SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada, 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Computer Science and Engineering

TENTATIVE LESSION PLAN: R1621051
STATICS WITH R PROGRAMMING

Course Title: STATICS WITH R PROGRAMMING		
Section : Sec I	Date : 10/6/2019	Page No : 01 of 04
Revision No : 00	Prepared By : M.ANITHA	Approved By : HOD
Tools : Black Board, PPTs		

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I : INTRODUCTION			
CO1: List motivation for learning R programming language			
TB: The Art of R Programming, Norman Matloff, Cengage Learning			
1	Introduction	11/6/19	Lecture interspersed with discussions
2	How to run R, R Sessions	12/6/19	
3	Functions	14/6/19	
4	Basic Math	17/6/19	
5	Variables, Data Types	19/6/19	
6	Vectors	19/6/19	
7	Advanced Data Structures	22/6/19	
8	Data Frames	24/6/19	
9	Lists	26/6/19	
10	Matrices	26/6/19	
11	Arrays	27/6/19	
12	Classes	28/6/19	
UNIT-II : R PROGRAMMING STRUCTURES			
CO2: Access online resources for R and import new function packages into the R workspace and manipulating data.			
TB: The Art of R Programming, Norman Matloff, Cengage Learning			
13	R Programming Structures	29/6/19	

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No. of periods	TOPIC	Date	Mode of Delivery
14	Control Statements	1/7/19	Lecture interspersed with discussions
15	Loops	3/7/19	
16	Looping Over Nonvector Sets	3/7/19	
17	If-Else	5/7/19	
18	Arithmetic and Boolean Operators and values	5/7/19	
19	Default Values for Argument, Return Values	9/7/19	
20	explicitly call return- Returning Complex Objects	9/7/19	
21	Functions are Objective	10/7/19	
22	No Pointers in R	12/7/19	
23	Recursion	12/7/19	
24	A Quicksort Implementation-Extended	15/7/19	
25	Extended Example: A Binary Search Tree.	18/7/19	

UNIT – III: DOING MATH AND SIMULATION IN R

CO3: Import, review, manipulate and summarize data-sets in R

TB: The Art of R Programming, Norman Matloff, Cengage Learning

26	UNIT -3: Doing Math and Simulation in R	19/7/19	Lecture interspersed with discussions
27	Math Function	19/7/19	
28	Extended Example Calculating Probability - Cumulative Sums	20/7/19	
29	Products-Minima and Maxima- Calculus	20/7/19	
30	Functions For Statistical Distribution	21/7/19	
31	Sorting	22/7/19	
32	Linear Algebra Operation on Vectors and Matrices	24/7/19	

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No. of periods	TOPIC	Date	Mode of Delivery
33	Extended Example: Vector cross Product	24/7/19	
34	Extended Example: Finding Stationary Distribution of Markov Chains	25/7/19	
35	Set Operation	26/7/19	
36	Input /out put, Accessing the Keyboard and Monitor	27/7/19	
37	Reading and writer Files	27/7/19	

UNIT – IV: GRAPHICS

CO4: Perform appropriate statistical tests using R Create and edit visualizations with R functions

TB: The Art of R Programming, Norman Matloff, Cengage Learning

38	UNIT – 4: Graphics	28/7/19	Lecture interspersed with discussions
39	Creating Graphs	29/7/19	
40	The Workhorse of R Base Graphics	29/7/19	
41	the plot() Function – Customizing Graphs	30/7/19	
42	Saving Graphs to Files	31/7/19	

UNIT – V PROBABILITY DISTRIBUTIONS

CO5: Explore data-sets to create testable hypotheses and identify appropriate statistical tests.

TB: The Art of R Programming, Norman Matloff, Cengage Learning

43	UNIT-5: Probability Distributions	1/8/19	Lecture interspersed with discussions
44	Normal Distribution	1/8/19	
45	Binomial Distribution	2/8/19	
46	Poisson Distributions	3/8/19	
47	Other Distribution	7/8/19	
48	Basic Statistics	7/7/19	

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No. of periods	TOPIC	Date	Mode of Delivery
49	Correlation and Covariance,	9/7/19	
50	T-Tests	10/8/19	
51	ANOVA	12/7/19	

UNIT – VI: LINEAR MODELS

CO6: To Explore advanced techniques in manipulating data sets.

TB: The Art of R Programming, Norman Matloff, Cengage Learning

No. of periods	TOPIC	Date	Mode of Delivery
52	**UNIT-6: Linear Models**	14/8/19	
53	Simple Linear Regression	14/8/19	
54	Multiple Regression	15/8/19	
55	Logistic Regression	16/8/19	Lecture interspersed with discussions
56	Poisson Regression	17/8/19	
57	Survival Analysis	19/8/19	
58	Nonlinear Models,	19/8/19	
59	Splines, Decision	20/8/19	
60	Random Forests	21/8/19	

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Department of Computer Science and Engineering

TENTATIVE LESSION PLAN: R1621051
STATICS WITH R PROGRAMMING

Course Title: STATICS WITH R PROGRAMMING			
Section : Sec II	Date : 10/6/2019	Page No : 01 of 04	
Revision No : 00	Prepared By : N.SUDHAKAR REDDY	Approved By : HOD	

Tools : Black Board, PPTs

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I : INTRODUCTION			
CO1: List motivation for learning R programming language			
TB: The Art of R Programming, Norman Matloff, Cengage Learning			
1	Introduction	12/6/19	Lecture interspersed with discussions
2	How to run R, R Sessions	13/6/19	
3	Functions	14/6/19	
4	Basic Math	17/6/19	
5	Variables, Data Types	19/6/19	
6	Vectors	19/6/19	
7	Advanced Data Structures	22/6/19	
8	Data Frames	24/6/19	
9	Lists	26/6/19	
10	Matrices	26/6/19	
11	Arrays	27/6/19	
12	Classes	28/6/19	
UNIT-II : R PROGRAMMING STRUCTURES			
CO2: Access online resources for R and import new function packages into the R workspace and manipulating data.			
TB: The Art of R Programming, Norman Matloff, Cengage Learning			

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No. of periods	TOPIC	Date	Mode of Delivery
13	R Programming Structures	28/6/19	Lecture interspersed with discussions
14	Control Statements	1/7/19	
15	Loops	3/7/19	
16	Looping Over Nonvector Sets	3/7/19	
17	If-Else	5/7/19	
18	Arithmetic and Boolean Operators and values	5/7/19	
19	Default Values for Argument, Return Values	9/7/19	
20	explicitly call return- Returning Complex Objects	9/7/19	
21	Functions are Objective	10/7/19	
22	No Pointers in R	12/7/19	
23	Recursion	12/7/19	
24	A Quicksort Implementation-Extended	15/7/19	
25	Extended Example: ABinary Search Tree.	18/7/19	

UNIT – III: DOING MATH AND SIMULATION IN R

CO3: Import, review, manipulate and summarize data-sets in R

TB: The Art of R Programming, Norman Matloff, Cengage Learning

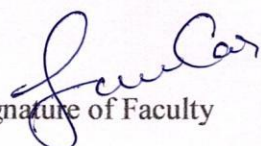| No. of periods	TOPIC	Date	Mode of Delivery
26	Doing Math and Simulation in R	19/7/19	Lecture interspersed with discussions
27	Math Function	19/7/19	
28	Extended Example Calculating Probability- Cumulative Sums	20/7/19	
29	Products-Minima and Maxima- Calculus	20/7/19	
30	Functions For Statistical Distribution	21/7/19	
31	Sorting	22/7/19	
32	Linear Algebra Operation on Vectors and Matrices	24/7/19	
33	Extended Example: Vector cross Product	24/7/19	

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No. of periods	TOPIC	Date	Mode of Delivery
34	Extended Example: Finding Stationary Distribution of Markov Chains	25/7/19	
35	Set Operation	26/7/19	
36	Input /out put, Accessing the Keyboard and Monitor	27/7/19	
37	Reading and writer Files	27/7/19	

UNIT – IV: GRAPHICS

CO4: Perform appropriate statistical tests using R Create and edit visualizations with R functions

TB: The Art of R Programming, Norman Matloff, Cengage Learning

No. of periods	TOPIC	Date	Mode of Delivery
38	Graphics	28/7/19	Lecture interspersed with discussions
39	Creating Graphs	29/7/19	
40	The Workhorse of R Base Graphics	29/7/19	
41	the plot() Function – Customizing Graphs	30/7/19	
42	Saving Graphs to Files	31/7/19	

UNIT – V PROBABILITY DISTRIBUTIONS

CO5: Explore data-sets to create testable hypotheses and identify appropriate statistical tests.

TB: The Art of R Programming, Norman Matloff, Cengage Learning

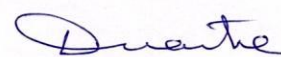| No. of periods	TOPIC	Date	Mode of Delivery
43	Probability Distributions	1/8/19	Lecture interspersed with discussions
44	Normal Distribution	1/8/19	
45	Binomial Distribution	2/8/19	
46	Poisson Distributions	3/8/19	
47	Other Distribution	7/8/19	
48	Basic Statistics	7/7/19	
49	Correlation and Covariance,	9/7/19	
50	T-Tests	10/8/19	

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No. of periods	TOPIC	Date	Mode of Delivery
51	ANOVA	12/7/19	

UNIT – VI: LINEAR MODELS

CO6: To Explore advanced techniques in manipulating data sets.

TB: The Art of R Programming, Norman Matloff, Cengage Learning

No. of periods	TOPIC	Date	Mode of Delivery
52	Linear Models	14/8/19	
53	Simple Linear Regression	14/8/19	
54	Multiple Regression	15/8/19	
55	Logistic Regression	16/8/19	Lecture interspersed with discussions
56	Poisson Regression	19/8/19	
57	Survival Analysis	19/8/19	
58	Nonlinear Models,	20/8/19	
59	Splines, Decision	21/8/19	
60	Random Forests	21/8/19	

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TENTETIVE LESSON PLAN – R1621052

Course Title: MATHEMATICAL FOUNDATION OF COMPUTER SCIENCE

Section : CSE-A	Date : 10/06/2019	Page No : 01 of 03
Revision No : 00	Prepared By : T.Prasanna	Approved By : HOD

Tools : Black board

No. of Periods	TOPIC	Date	Mode of Delivery
	UNIT- I : MATHEMATICAL LOGIC **CO1: Student will be able to demonstrate skills in solving mathematical problems.**		
1.	Statements, Notations, Connectives, Well defined Formulas	14/6/19	
2.	Truth tables, Tautologies	17/6/19	
3.	Equivalence of formulas	18/6/19	
4.	Duality law, Tautological Implications	19/6/19	
5.	Normal forms	20/6/19	
6.	Tutorial class	24/6/19(2)	
7.	Theory of inference for statement calculus	26/6/19	
8.	Consistency of premises	28/6/19(2)	
9.	Indirect method of proof	29/6/19	
10.	Predicative Logic, statement functions	1/7/19(2)	Lecture interspersed with discussions
11.	Tutorial class	3/7/19	
12.	Variables and Quantifiers, free & bound variables	5/7/19	
13.	Inference theory of predicate calculus	6/7/19	
	UNIT- II : SET THEORY **CO2: Student will be able to demonstrate knowledge of mathematical modelling and proficiency in using mathematical software.**		
14.	Introduction to sets, operations on Binary sets	8/7/19(2)	
15.	Principle of Inclusion and Exclusion	10/7/19	
16.	Relations, Properties of binary relations	12/7/19	
17.	Relation matrix and Digraph	13/7/19	
18.	Operations on relations	16/7/19	
19.	Partition and covering, transitive closure	17/7/19(2)	
20.	Tutorial class	19/7/19(2)	Lecture interspersed with discussions
21.	Equivalence relations, compatibility relations,	20/7/19	
22.	Partial ordering relations, Hasse diagram	20/7/19	
23.	Bijective Functions and composition of functions	22/7/19	
24.	Inverse functions, recursive functions, permutation functions	23/7/19	
25.	Lattices	8/7/19(2)	

UNIT III- ALGEBRAIC STRUCTURES AND NUMBER THEORY

CEO3: Overview of algebraic structures, Group theory, number theory, basic algorithms in number Theory.

