud sim
	50	Revision		
	51	Class test		
14	53	Different types of scheduling in cloud	14	practical repeated same as above
	54	overview of the problems of scheduling		
	55	scheduling for independent and dependent tasks		
15	57	static vs dynamic scheduling	15	practical repeated same as above
	58	Assignment		
	59	Revision		

Lesson Plan

Name of Faculty : Dharamvir Saini
 Discipline : Computer Engg.
 Semester : 5th
 Subject : PHP
 Lesson Plan Duration : (From Sept 2020 to Nov. 2020)

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1 st	1	Introduction to HTML	1	HTML Tags Practice
	2	HTML tags practice	2	Use of Frontpage
	3	Frames and Forms in HTML		
2 nd	4	1. Introduction to PHP: How PHP Works , The php.ini File	3	Design of Webpage using HTML
	5	Basic PHP Syntax, PHP Tags, PHP Statements and Whitespace	4	Practice of HTML
	6	Variable Types, Variable Names (Identifiers)		
3 rd	7	Type Strength, Variable Scope in PHP	5	How PHP is Embedded in HTML
	8	Constants, Variable-Testing	6	Introduction to XAMPP software
	9	Manipulation Functions		
4 th	10	2.Operators : Type of Operators	7	PHP based web pages design
	11	Strings	8	PHP based web pages design
	12	arrays, comments		
5 th	13	3. Methods and Functions: Built in functions	9	PHP based web pages using CSS
	14	User-defined functions	10	PHP based web pages using XHTML
	15	Function arguments		
6 th	16	Returning values in Functions	11	Create Web forms
	17	Variable functions	12	Create Web forms and pages that properly use HTTP GET protocol
	18	Anonymous functions		
7 th	19	Control statements: Conditional Processing : If Conditions	13	Create Web forms and pages that properly use HTTP POST protocol
	20	Conditional Processing : Nested if	14	Create Web forms :practice
	21	Loops : while		
8 th	22	Loops : while revision	15	Design SQL language within MySQL
	23	Loops : do..while	16	Design SQL language within MySQL
	24	Loops: do..while revision		
9 th	25	Loops : for	17	PHP to access databases
	26	Loop : nested For	18	PHP to access databases
	27	break and continue		
10 th	28	PHP forms : designing	19	PHP to access and manipulate databases
	29	PHP forms : Server connectivity	20	PHP to access and manipulate databases
	30	Login Security Authentication		

11 th	31	Authorization (Permissions)	21	Practice With MySQL
	32	Encryption	22	Practice With MySQL
	33	Sessions		
12th	34	Cookies	23	Install and configure both PHP and MySQL
	35	PHP Mail : designing	24	Install and configure both PHP and MySQL
	36	File Handling		
13th	37	File Handling	25	Create PHP code that utilizes API library functions
	38	File Uploading	26	Create PHP code that utilizes API library functions
	39	Introduction to MySQL : Database Concepts		
14th	40	Query Language	27	Design and create a complete web site that demonstrates good PHP/MySQL client/server design.
	41	INSERT, SELECT Query	28	Website design in PHP
	42	UPDATE, DELETE Query		
15th	43	Database design and Development using MySql	29	Website design in PHP
	44	PHP Connectivity with MySQL	30	Website design in PHP
	45	PHP Connectivity with MySQL : Revision		