26.	Algebraic systems, Examples, General properties	24/7/19	
27.	Semi groups and Monoids	26/7/19	
28.	Homomorphism of semi groups and monoids	26/7/19	
29.	Group, Subgroup, Abelian Group, Homomorphism, Isomorphism	29/7/19	
30.	Tutorial class	31/7/19	Lecture interspersed with discussions
31.	Properties of integers, division theorem	2/8/19	
32.	GCD, Euclidean algorithm	2/8/19	
33.	LCM, Testing for prime numbers	3/8/19	
34.	The fundamental theorem of Arithmetic	5/8/19	
35.	Modular Arithmetic, Euler and Fermat's theorems	5/8/19	
36.	Tutorial class	7/8/19	

UNIT – IV   THEORY OF GAMES & WAITING LINES

CO4: Student will be able to communicate effectively mathematical ideas results verbally or in Wrting.

37.	Basics of counting, permutations	8/8/19	
38.	Permutations with Repetitions	8/8/19	
39.	Circular Permutations, Restricted Permutations	9/8/19	
40.	Combinations, Restricted Combinations	9/8/19	
41.	Tutorial Class	10/8/19	Lecture interspersed with discussions
42.	Generating functions of permutations and combinations	12/8/19	
43.	Binomial and multinomial coefficients	16/8/19	
44.	Binomial and multinomial theorems	17/8/19	
45.	Coloring and chromatic numbers	19/8/19	
46.	Pigeonhole Principle and its allpications	22/819(2)	

UNIT V: RECURRENCE RELATIONS

CO5: Student will be able to manipulate and analyze data generatically and recurrencingly.

42.	Generating Functions	23/8/19	
43.	Function of Sequences	26/8/19	
44.	Partial Fractions	27/8/19 29/8/19	
45.	Coefficient of generating functions	30/9/19 3/9/19,4/9/19	
46.	Recurrence relations	9/919	Lecture interspersed with discussions
47.	Formulation as recurrence relations	9/8919	
48.	Recurrence relations by substitution	5/9/2019	
49.	Recurrence relations by Generating functions	5/9/2019	
50.	Tutorial class	7/9/2019 9/9/2019	
51.	Recurrence relations by method of characteristics roots	11/9/2019	

			17/9/2019	
52	Inhomogeneous Recurrence relations		12/9/2019	
53	Generating Functions			
54	Function of Sequences		17/9/2019	
55				
56	Partial Fractions		18/9/2019	
57	Coefficient of generating functions			

UNIT - VI : GRAPH THEORY

CO6: Student will be able to manipulate and analyze data graphically using Appropriate software.

58	Basic concepts of graphs, sub graphs		19/9/2019	
59	Representation of graphs: Adjacency, Incidence matrices			
60	Isomorphic graphs		19/9/2019	
61	Paths, circuits, Eulerian and Hamiltonian graphs			
62	Multi graphs, Problems		20/9/2019	Lecture interspersed withP discussions
63	Tutorial class		24/9/2019	
64	Planar graphs, Euler's formula		25/9/2019	
65	Graph Colouring and covering		25/9/2019	
66	Chromatic numbers		26/9/19	
67	Spanning trees, Algorithms for spanning trees		26/9/19	

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Course Title: **MATHEMATICAL FOUNDATION OF COMPUTER SCIENCE**		
Section : CSE-B	**Date : 10/06/2019**	**Page No : 01 of 03**
Revision No : 00	**Prepared By : T.Prasanna**	**Approved By : HOD**

Tools : Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT- I : MATHEMATICAL LOGIC			
CO1: Student will be able to demonstrate skills in solving mathematical problems.			
1.	Statements, Notations, Connectives, Well defined Formulas	14/6/19	
2.	Truth tables, Tautologies	17/6/19	
3.	Equivalence of formulas	18/6/19	
4.	Duality law, Tautological Implications	19/6/19	
5.	Normal forms	20/6/19	
6.	Tutorial class	24/6/19(2)	
7.	Theory of inference for statement calculus	26/6/19	
8.	Consistency of premises	28/6/19(2)	
9.	Indirect method of proof	29/6/19	
10.	Predicative Logic, statement functions	1/7/19(2)	Lecture interspersed with discussions
11.	Tutorial class	3/7/19	
12.	Variables and Quantifiers, free & bound variables	5/7/19	
13.	Inference theory of predicate calculus	6/7/19	
UNIT- II : SET THEORY			
CO2: Student will be able to demonstrate knowledge of mathematical modelling and proficiency in using mathematical software.			
14.	Introduction to sets, operations on Binary sets	8/7/19(2)	
15.	Principle of Inclusion and Exclusion	10/7/19	
16.	Relations, Properties of binary relations	12/7/19	
17.	Relation matrix and Digraph	13/7/19	
18.	Operations on relations	16/7/19	
19.	Partition and covering, transitive closure	17/7/19(2)	
20.	Tutorial class	19/7/19(2)	Lecture interspersed with discussions
21.	Equivalence relations, compatibility relations,	20/7/19	
22.	Partial ordering relations, Hasse diagram	20/7/19	
23.	Bijective Functions and composition of functions	22/7/19	
24.	Inverse functions, recursive functions, permutation functions	23/7/19	
25.	Lattices	8/7/19(2)	

UNIT III- ALGEBRAIC STRUCTURES AND NUMBER THEORY

CEO3: Overview of algebraic structures, Group theory, number theory, basic algorithms in number Theory.

26.	Algebraic systems, Examples, General properties	24/7/19	
27.	Semi groups and Monoids	26/7/19	
28.	Homomorphism of semi groups and monoids	26/7/19	
29.	Group, Subgroup, Abelian Group, Homomorphism, Isomorphism	29/7/19	
30.	Tutorial class	31/7/19	Lecture interspersed with discussions
31.	Properties of integers, division theorem	2/8/19	
32.	GCD, Euclidean algorithm	2/8/19	
33.	LCM, Testing for prime numbers	3/8/19	
34.	The fundamental theorem of Arithmetic	5/8/19	
35.	Modular Arithmetic, Euler and Fermat's theorems	5/8/19	
36.	Tutorial class	7/8/19	

UNIT – IV THEORY OF GAMES & WAITING LINES

CO4: Student will be able to communicate effectively mathematical ideas results verbally or in Wrting.

37.	Basics of counting, permutations	8/8/19	
38.	Permutations with Repetitions	8/8/19	
39.	Circular Permutations, Restricted Permutations	9/8/19	
40.	Combinations, Restricted Combinations	9/8/19	
41.	Tutorial Class	10/8/19	Lecture interspersed with discussions
42.	Generating functions of permutations and combinations	12/8/19	
43.	Binomial and multinomial coefficients	16/8/19	
44.	Binomial and multinomial theorems	17/8/19	
45.	Coloring and chromatic numbers	19/8/19	
46.	Pigeonhole Principle and its allpications	22/819(2)	

UNIT V: RECURRENCE RELATIONS

CO5: Student will be able to manipulate and analyze data generatically and recurrencingly.

42.	Generating Functions	23/8/19	
43.	Function of Sequences	26/8/19	
44.	Partial Fractions	27/8/19 29/8/19	
45.	Coefficient of generating functions	30/9/19 3/9/19,4/9/19	
46.	Recurrence relations	9/919	Lecture interspersed with discussions
47.	Formulation as recurrence relations	9/8919	
48.	Recurrence relations by substitution	5/9/2019	
49.	Recurrence relations by Generating functions	5/9/2019	
50.	Tutorial class	7/9/2019 9/9/2019	
51.	Recurrence relations by method of characteristics roots	11/9/2019	

			17/9/2019	
52	Inhomogeneous Recurrence relations		12/9/2019	
53	Generating Functions			
54	Function of Sequences		17/9/2019	
55				
56	Partial Fractions		18/9/2019	
57	Coefficient of generating functions			

UNIT - VI : GRAPH THEORY

CO6: Student will be able to manipulate and analyze data graphically using Appropriate software.

58	Basic concepts of graphs, sub graphs	19/9/2019	
59	Representation of graphs: Adjacency, Incidence matrices		
60	Isomorphic graphs	19/9/2019	
61	Paths, circuits, Eulerian and Hamiltonian graphs		
62	Multi graphs, Problems	20/9/2019	Lecture interspersed withP discussions
63	Tutorial class	24/9/2019	
64	Planar graphs, Euler's formula	25/9/2019	
65	Graph Colouring and covering	25/9/2019	
66	Chromatic numbers	26/9/19	
67	Spanning trees, Algorithms for spanning trees	26/9/19	

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TENTATIVE LESSON PLAN: R1621053
DIGITAL LOGIC DESIGN

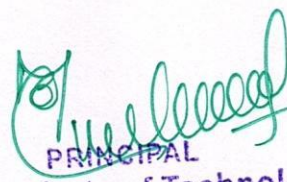| Course Title: Digital Logic Design		
Section: SEC A & B	Date:10/06/19	Page No: 01 of 03
Revision No:	Prepared By: Ch.Ambedkar	Approved By: HOD
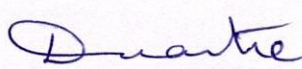
Tools: Black Board, PowerPoint Presentations

No. of Periods	Topic	Date	Mode of Delivery
UNIT I **CO 1**	**: Digital Systems and Binary Numbers** : The ability to define different number systems, binary addition and subtraction, 2's complement representation and operations with this representation		
Text Book : Digital Design, 5/e, M.Morris Mano, Michael D Ciletti, PEA.			
1	Digital Systems and Binary Numbers: Introduction	10-6-2019	BB/PPT
2	Digital Systems	11-6-2019	BB/PPT
3	Binary Numbers	12-6-2019	BB/PPT
4	Conversions	13-6-2019	BB/PPT
5	Complement of numbers	14-6-2019 & 15-6-2019	BB/PPT
6	Octal and Hexadecimal Numbers	17-6-2019	BB/PPT
7	Signed Binary Numbers	18-6-2019	BB/PPT
8	Arithmetic addition	19-6-2019	BB/PPT
9	Arithmetic subtraction	20-6-2019	BB/PPT
10	Tutorial	21-6-2019	
UNIT II **CO 1**	**: Concept of Boolean algebra** : The ability to understand the different switching algebra theorems and apply them for logic functions.		
Text Book : Digital Design, 5/e, M.Morris Mano, Michael D Ciletti, PEA			
1	Concept of Boolean algebra Introduction	22-6-2019 & 24-6-2019	BB/PPT
2	Basic Theorems and Properties of Boolean algebra	25-6-2019 & 26-6-2019	BB/PPT
3	Boolean Functions	1-7-2019	BB/PPT
4	Tutorial	2-7-2019	BB/PPT
5	Canonical and Standard Forms	4-7-2019	BB/PPT

6	Minterms and Maxterms	6-7-2019 & 11-7-2019	BB/PPT
7	Tutorial	15-7-2019	

UNIT III : Gate level Minimization

CO 3 : An ability to define the Karnaugh map for a few variables and perform an algorithmic reduction of logic functions

Text Book : Digital Design, 5/e, M.Morris Mano, Michael D Ciletti, PEA

1	Gate level Minimization Introduction	18-7-2019	BB/PPT
2	Map Method	19-7-2019	BB/PPT
3	Two-Variable K-Map	20-7-2019 & 22-7-2019	BB/PPT
4	Three-Variable K-Map	23-7-2019 & 25-7-2019	BB/PPT
5	Four Variable K-Maps	26-7-2019	BB/PPT
6	Tutorial	27-7-2019	BB/PPT
7	Products of Sum Simplification	29-7-2019 & 30-7-2019	BB/PPT
8	Sum of Products Simplification	31-7-2019	BB/PPT
9	Don't – Care Conditions	1-8-2019	BB/PPT
10	NAND and NOR Implementation	2-8-2019 & 5-8-2019	BB/PPT
11	Exclusive-OR Function	6-8-2019	BB/PPT
12	Tutorial	8-8-2019	

UNIT IV : Combinational Logic

CO 4 : To introduce the basic tools for design with combinational and sequential digital logic and state machines.

Text Book : Digital Design, 5/e, M.Morris Mano, Michael D Ciletti, PEA

1	Combinational Logic: Introduction	9-8-2019	BB/PPT
2	Analysis Procedure	12-8-2019	BB/PPT
3	Design Procedure	13-8-2019	BB/PPT
4	Binary Adder–Subtractor	13-8-2019	BB/PPT
5	Decimal Adder	14-8-2019	BB/PPT
6	Binary Multiplier	16-8-2019	BB/PPT
7	Decoders	17-8-2019	BB/PPT
8	Encoders	19-8-2019	BB/PPT
9	Multiplexers	20-8-2019	BB/PPT
10	HDL Models of Combinational Circuits	21-8-2019 & 22-8-2019	BB/PPT
11	Tutorial	23-8-2019	

UNIT V : **Synchronous Sequential Logic**

CO 5 : To understand the various sequential circuits such as Latches, flip-flops & conversions among them.

Text Book : **Digital Design, 5/e, M.Morris Mano, Michael D Ciletti, PEA**

1	**Synchronous Sequential Logic** Introduction	30-8-2019	BB/PPT
2	Introduction to Sequential Circuits	2-9-2019 & 3-9-2019	BB/PPT
3	Storage Elements	4-9-2019	BB/PPT
4	Latches	5-9-2019	BB/PPT
5	Flip-Flops	6&7-9-2019	BB/PPT
6	Analysis of Clocked Sequential Circuits	9-9-2019 & 10-9-2019	BB/PPT
7	Mealy and Moore Models of Finite State Machines	11-9-2019 & 12-9-2019	BB/PPT
8	Tutorial	13-9-2019	BB/PPT

UNIT VI : **Registers and Counters**

CO 6 : To design counters and understand the serial & parallel transmission of data through registers

Text Book : **Digital Design, 5/e, M.Morris Mano, Michael D Ciletti, PEA**

1	**Registers and Counters** Introduction	16-9-2019 & 17-9-2019	BB/PPT
2	Registers	18-9-2019	BB/PPT
3	Shift Registers	19-9-2019 & 20-9-2019	BB/PPT
4	Ripple Counters	21-9-2019 & 23-9-2019	BB/PPT
5	Synchronous Counters	25-9-2019	BB/PPT
6	Ring Counter	26-9-2019	BB/PPT
7	Johnson Counter	27-9-2019	BB/PPT
8	Tutorial	30-9-2019	BB/PPT

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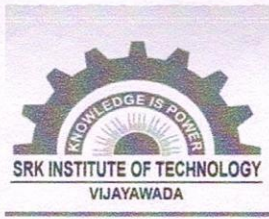
TENTATIVE LESSON PLAN: R1621054

PYTHON PROGRAMMING

Course-: PYTHON PROGRAMMING		
Section:Sec1 & 2	Date: 12/06/19	Page No: 01 of 04
Revision No: 00	Prepared By: B.Ashalataha	Approved By: HOD

Tools: Black Board, PPTs

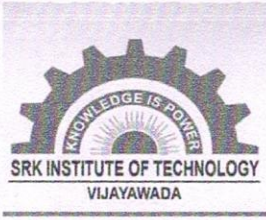| No. of Periods	Topic	Date	Mode of Delivery
Unit-Introduction **CO1: To learn about Python programming language syntax, semantics, and the runtime environment** **TB:" Python Programming: A Modern Approach, Vamsi Kurama, Pearson. "**			
1	History of Python	12/6/19	Lecturer interspersed with discussions
2	Need of Python Programming	13/6/19	
3	Applications Basics of Python Programming Using the EPL(Shell),	14/6/19	
4	Running Python Scripts, Variables, Assignment	14/6/19	
5	Keywords, Input-Output, Indentation	18/6/19	
6	**Tutorial**	18/6/19	
UNIT-II Types, Operators and Expressions **CO2: To be familiarized with universal computer programming concepts like data types, containers** **TB:" Python Programming: A Modern A, 2008pproach, Vamsi Kurama, Pearson. "**			
1	Types - Integers	21/6/19	Lecturer interspersed with discussions
2	Strings, Booleans Operators- Arithmetic Operators, for, while, break, continue, pass	22/6/19 25/6/19	
3	Comparison (Relational) Operators, Assignment Operators, evaluations Control Flow- if, if-elif-else	26/6/19 27/6/19	
4	Logical Operators, Bitwise Operators,	28/6/19	

5	Membership Operators,		
5	Identity Operators, Expressions and order of evaluations	2/7/19	
6	**Tutorial class**	2/7/19	

UNIT-III Data Structures

CO3: To be familiarized with general computer programming concepts like conditional execution, loops & functions

TB:" Python Programming: A Modern Approach, Vamsi Kurama, Pearson. "

1	Lists - Operations	9/7/19	
2	Slicing, Methods; Tuples	10/7/19	
3	Sets, Dictionaries	12/7/19	
4	Tutorial class	19/7/19	
5	Sequences	20/7/19	Lecturer interspersed with discussions
6	. Comprehensions	27/7/19	
7	**Tutorial**	27/7/19	

UNIT-IV: Functions

CO4: To be familiarized with general coding techniques and object-oriented programming

TB "Python Programming: A Modern Approach, Vamsi Kurama, Pearson "

1	Defining Functions	31/7/19	
2	Calling Functions, Passing Arguments	1/8/19	
3	Model	3/8/19	
4	Keyword Arguments	6/8/19	
5	Default Arguments,	7/8/19	
6	Variable argu-length ments	8/8/19	
7	Anonymous Functions	9/8/19	Lecturer interspersed with discussions
8	Fruitful Functions(Function Returning Values),	13/8/19	
9	Scope of the Variables in a Function - Global and Local Variables.	13/8/19	
10	Creating modules	13/8/19	
11	import statement	14/8/19	
12	from. Import statement	14/8/19	
13	name spacing	16/8/19	

14	Introduction to PIP	16/8/19	
15	Installing Packages via PIP	17/8/19	
16	Using Python Packages	17/8/19	
17	**Tutorial**	28/8/19	

UNIT-V: Object Oriented Programming OOP in Python
CO5: To Develop essential programming skills in computer programming concepts like data types, containers
TB: "Python Programming: A Modern Approach, Vamsi Kurama, Pearson"

1	Classes	12/7/19	
2	self variable', Methods	28/8/19	
3	Constructor Method	29/8/19	
4	Inheritance	30/8/19	
5	Overriding Methods	3/9/19	
6	Datahiding	4/9/19	Lecturer interspersed with discussions
7	Difference between an error and Exception	5/9/19	
8	Handling Exception,	5/9/19	
9	try except block	6/9/19	
10	Raising Exceptions	6/9/19	
11	User Defined Exceptions	7/9/19	
12	**Tutorial class**	7/9/19	

UNIT-VI: Brief Tour of the Standard Library
CO6: To Apply the basics of programming in the Python language
TB:" Learning Python, Mark Lutz, Orielly "

1	Operating System Interface	7/9/19	
2	String Pattern Matching	11/9/19	
3	String Pattern Matching	12/9/19	Lecturer interspersed with discussions
4	Dates and Times	12/9/19	
5	Data Compression	7/9/19	
6	Multithreading	11/9/19	
7	GUI Programming	12/9/19	
8	Turtle Graphics	12/9/19	
9	Why testing is required ? Basic	7/9/19	

	concepts of testing		
10	Unit testing in Python	11/9/19	
11	Writing Test cases	11/9/19	
12	Running Tests	12/9/19	
13	**Tutorial**	12/9/19	

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Department of Computer Science and Engineering

TENTATIVE LESSON PLAN: R1621055
DATA STRUCTURES THROUGH C++

Course Title: DATA STRUCTURES THROUGH C++ (R1621055)			
Section : Sec A	Date : 10/6/2019		Page No : 01 of 04
Revision No : 00	Prepared By : J Niranjani		Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1 ARRAYS			
CO1: To be familiar with basic techniques of object oriented principles and exception handling using C++			
TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "			
1	Abstract Data Types and the C++ Class	12/6/19	Lecture Interspersed With discussions
2	An Introduction to C++ Class-	12/6/19	
3	Data Abstraction and Encapsulation in C++	13/6/19	
4	Declaring Class Objects and Invoking Member Functions	14/6/19	
5	Special Class Operations	17/6/19	
6	Miscellaneous Topics	19/6/19	
7	ADTs and C++Classes	20/6/19	
8	The Array as an Abstract Data Type	22/6/19	
9	The Polynomial Abstract Data type- Polynomial Representation	22/6/19	
10	Polynomial Addition	24/6/19	
11	Spares Matrices, Introduction- Sparse Matrix Representation	26/6/19	
12	Transposing a Matrix	28/6/19	
13	Matrix Multiplication	28/6/19	
14	Representation of Arrays.	28/6/19	
15	**Tutorial**	01/7/19	
UNIT-II: STACKS AND QUEUES			
CO2: To be familiar with the concepts like Inheritance, Polymorphism			
TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "			
16	Templates in C++- Template Functions	1/7/19	
17	Using Templates to Represent Container Classes	2/7/19	
18	The Stack Abstract Data Type	4/7/19	
19	The Queue Abstract Data Type	6/7/19	

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UNIT-IV: TREES

CO4: Be familiar with advanced data structures such as balanced search trees, AVLTrees, and B Trees.

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

No. of Periods	TOPIC	Date	Mode of Delivery
50	Introduction, Terminology, Representation of Trees	5/9/19	Lecture interspersed with discussions
51	Binary Trees, The Abstract Data Type	5/9/19	
52	Properties of Binary Tress	6/9/19	
53	Binary Tree Representations	6/9/19	
54	Binary Tree Traversal and Tree Iterators-Introduction	6/9/19	
55	Inorder Traversal	7/9/19	
56	Preorder Traversal	7/9/19	
57	Postorder Traversal	7/9/19	
58	Thread Binary Trees-Threads,	9/9/19	
59	Inorder Traversal of a Threaded Binary Tree	9/9/19	
60	Inserting a Node into a Threaded Binary Tree	13/9/19	
61	Heaps- Priority Queues	13/9/19	
62	Definition of a Max Heap	14/9/19	
63	Insertion into a Max Heap	16/9/19	
64	Deletion from a Max Heap	18/9/19	
65	Binary Search Trees-Definition	19/9/19	
66	Searching a Binary Search Tree	20/9/19	
67	Insertion into a Binary Search Tree	20/9/19	
68	Deletion from a Binary Search Tree.	21/9/19	
69	Height of Binary Search Tree.	20/9/19	
70	**Tutorial**	21/9/19	

UNIT-V: GRAPHS

CO5: Be familiar with advanced data structures such as balanced search trees, AVLTrees, and B Trees.

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

No.	TOPIC	Date	Mode of Delivery
71	The Graph Abstract Data Type, Introduction, Graph Representation	21/9/19	Lecture interspersed with discussions
72	Elementary Graph Operation	21/9/19	
73	Depth First Search(DFS)	23/9/19	

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No. of Periods	TOPIC	Date	Mode of Delivery
20	Sub typing and Inheritance in C++	8/7/19	Lecture interspersed with discussions
21	Evaluation of Expressions- Expression	10/7/19	
22	Postfix Notation	12/7/19	
23	Infix to Postfix.	14/7/19	
24	**Tutorial**	17/7/19	

UNIT-III: LINKED LISTS

CO3: Solve problems using data structures such as linear lists, stacks, queues, hash tables

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

No. of Periods	TOPIC	Date	Mode of Delivery
25	Single Linked List and Chains	18/7/19	Lecture interspersed with discussions
26	Representing Chains in C++- Defining a Node in C++	19/7/19	
27	Designing a Chain Class in C++	19/7/19	
28	Pointer manipulation in C++	19/7/19	
29	Chain Manipulation Operations	20/7/19	
30	The Template Class Chain	22/7/19	
31	Implementing Chains with Templates	22/7/19	
32	Chain Iterators	26/7/19	
33	Chain Operations	26/7/19	
34	Reusing a Class	26/7/19	
35	Circular Lists	27/7/19	
36	Available Space Lists	29/7/19	
37	Linked Stacks and Queues	31/7/19	
38	Polynomials- Polynomial Representation	2/8/19	
39	Adding Polynomials	2/8/19	
40	Circular List Representation of Polynomials	2/8/19	
41	Equivalence Classes	3/8/19	
42	Sparse Matrices-Sparse Matrix Representation	5/8/19	
43	Sparse Matrix Input	7/8/19	
44	Deleting a Sparse Matrix	9/8/19	
45	Doubly Linked Lists	14/8/19	
46	Generalized Lists-Representation of Generalized Lists	16/8/19	
47	Recursive Algorithms for Lists-	17/8/19	
48	Reference Counts Shared and Recursive Lists	28/8/19	
49	**Tutorial**	28/8/19	

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74	Breadth First Search(BFS)	24/9/19	
75	Connected Components, Spanning Trees	25/9/19	
76	Biconnected Components	25/9/19	
77	Minimum Cost Spanning Trees	25/9/19	
78	Kruskal's Algorithm	26/9/19	
79	Prim's Algorithm, Sollin' s Algorithm	27/9/19	
80	Shortest Paths and Transitive Closure	27/9/19	
81	Single Source/All Destination: Nonnegative Edge Cost	28/9/19	
82	Single Source/All Destination: General Weights	29/9/19	
83	All-Pairs Shortest Path, Transitive Closure	30/9/19	
84	**Tutorial**	1/10/19	

UNIT-VI: SORTING

CO6: Be familiar with advanced data structures such as balanced search trees, AVLTrees, and B Trees.

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

85	Insertion Sort	28/8/19	
86	Quick Sort	30/8/19	Lecture interspersed with discussions
87	Merge Sort Merging	31/8/19	
88	Iterative Merge Sort	31/8/19	
89	Recursive Merge Sort	2/8/19	
90	Heap Sort	3/8/19	
91	**Tutorial**	5/9/19	

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TENTATIVE LESSON PLAN: R1621055
DATA STRUCTURES THROUGH C++

Course Title: DATA STRUCTURES THROUGH C++ (R1621055)			
Section : Sec B	Date : 10/6/2019		Page No : 01 of 04
Revision No : 00	Prepared By : M Naresh Babu		Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1 ARRAYS			
CO1: To be familiar with basic techniques of object oriented principles and exception handling using C++			
TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "			
1	Abstract Data Types and the C++ Class	12/6/19	
2	An Introduction to C++ Class-	12/6/19	
3	Data Abstraction and Encapsulation in C++	13/6/19	
4	Declaring Class Objects and Invoking Member Functions	14/6/19	Lecture Interspersed With discussions
5	Special Class Operations	17/6/19	
6	Miscellaneous Topics	19/6/19	
7	ADTs and C++Classes	20/6/19	
8	The Array as an Abstract Data Type	22/6/19	
9	The Polynomial Abstract Data type- Polynomial Representation	22/6/19	
10	Polynomial Addition	24/6/19	
11	Spares Matrices, Introduction- Sparse Matrix Representation	26/6/19	
12	Transposing a Matrix	28/6/19	
13	Matrix Multiplication	28/6/19	
14	Representation of Arrays.	28/6/19	
15	**Tutorial**	01/7/19	
UNIT-II: STACKS AND QUEUES			
CO2: To be familiar with the concepts like Inheritance, Polymorphism			
TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "			
16	Templates in C++- Template Functions	1/7/19	
17	Using Templates to Represent Container Classes	2/7/19	
18	The Stack Abstract Data Type	4/7/19	
19	The Queue Abstract Data Type	6/7/19	

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No. of Periods	TOPIC	Date	Mode of Delivery
20	Sub typing and Inheritance in C++	8/7/19	Lecture interspersed with discussions
21	Evaluation of Expressions- Expression	10/7/19	
22	Postfix Notation	12/7/19	
23	Infix to Postfix.	14/7/19	
24	**Tutorial**	17/7/19	

UNIT-III: LINKED LISTS

CO3: Solve problems using data structures such as linear lists, stacks, queues, hash tables

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

No. of Periods	TOPIC	Date	Mode of Delivery
25	Single Linked List and Chains	18/7/19	Lecture interspersed with discussions
26	Representing Chains in C++- Defining a Node in C++	19/7/19	
27	Designing a Chain Class in C++	19/7/19	
28	Pointer manipulation in C++	19/7/19	
29	Chain Manipulation Operations	20/7/19	
30	The Template Class Chain	22/7/19	
31	Implementing Chains with Templates	22/7/19	
32	Chain Iterators	26/7/19	
33	Chain Operations	26/7/19	
34	Reusing a Class	26/7/19	
35	Circular Lists	27/7/19	
36	Available Space Lists	29/7/19	
37	Linked Stacks and Queues	31/7/19	
38	Polynomials- Polynomial Representation	2/8/19	
39	Adding Polynomials	2/8/19	
40	Circular List Representation of Polynomials	2/8/19	
41	Equivalence Classes	3/8/19	
42	Sparse Matrices-Sparse Matrix Representation	5/8/19	
43	Sparse Matrix Input	7/8/19	
44	Deleting a Sparse Matrix	9/8/19	
45	Doubly Linked Lists	14/8/19	
46	Generalized Lists-Representation of Generalized Lists	16/8/19	
47	Recursive Algorithms for Lists-	17/8/19	
48	Reference Counts Shared and Recursive Lists	28/8/19	
49	**Tutorial**	28/8/19	

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UNIT-IV: TREES

CO4: Be familiar with advanced data structures such as balanced search trees, AVLTrees, and B Trees.

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

No. of Periods	TOPIC	Date	Mode of Delivery
50	Introduction, Terminology, Representation of Trees	5/9/19	Lecture interspersed with discussions
51	Binary Trees, The Abstract Data Type	5/9/19	
52	Properties of Binary Tress	6/9/19	
53	Binary Tree Representations	6/9/19	
54	Binary Tree Traversal and Tree Iterators-Introduction	6/9/19	
55	Inorder Traversal	7/9/19	
56	Preorder Traversal	7/9/19	
57	Postorder Traversal	7/9/19	
58	Thread Binary Trees-Threads,	9/9/19	
59	Inorder Traversal of a Threaded Binary Tree	9/9/19	
60	Inserting a Node into a Threaded Binary Tree	13/9/19	
61	Heaps- Priority Queues	13/9/19	
62	Definition of a Max Heap	14/9/19	
63	Insertion into a Max Heap	16/9/19	
64	Deletion from a Max Heap	18/9/19	
65	Binary Search Trees-Definition	19/9/19	
66	Searching a Binary Search Tree	20/9/19	
67	Insertion into a Binary Search Tree	20/9/19	
68	Deletion from a Binary Search Tree.	21/9/19	
69	Height of Binary Search Tree.	20/9/19	
70	**Tutorial**	21/9/19	

UNIT-V: GRAPHS

CO5: Be familiar with advanced data structures such as balanced search trees, AVLTrees, and B Trees.

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

71	The Graph Abstract Data Type, Introduction, Graph Representation	21/9/19	Lecture interspersed with discussions
72	Elementary Graph Operation	21/9/19	
73	Depth First Search(DFS)	23/9/19	

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74	Breadth First Search(BFS)	24/9/19	
75	Connected Components, Spanning Trees	25/9/19	
76	Biconnected Components	25/9/19	
77	Minimum Cost Spanning Trees	25/9/19	
78	Kruskal's Algorithm	26/9/19	
79	Prim's Algorithm, Sollin' s Algorithm	27/9/19	
80	Shortest Paths and Transitive Closure	27/9/19	
81	Single Source/All Destination: Nonnegative Edge Cost	28/9/19	
82	Single Source/All Destination: General Weights	29/9/19	
83	All-Pairs Shortest Path, Transitive Closure	30/9/19	
84	**Tutorial**	1/10/19	

UNIT-VI: SORTING

CO6: Be familiar with advanced data structures such as balanced search trees, AVLTrees, and B Trees.

TB:" Fundamentals of Data Structures in C++, S.Sahni, University Press (India) Pvt.Ltd, 2nd edition, Universities Press, Pvt. Ltd. "

85	Insertion Sort	28/8/19	
86	Quick Sort	30/8/19	Lecture interspersed with discussions
87	Merge Sort Merging	31/8/19	
88	Iterative Merge Sort	31/8/19	
89	Recursive Merge Sort	2/8/19	
90	Heap Sort	3/8/19	
91	**Tutorial**	5/9/19	

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TENTATIVE LESSON PLAN: R1621056

COMPUTER GRAPHICS

Course Title: Computer Graphics		
Section:Sec1	Date: Date:10/6/19	Page No: 01 of 04
Revision No: 00	Prepared By: A RADHIKA	Approved By: HOD

Tools: Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1: 2D Primitives Output primitives CO1: Understand the fundamental concepts and theory of computer graphics. TB:" Donald Hearn, Pauline Baker, Computer Graphics – C Version, second edition Pearson Education,2004 "			
1	Unit 1- Introduction To ComputerGraphics	12/6/19	Lecture interspersed with discussions
2	Line Generation DDA explanation	12/6/19	
3	DDA Algorithm, Problem	12/6/19	
4	Bresenham 's Algorithm Problem	14/6/19	
5	Bresenhams Circle Derivation	14/6/19	
6	Circle Algorithm ,Problem	24/6/19	
7	Bresenhams Ellipse Algorithm	25/6/19	
8	Bresenhams Derivation	26/6/19	
9	Problem on Ellipse Generation	28/6/19	
10	Two dimensional Geometric Transformation	28/6/19	
11	Translation, scaling, Rotation	29/6/19	
12	Two Dimensional Viewing	1/7/19	
13	Window to ViewPort Transformation	2/7/19	
14	Clipping, Point Clipping	2/7/19	
15	Line clipping, Sutherland-Line Clipping	3/7/19	
16	Lian Barsky Line Clipping	4/7/19	
17	Polygon Clipping	4/7/19	
18	Text and Curve Fitting	4/7/19	
19	Tutorial	5/7/19	

UNIT-II: Graphics Programming Color Models

CO2: Know and be able to select among models for lighting/shading: Color, ambient light; distant and light with sources) and Open GL Primitives

TB:" Donald Hearn, Pauline Baker, Computer Graphics – C Version, second edition Pearson Education,2004. "

1	**Color Modes,RGB ,YIQ**	**24/7/19**	
2	CMY,HSV Color Model	**25/7/19**	
3	Animations	**25/7/19**	
4	General Computer Animation	**26/7/19**	
5	Raster Animation	**29/7/19**	
6	Key Frame System	**30/7/19**	**Lecture interspersed with discussions**
7	Motion Specifications	**30/719**	
8	Graphic Programming Using OPENGL	**31/7/19**	
9	Basic GL Primitives	**31/7/19**	
10	Drawing 3D Objects	**1/8/19**	
11	Drawing 3D Scenes	**2/8/19**	
12	Tutorial	**2/8/19**	

UNIT-III: 3D Concepts Parallel and Perspective projections

CO3: Understand modeling, and interactive control of 3D computer graphics applications,

Computer Graphics – C Version, second edition Pearson Education,2004"

1	3D Transformations	**24/7/19**	
2	Reflection,Shearing	**25/7/19**	
3	3D Object Representation	**25/7/19**	
4	Curved lines	**26/7/19**	
5	Bezier Curves	**29/7/19**	
6	Spline Curves	**30/7/19**	**Lecture interspersed with discussions**
7	Parallel Projections	**30/7/19**	
8	Perspective Projections	**31/7/19**	
9	Quadratic Surfaces	**31/7/19**	
10	Visualization of Datasets	**1/8/19**	
11	Visible Surface detection	**2/8/19**	
12	Image space identification	**2/8/19**	
13	Tutorial	**3/8/19**	

UNIT-IV: Rendering Introduction to Shading models
CO4: Know and able to understand various rendering methods, rendering textures and drawing shadows
TB:" F.S. Hill, Computer Graphics using OPENGL, Second edition, Pearson Education, 2003 "

1	Introduction to Shading Models	5/8/19	Lecture interspersed with discussions
2	Lambuts law, Phonf coefficient	6/8/19	
3	Flat Shading	7/8/19	
4	Smooth Shading – Gaurand Shading	8/8/19	
5	Phong Shading	8/8/19	
6	Adding Textures to faces	13/8/19	
7	Adding Shadows to Objects	14/8/19	
8	Rendering a Texture	16/8/19	
9	Drawing Shadows	17/8/19	
10	Shadows using buffer	28/8/19	
11	Tutorial	4/9/19	

UNIT-V: Fractals and Self similarity
CO5: Demonstrate an understanding of various fractals and self similarities, creating image by interacted functions
TB:" F.S. Hill, Computer Graphics using OPENGL, Second edition, Pearson Education, 2003"
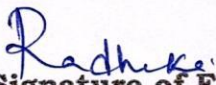
1	Fractals and Self Similarity	5/9/19	Lecture interspersed with discussions
2	Peano Curves	5/9/19	
3	Creating image by Iterated Systems	6/9/19	
4	Chic as Game	9/9/19	
5	Mandelbrot sets	11/9/19	
6	Example on Mandelbrout set	12/9/19	
7	Julia set	12/9/19	
8	Example on Julia set	16/9/19	
9	Random Fractals	17/9/19	
10	Tutorial	18/9/19	

UNIT-VI: Overview of Ray Tracing Intersecting rays with other primitives
CO6: Know various intersecting rays with other primitives, and adding surface textures, various Boolean operations in computer graphics using open GL
TB:" F.S. Hill, Computer Graphics using OPENGL, Second edition, Pearson Education, 2003 "

1	Overview of Raytracing	19/9/19	Lecture interspersed with discussions
2	Intersecting Rays with Primitives	21/9/19	
3	Reflection	23/9/19	
4	Transparency	24/9/19	
5	Boolean Operation on Objects	25/9/19	
6	Boolean Operation on Objects with Example	26/9/19	
7	Adding surface texture	27/9/19	
8	Tutorial	28/9/19	

Radhika
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TENTATIVE LESSON PLAN: R1621056

COMPUTER GRAPHICS

Course Title: Computer Graphics		
Section:Sec2	Date: Date:10/6/19	Page No: 01 of 04
Revision No: 00	Prepared By: A RADHIKA	Approved By: HOD

Tools: Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1: 2D Primitives Output primitives CO1: Understand the fundamental concepts and theory of computer graphics. TB:" Donald Hearn, Pauline Baker, Computer Graphics – C Version, second edition Pearson Education,2004 "			
1	Unit 1- Introduction To ComputerGraphics	12/6/19	Lecture interspersed with discussions
2	Line Generation DDA explanation	12/6/19	
3	DDA Algorithm, Problem	12/6/19	
4	Bresenham 's Algorithm Problem	14/6/19	
5	Bresenhams Circle Derivation	14/6/19	
6	Circle Algorithm ,Problem	24/6/19	
7	Bresenhams Ellipse Algorithm	25/6/19	
8	Bresenhams Derivation	26/6/19	
9	Problem on Ellipse Generation	28/6/19	
10	Two dimensional Geometric Transformation	28/6/19	
11	Translation, scaling, Rotation	29/6/19	
12	Two Dimensional Viewing	1/7/19	
13	Window to ViewPort Transformation	2/7/19	
14	Clipping, Point Clipping	2/7/19	
15	Line clipping, Sutherland-Line Clipping	3/7/19	
16	Lian Barsky Line Clipping	4/7/19	
17	Polygon Clipping	4/7/19	
18	Text and Curve Fitting	4/7/19	
19	Tutorial	5/7/19	

UNIT-II: Graphics Programming Color Models

CO2: Know and be able to select among models for lighting/shading: Color, ambient light; distant and light with sources) and Open GL Primitives

TB:" Donald Hearn, Pauline Baker, Computer Graphics – C Version, second edition Pearson Education,2004. "

1	Color Modes,RGB ,YIQ	24/7/19	
2	CMY,HSV Color Model	25/7/19	
3	Animations	25/7/19	
4	General Computer Animation	26/7/19	
5	Raster Animation	29/7/19	
6	Key Frame System	30/7/19	Lecture interspersed with discussions
7	Motion Specifications	30/719	
8	Graphic Programming Using OPENGL	31/7/19	
9	Basic GL Primitives	31/7/19	
10	Drawing 3D Objects	1/8/19	
11	Drawing 3D Scenes	2/8/19	
12	Tutorial	2/8/19	

UNIT-III: 3D Concepts Parallel and Perspective projections

CO3: Understand modeling, and interactive control of 3D computer graphics applications

Computer Graphics – C Version, second edition Pearson Education,2004"

1	3D Transformations	24/7/19	
2	Reflection,Shearing	25/7/19	
3	3D Object Representation	25/7/19	
4	Curved lines	26/7/19	
5	Bezier Curves	29/7/19	
6	Spline Curves	30/7/19	Lecture interspersed with discussions
7	Parallel Projections	30/7/19	
8	Perspective Projections	31/7/19	
9	Quadratic Surfaces	31/7/19	
10	Visualization of Datasets	1/8/19	
11	Visible Surface detection	2/8/19	
12	Image space identification	2/8/19	
13	Tutorial	3/8/19	

UNIT-IV: Rendering Introduction to Shading models
CO4: Know and able to understand various rendering methods, rendering textures and drawing shadows
TB:" F.S. Hill, Computer Graphics using OPENGL, Second edition, Pearson Education, 2003 "

1	Introduction to Shading Models	5/8/19	
2	Lambuts law, Phong coefficient	6/8/19	
3	Flat Shading	7/8/19	
4	Smooth Shading – Gaurand Shading	8/8/19	Lecture interspersed with discussions
5	Phong Shading	8/8/19	
6	Adding Textures to faces	13/8/19	
7	Adding Shadows to Objects	14/8/19	
8	Rendering a Texture	16/8/19	
9	Drawing Shadows	17/8/19	
10	Shadows using buffer	28/8/19	
11	Tutorial	4/9/19	

UNIT-V: Fractals and Self similarity
CO5: Demonstrate an understanding of various fractals and self similarities, creating image by interacted functions
TB:" F.S. Hill, Computer Graphics using OPENGL, Second edition, Pearson Education, 2003"

1	Fractals and Self Similarity	5/9/19	
2	Peano Curves	5/9/19	
3	Creating image by Iterated Systems	6/9/19	
4	Chic as Game	9/9/19	Lecture interspersed with discussions
5	Mandelbrot sets	11/9/19	
6	Example on Mandelbrout set	12/9/19	
7	Julia set	12/9/19	
8	Example on Julia set	16/9/19	
9	Random Fractals	17/9/19	
10	Tutorial	18/9/19	

UNIT-VI: Overview of Ray Tracing Intersecting rays with other primitives
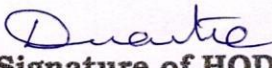**CO6: Know various intersecting rays with other primitives, and adding surface textures, various Boolean operations in computer graphics using open GL**
**TB:" F.S. Hill, Computer Graphics using OPENGL, Second edition, Pearson Education, 2003 "**

1	Overview of Ray tracing	19/9/19	Lecture interspersed with discussions
2	Intersecting Rays with Primitives	21/9/19	
3	Reflection	23/9/19	
4	Transparency	24/9/19	
5	Boolean Operation on Objects	25/9/19	
6	Boolean Operation on Objects with Example	26/9/19	
7	Adding surface texture	27/9/19	
8	Tutorial	28/9/19	

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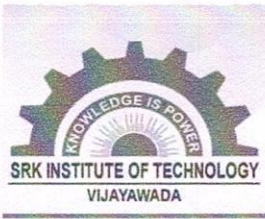
TENTATIVE LESSON PLAN: R1631051

COMPILER DESIGN

Course Title: **COMPILER DESIGN**		
Section:Sec1	Date:10/6/19	Page No: 01 of 04
Revision No: 00	Prepared By: B.Ashalatha	Approved By: HOD

Tools: Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1 Introduction **CO1: To acquire knowledge in different phases and passes of Compiler, and specifying different types of tokens by lexical analyzer, and also able to use the Compiler tools like LEX, YACC, etc** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman,2nd edition,pearson,2007. "**			
1	Language Processing	12/6/19	Lecturer interspersed with discussions
2	Structure of a compiler-	12/6/19	
3	the evaluation of Programming language,	13/6/19	
4	the evaluation of Programming language,	14/6/19	
5	The Science of building a Compiler	17/6/19	
6	application of Compiler Technology	19/6/19	
7	Programming Language Basics	20/6/19	
8	Programming Language Basics	22/6/19	
9	Lexical Analysis	22/6/19	
10	The role of lexical analysis buffing	24/6/19	
11	specification of tokens	26/6/19	
12	Recognitions of tokens	28/6/19	
13	the lexical analyzer generator	28/6/19	
14	the lexical analyzer generator	28/6/19	
15	**Tutorial**	01/7/19	
UNIT-II: Syntax Analysis			

CO2: To be familiar with the concepts Parsing Syntax Analysis.
TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman,2nd edition,pearson,2007. "
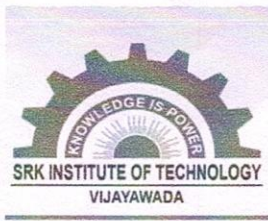
1	The Role of a parser	1/7/19	Lecturer interspersed with discussions
2	The Role of a parser	2/7/19	
3	Context free Grammars	4/7/19	
4	Writing A grammar	6/7/19	
5	top down parsing	8/7/19	
6	Evaluation of Expressions- Expression	10/7/19	
7	bottom up parsing	12/7/19	
8	Introduction to Lr Parser	14/7/19	
9	**Tutorial**	17/7/19	

UNIT-III: More Powerful LR parser
CO3: To be familiar with Parser and its types i.e. Top-down and Bottom-up parsers
TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "

1	Introducuction to LR PArsers	18/7/19	Lecturer interspersed with discussions
2	SLR	19/7/19	
3	SLR	19/7/19	
4	CLR	19/7/19	
5	CLR	20/7/19	
6	LALR	22/7/19	
7	(LR1, LALR) Using Armigers Grammars	22/7/19	
8	Error Recovery in LR Parsers	26/7/19	
9	Error Recovery in LR Parsers	26/7/19	
10	Syntax Directed Transactions Definition	26/7/19	
11	Syntax Directed Transactions Definition	27/7/19	
12	Evolution order of SDTS	29/7/19	
13	Evolution order of SDTS	31/7/19	
14	Evolution order of SDTS	2/8/19	
15	Application of SDTS	2/8/19	
16	Application of SDTS	2/8/19	

17	Syntax Directed Translation Schemes	3/8/19	
18	Syntax Directed Translation Schemes	5/8/19	
19	Sparse Matrix Input	7/8/19	
20	Problems	9/8/19	
21	Problems	14/8/19	
22	Problems	16/8/19	
23	Problems	17/8/19	
24	Problems	28/8/19	
25	**Tutorial**	28/8/19	

UNIT-IV: Intermediated Code

CO4: Be familiar with Construction of LL, SLR, CLR and LALR parse table.

TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "

1	Generation Variants of Syntax trees	5/9/19	
2	Generation Variants of Syntax trees	5/9/19	
3	3 Address code	6/9/19	
4	3 Address code	6/9/19	
5	Types and Deceleration,	6/9/19	
6	Types and Deceleration,	7/9/19	
7	Types and Deceleration,	7/9/19	Lecturer interspersed with discussions
8	Translation of Expressions	7/9/19	
9	Type Checking	9/9/19	
10	Type Checking	9/9/19	
11	Control Flow	13/9/19	
12	Control Flow	13/9/19	
13	Back patching	16/9/19	
14	Back patching	16/9/19	
15	Problems	18/9/19	
16	Problems	19/9/19	
17	**Tutorial**	20/9/19	

UNIT-V: Runtime Environments

CO5: Be familiar with Syntax directed translation, synthesized and inherited

attributes

TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "
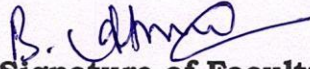
1	Stack allocation of space	21/9/19	
2	access to Non Local data	21/9/19	
3	Stack Management	23/9/19	
4	Heap Managemen	24/9/19	
5	code generation	25/9/19	
6	Issues in design of code generation	25/9/19	
7	target Language	25/9/19	Lecturer interspersed with discussions
8	Address in the target code	26/9/19	
9	Basic blocks	27/9/19	
10	Basic blocks	27/9/19	
11	Flow graphs	28/9/19	
12	Simple Code generation	28/9/19	
13	Simple Code generation	30/9/19	
14	**Tutorial**	1/10/19	

UNIT-VI: Machine Independent Optimization
CO6: Be familiar with Techniques for code optimization.
TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "

1	The principle sources of Optimization	30/8/19	
2	The principle sources of Optimization	30/8/19	Lecturer interspersed with discussions
3	peep hole Optimization	31/8/19	
4	peep hole Optimization	31/8/19	
5	Introduction to Date flow Analysis	31/8/19	
6	Introduction to Date flow Analysis	31/8/19	
7	**Tutorial**	5/9/19	

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SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Computer Science and Engineering

TENTATIVE LESSON :COMPILER DESIGN

Course Title: COMPILER DESIGN(R1631051)		
Section:Sec2	**Date:10/6/19**	**Page No: 01 of 04**
Revision No: 00	**Prepared By: Dr.N.Neelima Priyanka**	**Approved By:** **HOD**

Tools: Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1 Introduction **CO1: To acquire knowledge in different phases and passes of Compiler, and specifying different types of tokens by lexical analyzer, and also able to use the Compiler tools like LEX, YACC, etc** **TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman,2nd edition,pearson,2007. "**			
1	Language Processing	12/6/19	
2	Structure of a compiler-	12/6/19	
3	the evaluation of Programming language,	13/6/19	
4	the evaluation of Programming language,	14/6/19	
5	The Science of building a Compiler	17/6/19	
6	application of Compiler Technology	19/6/19	Lecturer interspersed with discussions
7	Programming Language Basics	20/6/19	
8	Programming Language Basics	22/6/19	
9	Lexical Analysis	22/6/19	
10	The role of lexical analysis buffing	24/6/19	
11	specification of tokens	26/6/19	
12	Recognitions of tokens	28/6/19	
13	the lexical analyzer generator	28/6/19	
14	the lexical analyzer generator	28/6/19	
15	**Tutorial**	01/7/19	
UNIT-II: Syntax Analysis **CO2: To be familiar with the concepts Parsing Syntax Analysis.**			

TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi Sethi Jeffery D. Ullman,2nd edition,pearson,2007. "

1	The Role of a parser	1/7/19	Lecturer interspersed with discussions
2	The Role of a parser	2/7/19	
3	Context free Grammars	4/7/19	
4	Writing A grammar	6/7/19	
5	top down parsing	8/7/19	
6	Evaluation of Expressions- Expression	10/7/19	
7	bottom up parsing	12/7/19	
8	Introduction to Lr Parser	14/7/19	
9	**Tutorial**	17/7/19	

UNIT-III: More Powerful LR parser

CO3: To be familiar with Parser and its types i.e. Top-down and Bottom-up parsers

TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "

1	Introducuction to LR PArsers	18/7/19	
2	SLR	19/7/19	
3	SLR	19/7/19	
4	CLR	19/7/19	
5	CLR	20/7/19	
6	LALR	22/7/19	
7	(LR1, LALR) Using Armigers Grammars	22/7/19	
8	Error Recovery in LR Parsers	26/7/19	
9	Error Recovery in LR Parsers	26/7/19	
10	Syntax Directed Transactions Definition	26/7/19	Lecturer interspersed with discussions
11	Syntax Directed Transactions Definition	27/7/19	
12	Evolution order of SDTS	29/7/19	
13	Evolution order of SDTS	31/7/19	
14	Evolution order of SDTS	2/8/19	
15	Application of SDTS	2/8/19	
16	Application of SDTS	2/8/19	
17	Syntax	3/8/19	

	Directed Translation Schemes		
18	Syntax Directed Translation Schemes	5/8/19	
19	Sparse Matrix Input	7/8/19	
20	Problems	9/8/19	
21	Problems	14/8/19	
22	Problems	16/8/19	
23	Problems	17/8/19	
24	Problems	28/8/19	
25	**Tutorial**	28/8/19	

UNIT-IV: Intermediated Code

CO4: Be familiar with Construction of LL, SLR, CLR and LALR parse table.

TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "

1	Generation Variants of Syntax trees	5/9/19	
2	Generation Variants of Syntax trees	5/9/19	
3	3 Address code	6/9/19	
4	3 Address code	6/9/19	
5	Types and Deceleration,	6/9/19	
6	Types and Deceleration,	7/9/19	
7	Types and Deceleration,	7/9/19	Lecturer interspersed with discussions
8	Translation of Expressions	7/9/19	
9	Type Checking	9/9/19	
10	Type Checking	9/9/19	
11	Control Flow	13/9/19	
12	Control Flow	13/9/19	
13	Back patching	16/9/19	
14	Back patching	16/9/19	
15	Problems	18/9/19	
16	Problems	19/9/19	
17	**Tutorial**	20/9/19	

UNIT-V: Runtime Environments

CO5: Be familiar with Syntax directed translation, synthesized and inherited attributes

TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "

1	Stack allocation of space	21/9/19	
2	access to Non Local data	21/9/19	
3	Stack Management	23/9/19	
4	Heap Managemen	24/9/19	
5	code generation	25/9/19	
6	Issues in design of code generation	25/9/19	
7	target Language	25/9/19	Lecturer interspersed with discussions
8	Address in the target code	26/9/19	
9	Basic blocks	27/9/19	
10	Basic blocks	27/9/19	
11	Flow graphs	28/9/19	
12	Simple Code generation	28/9/19	
13	Simple Code generation	30/9/19	
14	**Tutorial**	1/10/19	

UNIT-VI: Machine Independent Optimization
CO6: Be familiar with Techniques for code optimization.
TB:" Compilers, Principles Techniques and Tools.Alfred V Aho, Monical S. Lam, Ravi SethiJeffery D. Ullman,2nd edition,pearson,2007. "

1	The principle sources of Optimization	30/8/19	
2	The principle sources of Optimization	30/8/19	Lecturer interspersed with discussions
3	peep hole Optimization	31/8/19	
4	peep hole Optimization	31/8/19	
5	Introduction to Date flow Analysis	31/8/19	
6	Introduction to Date flow Analysis	31/8/19	
7	**Tutorial**	5/9/19	

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SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada, 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Computer Science and Engineering

TENTATIVE LESSON PLAN-R1631052

UNIX AND SHELL PROGRAMMING

Course Title: UNIX AND SHELL PROGRAMMING			
Year /Sem : III/I	Date : 5/10/2	SEC:A	AY: 2019-20
Revision No :	Prepared By : K.SRILAKSHMI Assistant Professor		Approved By : HOD

Tools: Black Board , PPT , Video Lectures

UNIT-I Introduction to unix
CO1:   Identify the basic Unix general purpose commands.
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

No.of Periods	Topic	Date	Mode of delivry
1	Introduction to unix-Brief History	11-6-19	Lecture with discussions
2	What is Unix	13-6-19	
3	Unix Components	15-6-19	
4	Using Unix	17-6-19	
5	Commands in Unix	19-6-19	
6,7	Basic commands	20-6-19	
8,9	Command Substitution	22-6-19	
10	Giving Multiple Commands	25-6-19	
11	Tutorial	29-6-19	

UNIT-II: The File system
CO2: Apply and change the ownership and file permissions using advance Unix commands
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

12	The File System-The Basics of Files	29-6-19	Lecture with discussions
13	What's in a File	3-7-19	
14	Directories and File Names	4-7-19	
15	Permissions	6-7-19	
16	INodes	6-7-19	
17	The Directory Hierarchy	8-7-19	
18,19	File Attributes and Permissions	8-7-19	
20	The File Command knowing the File Type	9-7-19	
21	The Chmod Command Changing File	10-7-19	
22	The Chown Command Changing the Owner of a	11-7-19	
23	The Chgrp Command Changing the Group of a	12-7-19	
24	Tutorial	12-7-19	

UNIT-III: Shell-Command Line Structure
CO3:   Use the awk, grep, perl scripts.
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

25	Using the Shell-Command Line Structure	18-7-19	Lecture with
26,27	MetaCharacters	20-7-19	

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28	Creating New Commands	25-7-19	discussions
29	Command Arguments and Parameters	27-7-19	
30,31	Program Output as Arguments	29-7-19	
32	Shell Variables	31-7-19	
33	More on I/O Redirection	2-8-19	
34	Looping in Shell Programs	3-8-19	
35	Tutorial	3-8-19	

UNIT-IV:. Filters

CO4: Implement shell scripts and sed

TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

36,37	Filters-The Grep Family	14-8-19	
38	Other Filters	19-8-19	
39	The Stream Editor Sed	24-8-19	Lecture with discussions
40	The AWK Pattern Scanning and processing Language	26-8-19	
41	Good Files and Good Filters	28-8-19	
42	Tutorial	28-8-19	

UNIT-V: Shell Programming

CO5: Apply basic of administrative task.

TB:. The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

43	Shell Prgramming-Shell Variables	31-8-19	
44	The Export Command	31-8-19	
45	The Profile File a Script Run During Starting	3-9-19	
46	The First Shell Script, The read Command	11-9-19	
47	Positional parameters	12-9-19	
48	The $? Variable knowing the exit status	13-9-19	
49	More about the Set Command, The Exit	14-9-19	Lecture with discussions
50	Branching Control Structures & Loop Control	14-9-19	
51	The Continue and Break Statement	16-9-19	
52	The Expr Command:Performing Integer	17-9-19	
53	Real Arithmetic in Shell Programs	17-9-19	
54	The here Document(<<)Sleep Command	18-9-19	
55	Debugging Scripts	18-9-19	
56	The Script, Eval, Exec Command	19-9-19	
57	Tutorial	19-9-19	

UNIT-VI: The Process

CO6: Apply networking Unix commands

TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

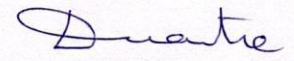| 58	The Process-The Meaning	20-9-19	Lecture with
59	Parent and Child Processes	21-9-19	

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60	Types of Processes	21-9-19	discussions
61	More about Foreground and Background	21-9-19	
62	Internal and External Commands	23-9-19	
63	Process Creation	24-9-19	
64	The Trap Command	25-9-19	
65	The Stty Command	26-9-19	
66	The Kill Command	28-9-19	
67	Job Control	1-10-19	
68	Tutorial	1-10-19	

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TENTATIVE LESSON PLAN-R1631052

UNIX AND SHELL PROGRAMMING

Course Title: UNIX AND SHELL PROGRAMMING			
Year /Sem : III/I	Date : 5/10/2	SEC:B	AY: 2019-20
Revision No :	Prepared By : K.SRILAKSHMI Assistant Professor		Approved By : HOD

Tools: Black Board , PPT , Video Lectures

UNIT-I Introduction to unix
CO1: Identify the basic Unix general purpose commands.
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

No.of Periods	Topic	Date	Mode of delivry
1	Introduction to unix-Brief History	11-6-19	Lecture with discussions
2	What is Unix	13-6-19	
3	Unix Components	15-6-19	
4	Using Unix	17-6-19	
5	Commands in Unix	19-6-19	
6,7	Basic commands	20-6-19	
8,9	Command Substitution	22-6-19	
10	Giving Multiple Commands	25-6-19	
11	Tutorial	29-6-19	

UNIT-II: The File system
CO2: Apply and change the ownership and file permissions using advance Unix commands
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

12	The File System-The Basics of Files	29-6-19	Lecture with discussions
13	What's in a File	3-7-19	
14	Directories and File Names	4-7-19	
15	Permissions	6-7-19	
16	INodes	6-7-19	
17	The Directory Hierarchy	8-7-19	
18,19	File Attributes and Permissions	8-7-19	
20	The File Command knowing the File Type	9-7-19	
21	The Chmod Command Changing File	10-7-19	
22	The Chown Command Changing the Owner of a	11-7-19	
23	The Chgrp Command Changing the Group of a	12-7-19	
24	Tutorial	12-7-19	

UNIT-III: Shell-Command Line Structure
CO3: Use the awk, grep, perl scripts.
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

25	Using the Shell-Command Line Structure	18-7-19	Lecture with
26,27	MetaCharacters	20-7-19	

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26,27	MetaCharacters	20-7-19	discussions
28	Creating New Commands	23-7-19	
29	Command Arguments and Parameters	26-7-19	
30,31	Program Output as Arguments	27-7-19	
32	Shell Variables	28-7-19	
33	More on I/O Redirection	30-7-19	
34	Looping in Shell Programs	3-8-19	
35	Tutorial	3-8-19	

UNIT-IV:. Filters
 CO4: Implement shell scripts and sed
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

36,37	Filters-The Grep Family	14-8-19	
38	Other Filters	16-8-19	
39	The Stream Editor Sed	21-8-19	Lecture with discussions
40	The AWK Pattern Scanning and processing Language	4-9-19	
41	Good Files and Good Filters	5-9-19	
42	Tutorial	5-9-19	

UNIT-V: Shell Programming
CO5: Apply basic of administrative task.

TB:. The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

43	Shell Prgramming-Shell Variables	31-8-19	
44	The Export Command	31-8-19	
45	The Profile File a Script Run During Starting	3-9-19	
46	The First Shell Script, The read Command	11-9-19	
47	Positional parameters	12-9-19	
48	The $? Variable knowing the exit status	13-9-19	
49	More about the Set Command, The Exit	14-9-19	Lecture with discussions
50	Branching Control Structures & Loop Control	14-9-19	
51	The Continue and Break Statement	16-9-19	
52	The Expr Command:Performing Integer	17-9-19	
53	Real Arithmetic in Shell Programs	17-9-19	
54	The here Document(<<)Sleep Command	18-9-19	
55	Debugging Scripts	18-9-19	
56	The Script, Eval, Exec Command	19-9-19	
57	Tutorial	19-9-19	

UNIT-VI: The Process
 CO6: Apply networking Unix commands
TB: The Unix programming Environment by Brain W. Kernighan & Rob Pike, Pearson.

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58	The Process-The Meaning	20-9-19	
59	Parent and Child Processes	21-9-19	
60	Types of Processes	21-9-19	
61	More about Foreground and Background	21-9-19	
62	Internal and External Commands	23-9-19	Lecture with discussions
63	Process Creation	24-9-19	
64	The Trap Command	25-9-19	
65	The Stty Command	26-9-19	
66	The Kill Command	28-9-19	
67	Job Control	1-10-19	
68	Tutorial	1-10-19	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TENTATIVE LESSON PLAN: R1631053

Course Title : OBJECT ORIENTED ANALYSIS & DESIGN USING UML			
Section : Sec A	Date : 10-6-2019		Page No : 01 of 03
Revision No : 00	Prepared By : P.JAYASRI		Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**INTRODUCTION TO SYSTEMS**		
CO1:: Will be able to understand how to solve complex problems			
TB: Object- Oriented Analysis And Design with Applications, Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston, 3rd edition, 2013, PEARSON.			
1.	Introduction to Systems	11/06/19	
2.	The Structure of Complex systems	12/06/19	
3.	The Inherent Complexity of Software	17/06/19	
4.	Attributes of Complex System	18/06/19	
5.	Organized and Disorganized Complexity	19/06/19	Lecture interspersed with discussions
6.	Bringing Order to Chaos	19/06/19	
7.	Designing Complex Systems	21/06/19	
8.	Evolution of Object Model	24/06/19	
9.	Foundation of Object Model	24/06/19	
10.	Elements of Object Model	25/06/19	
11.	Applying the Object Model	26/06/19	
12.	Tutorial	28/06/19	
UNIT –II CLASSES AND OBJECTS			
CO2:: Will be able to Able to Represent classes, responsibilities and states using UML Notation.			
TB: Object- Oriented Analysis And Design with Applications, Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston, 3rd edition, 2013, PEARSON.			
13.	Nature of object	29/06/19	
14.	Relationships among objects	29/06/19	
15.	Nature of a Class	01/07/19	
16.	Relationship among Classes	01/07/19	
17.	Interplay of Classes and Objects	05/07/19	
18.	Importance of Proper Classification	08/07/19	
19.	Key abstractions and Mechanisms	10/07/19	Lecture interspersed with discussions
20.	Tutorial	12/07/19	

UNIT – III   INTRODUCTION TO UML
CO3:: Gain the knowledge of classes and responsibilities of the problem domain.
    TB: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

21.	Introduction to UML	18/07/19	
22.	Why we model	19/07/19	
23.	Conceptual model of UML	20/07/19	Lecture interspersed with discussions
24.	Architecture	22/07/19	
25.	Classes	22/07/19	
26.	Relationships	23/07/19	
27.	Common Mechanisms	24/07/19	
28.	Class diagrams	26/07/19	
29.	Object diagrams	30/07/19	
30.	**Tutorial**	02/08/19	

UNIT –IV   BASIC BEHAVIORAL MODELING
CO4:: Gain the knowledge of Behavioral Modeling
TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

31.	Interactions	13/08/19	
32.	Interaction diagrams	19/07/19	
33.	Use cases	21/08/19	
34.	Use case Diagrams	27/08/19	Lecture interspersed with discussions
35.	Activity Diagrams	28/08/19	
36.	**Tutorial**	30/08/19	

UNIT – V ADVANCED BEHAVIORAL MODELING
CO5 :: Obtain the knowledge of Advanced Behavioral Modeling
TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

No. of Periods	TOPIC	DATE	Mode of Delivery
37.	Events and signals	30/08/19	
38.	State machines	31/08/19	Lecture interspersed with discussions
39.	Processes and Threads	11/09/19	
40.	Time and space	16/09/19	
41.	State chart diagrams	18/09/19	
42.	**Tutorial**	11/03/20	

UNIT - VI ARCHITECTURAL MODELING
CO6 : Gain the knowledge of Architectural Modeling

TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

43.	Component	23/09/19	
44.	Deployment	23/09/19	
45.	Component diagrams	24/09/19	
46.	Deployment diagrams	25/09/19	Lecture interspersed with discussions
47.	Case Study: The Unified Library application	25/09/19	
48.	**Tutorial**	27/09/19	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TENTATIVE LESSON PLAN: R1631053

Course Title : OBJECT ORIENTED ANALYSIS & DESIGN USING UML		
Section : Sec B	Date : 10-6-2019	Page No : 01 of 03
Revision No : 00	Prepared By : P.JAYASRI	Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**INTRODUCTION TO SYSTEMS**		
CO1:: Will be able to understand how to solve complex problems			
TB: Object- Oriented Analysis And Design with Applications, Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston, 3rd edition, 2013, PEARSON.			
1.	Introduction to Systems	11/06/19	
2.	The Structure of Complex systems	12/06/19	
3.	The Inherent Complexity of Software	17/06/19	
4.	Attributes of Complex System	18/06/19	
5.	Organized and Disorganized Complexity	19/06/19	Lecture interspersed with discussions
6.	Bringing Order to Chaos	19/06/19	
7.	Designing Complex Systems	21/06/19	
8.	Evolution of Object Model	24/06/19	
9.	Foundation of Object Model	24/06/19	
10.	Elements of Object Model	25/06/19	
11.	Applying the Object Model	26/06/19	
12.	**Tutorial**	28/06/19	
UNIT –II CLASSES AND OBJECTS			
CO2:: Will be able to Able to Represent classes, responsibilities and states using UML Notation.			
TB: Object- Oriented Analysis And Design with Applications, Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston, 3rd edition, 2013, PEARSON.			
13.	Nature of object	29/06/19	
14.	Relationships among objects	29/06/19	
15.	Nature of a Class	01/07/19	
16.	Relationship among Classes	01/07/19	
17.	Interplay of Classes and Objects	05/07/19	
18.	Importance of Proper Classification	08/07/19	
19.	Key abstractions and Mechanisms	10/07/19	Lecture interspersed with discussions
20.	**Tutorial**	12/07/19	

UNIT – III   INTRODUCTION TO UML
CO3:: Gain the knowledge of classes and responsibilities of the problem domain.
TB: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

21.	Introduction to UML	18/07/19	Lecture interspersed with discussions
22.	Why we model	19/07/19	
23.	Conceptual model of UML	20/07/19	
24.	Architecture	22/07/19	
25.	Classes	22/07/19	
26.	Relationships	23/07/19	
27.	Common Mechanisms	24/07/19	
28.	Class diagrams	26/07/19	
29.	Object diagrams	30/07/19	
30.	**Tutorial**	02/08/19	

UNIT –IV   BASIC BEHAVIORAL MODELING
CO4:: Gain the knowledge of Behavioral Modeling
TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

31.	Interactions	13/08/19	Lecture interspersed with discussions
32.	Interaction diagrams	19/07/19	
33.	Use cases	21/08/19	
34.	Use case Diagrams	27/08/19	
35.	Activity Diagrams	28/08/19	
36.	**Tutorial**	30/08/19	

UNIT – V ADVANCED BEHAVIORAL MODELING
CO5 :: Obtain the knowledge of Advanced Behavioral Modeling
TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

No. of Periods	TOPIC	DATE	Mode of Delivery
37.	Events and signals	30/08/19	
38.	State machines	31/08/19	
39.	Processes and Threads	11/09/19	
40.	Time and space	16/09/19	Lecture interspersed with discussions
41.	State chart diagrams	18/09/19	
42.	**Tutorial**	11/3/20	

UNIT - VI ARCHITECTURAL MODELING
CO6 : Gain the knowledge of Architectural Modeling
TB:: "The Unified Modeling Language User Guide", Grady Booch, James Rumbaugh, Ivar Jacobson, 12th Impression, 2012, PEARSON.

43.	Component	23/09/19	
44.	Deployment	23/09/19	
45.	Component diagrams	24/09/19	
46.	Deployment diagrams	25/09/19	
47.	Case Study: The Unified Library application	25/09/19	Lecture interspersed with discussions
48.	**Tutorial**	27/09/19	

P. JayaSri

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TENTATIVE LESSONPLAN: R1631054
DATABASE MANAGEMENT SYSTEM

Course Title: DATA BASE MANAGEMENT SYSTEM		
Section : CSE- A Date : 12-06-2019		Page No : 01 of 04
Revision No : 00 Prepared by: K. RAMA RAO		Approved by : HOD
Tools: Black board, PPTs		

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I			
	An Overview of Database Management System, Introduction to SQl, - Database System, Characteristics(Database Vs File System), Database Users, Advantages of Database system, Database applications, Brief introduction of different Data Models, Concept of Schema, Instance and data independence, Database system structure, Database System environment, Centralized and Client Server architecture for the database		
1	Introduction to DBMS	12-06-2019	
2	Introduction to SQl	12-06-2019	
3	Database System, Characteristics(Database Vs File System)	13-06-2019	
4	Database Users	13-06-2019	
5	Advantages of Database system	14-06-2019	
6	Tutorial Class	17-06-2019	
7	Database applications	19-06-2019	
8	Brief introduction of different Data Models	20-06-2019	Lecture interspersed with discussions
9	Concept of Schema, Instance and data independence	20-06-2019	
10	Three tier schema architecture for data independence	21-06-2019	
11	Database system structure	22-06-2019	
12	Tutorial Class	24-06-2019	
13	Database System environment	25-06-2019	
14	Centralized and Client Server architecture for the database	25-06-2019	
15	Tutorial Class	27-06-2019	
No. of periods	TOPIC	Date	Mode of Delivery
UNIT-II:			
	Introduction to relational model, concepts of domain, attribute, tuple, relation, Importance of null values, Constraints(Domain, Key constraints, Integrity constants) and their importance, Basic SQL Concepts, Simple Database Schema, datatypes, table definitions, Different DML		

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Operations(insert, delete, update), Basic SQl querying (Select and project), SQL functions (date and Time, Numeric, String conversion)

No. of periods	TOPIC	Date	Mode of Delivery
16	Introduction to relational model	28-06-2019	
17	Concepts of domain, attribute, tuple, relation	28-06-2019	
18	Importance of null values	29-06-2019	
19	Constraints(Domain, Key constraints, Integrity constants) and their importance	01-07-2019	
20	Tutorial Class	02-07-2019	
21	Basic SQL Concepts	05-07-2019	
22	Simple Database Schema, datatypes, table definitions	06-07-2019	
23	Different DML Operations(insert, delete, update)	08-07-2019	
24	Basic SQl querying (Select and project)	11-07-2019	
25	SQL functions (date and Time, Numeric, String conversion)	12-07-2019	
26	Tutorial Class	18-07-2019	
No. of periods	**TOPIC**	**Date**	**Mode of Delivery**

UNIT-III:

Introduction to ER model, Representation of entities, attributes, entity set, Relationship, relationship set, Constraints, sub classes, super class, Inheritance, Specialization, generalization using ER Diagrams, Creating tables with relationship, implementation of key and integrity constraints, Nested queries, sub queries, Grouping aggregation, ordering, Implementation of different types of joins, View(updatable and non updatable), Relational set operations

No. of periods	TOPIC	Date	Mode of Delivery
27	Introduction to ER model	19-07-2019	
28	Representation of entities, attributes, entity set	20-07-2019	
29	Relationship, relationship set	20-07-2019	
30	Constraints, sub classes, super class, Inheritance	22-07-2019	
31	Specialization, generalization using ER Diagrams	22-07-2019	
32	Tutorial Class	23-07-2019	Lecture interspersed with discussions
33	Creating tables with relationship	24-07-2019	
34	Implementation of key and integrity constraints	25-07-2019	
35	Nested queries, sub queries	27-07-2019	
36	Grouping aggregation, ordering	27-07-2019	
37	Implementation of different types of joins	29-07-2019	

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38	Tutorial Class	30-07-2019	
39	View(updatable and non updatable)	01-08-2019	
40	Relational set operations	02-08-2019	

UNIT-IV:

Purpose of Normalization or Schema refinement, Concept of offunctional dependency, 1NF,2NF,3NF, Concept of surrogate key, Boyce-codd Normal form(BCNF), lossless join decomposition, Dependency preserving decomposition, Fourth Normal Form(4NF)

No. of periods	TOPIC	Date	Mode of Delivery
41	Purpose of Normalization or Schema refinement	14-08-2019	
42	Concept of offunctional dependency	16-08-2019	
43	1NF, 2NF	17-08-2019	
44	3NF	19-08-2019	
45	Concept of surrogate key	20-08-2019	
46	Tutorial Class	21-08-2019	
47	Boyce-codd Normal form(BCNF),	22-08-2019	
48	Lossless join decomposition	24-08-2019	
49	Dependency preserving decomposition	26-08-2019	Lecture interspersed with discussions
50	Fourth Normal Form(4NF)	27-08-2019	
51	Tutorial Class	28-08-2019	

UNIT-V:

Transaction, Properties of transactions, Transaction log, Transaction Management with SQL using commit rollback and savepoint, Concurrency control for lost updates, Uncommitted data, inconsistent retrievals and the scheduler, Concurrency control with locking methods, Lock granularity, lock types, Two phase locking for ensuring serializability, Deadlocks, Concurrency control with time stamp ordering, Wait/ Die and wound/ Wait Schemas, Database Recovery management: Transaction recovery, Sql constructs that grant access or revoke access from user or user groups, Basic PL/SQL procedures, Functions and triggers

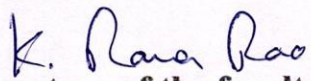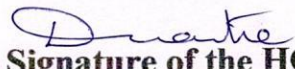| No. of periods	TOPIC	Date	Mode of Delivery
52	Transaction, Properties of transactions, Transaction log	30-08-2019	
53	Transaction Management with SQL using commit rollback and savepoint	30-08-2019	Lecture interspersed with discussions
54	Concurrency control for lost updates	31-08-2019	
55	Uncommitted data, inconsistent retrievals and the scheduler	03-09-2019	
56	Tutorial Class	11-09-2019	
57	Concurrency control with locking methods	12-09-2019	
58	Lock granularity, lock types	12-09-2019	
59	Two phase locking for ensuring serializability	16-09-2019	

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60	Deadlocks	16-09-2019	
61	Concurrency control with time stamp ordering	17-09-2019	
62	Wait/ Die and wound/ Wait Schemas	17-09-2019	
63	Tutorial Class	18-09-2019	
64	Database Recovery management: Transaction recovery	18-09-2019	
65	SQL constructs that grant access or revoke access from user or user groups	20-09-2019	
66	Basic PL/SQL procedures	20-09-2019	
67	Functions and triggers	20-09-2019	
68	Tutorial Class	21-09-2019	

UNIT-VI: Database File organization, File organization on disk, Heap Files and sorted file, Hashing, Single and multilevel indexes, Dynamic multilevel indexing using B-Tree, Dynamic multilevel indexing using B+-Tree, Index on multiple keys

No. of periods	TOPIC	Date	Mode of Delivery
69	Database File organization	23-09-2019	
70	File organization on disk	23-09-2019	Lecture interspersed with discussions
71	Heap Files and sorted file	24-09-2019	
72	Hashing	24-09-2019	
73	Single and multilevel indexes	26-09-2019	
74	Tutorial Class	27-09-2019	
75	Dynamic multilevel indexing using B-Tree	28-09-2019	
76	Dynamic multilevel indexing using B+-Tree	28-09-2019	
77	Index on multiple keys	28-09-2019	
78	Tutorial Class	30-09-2019	

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Department of Computer Science and Engineering

TENTATIVE LESSONPLAN: R1631054
DATABASE MANAGEMENT SYSTEM

Course Title: DATA BASE MANAGEMENT SYSTEM

Section : CSE- B	Date : 12-06-2019	Page No : 01 of 04
Revision No : 00	Prepared by: N. SUDHAKAR REDDY	Approved by : HOD

Tools: Black board, PPTs

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I			
An Overview of Database Management System, Introduction to SQl, - Database System, Characteristics(Database Vs File System), Database Users, Advantages of Database system, Database applications, Brief introduction of different Data Models, Concept of Schema, Instance and data independence, Database system structure, Database System environment, Centralized and Client Server architecture for the database			
1	Introduction to DBMS	12-06-2019	
2	Introduction to SQl	13-06-2019	
3	Database System, Characteristics(Database Vs File System)	13-06-2019	
4	Database Users	13-06-2019	
5	Advantages of Database system	14-06-2019	
6	Tutorial Class	17-06-2019	
7	Database applications	19-06-2019	
8	Brief introduction of different Data Models	20-06-2019	Lecture interspersed with discussions
9	Concept of Schema, Instance and data independence	20-06-2019	
10	Three tier schema architecture for data independence	21-06-2019	
11	Database system structure	22-06-2019	
12	Tutorial Class	24-06-2019	
13	Database System environment	25-06-2019	
14	Centralized and Client Server architecture for the database	25-06-2019	
15	Tutorial Class	27-06-2019	
No. of periods	TOPIC	Date	Mode of Delivery
UNIT-II:			
Introduction to relational model, concepts of domain, attribute, tuple, relation, Importance of null values, Constraints(Domain, Key constraints, Integrity constants) and their importance, Basic			

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SQL Concepts, Simple Database Schema, datatypes, table definitions, Different DML Operations(insert, delete, update), Basic SQl querying (Select and project), SQL functions (date and Time, Numeric, String conversion)

16	Introduction to relational model	28-06-2019	
17	Concepts of domain, attribute, tuple, relation	28-06-2019	
18	Importance of null values	29-06-2019	
19	Constraints(Domain, Key constraints, Integrity constants) and their importance	01-07-2019	
20	Tutorial Class	02-07-2019	
21	Basic SQL Concepts	05-07-2019	
22	Simple Database Schema, datatypes, table definitions	06-07-2019	
23	Different DML Operations(insert, delete, update)	08-07-2019	
24	Basic SQl querying (Select and project)	11-07-2019	
25	SQL functions (date and Time, Numeric, String conversion)	12-07-2019	
26	Tutorial Class	18-07-2019	
No. of periods	**TOPIC**	**Date**	**Mode of Delivery**

UNIT-III:
Introduction to ER model, Representation of entities, attributes, entity set, Relationship, relationship set, Constraints, sub classes, super class, Inheritance, Specialization, generalization using ER Diagrams, Creating tables with relationship, implementation of key and integrity constraints, Nested queries, sub queries, Grouping aggregation, ordering, Implementation of different types of joins, View(updatable and non updatable), Relational set operations

27	Introduction to ER model	19-07-2019	
28	Representation of entities, attributes, entity set	20-07-2019	
29	Relationship, relationship set	20-07-2019	
30	Constraints, sub classes, super class, Inheritance	22-07-2019	
31	Specialization, generalization using ER Diagrams	22-07-2019	**Lecture interspersed with discussions**
32	Tutorial Class	23-07-2019	
33	Creating tables with relationship	24-07-2019	
34	Implementation of key and integrity constraints	25-07-2019	
35	Nested queries, sub queries	27-07-2019	
36	Grouping aggregation, ordering	27-07-2019	
37	Implementation of different types of joins	29-07-2019	
38	Tutorial Class	30-07-2019	

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| 39 | View(updatable and non updatable) | 01-08-2019 | |
| 40 | Relational set operations | 02-08-2019 | |

UNIT-IV:

Purpose of Normalization or Schema refinement, Concept of offunctional dependency, 1NF,2NF,3NF, Concept of surrogate key, Boyce-codd Normal form(BCNF), lossless join decomposition, Dependency preserving decomposition, Fourth Normal Form(4NF)

No. of periods	TOPIC	Date	Mode of Delivery
41	Purpose of Normalization or Schema refinement	14-08-2019	
42	Concept of offunctional dependency	16-08-2019	
43	1NF, 2NF	17-08-2019	
44	3NF	19-08-2019	
45	Concept of surrogate key	20-08-2019	
46	Tutorial Class	21-08-2019	
47	Boyce-codd Normal form(BCNF),	22-08-2019	
48	Lossless join decomposition	24-08-2019	Lecture interspersed with discussions
49	Dependency preserving decomposition	26-08-2019	
50	Fourth Normal Form(4NF)	27-08-2019	
51	Tutorial Class	28-08-2019	

UNIT-V:

Transaction, Properties of transactions, Transaction log, Transaction Management with SQL using commit rollback and savepoint, Concurrency control for lost updates, Uncommitted data, inconsistent retrievals and the scheduler, Concurrency control with locking methods, Lock granularity, lock types, Two phase locking for ensuring serializability, Deadlocks, Concurrency control with time stamp ordering, Wait/ Die and wound/ Wait Schemas, Database Recovery management: Transaction recovery, Sql constructs that grant access or revoke access from user or user groups, Basic PL/SQL procedures, Functions and triggers

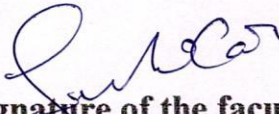| No. of periods	TOPIC	Date	Mode of Delivery
52	Transaction, Properties of transactions, Transaction log	30-08-2019	
53	Transaction Management with SQL using commit rollback and savepoint	30-08-2019	Lecture interspersed with discussions
54	Concurrency control for lost updates	31-08-2019	
55	Uncommitted data, inconsistent retrievals and the scheduler	03-09-2019	
56	Tutorial Class	11-09-2019	
57	Concurrency control with locking methods	12-09-2019	
58	Lock granularity, lock types	12-09-2019	
59	Two phase locking for ensuring serializability	16-09-2019	
60	Deadlocks	16-09-2019	
61	Concurrency control with time stamp ordering	17-09-2019	

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62	Wait/ Die and wound/ Wait Schemas	17-09-2019	
63	Tutorial Class	18-09-2019	
64	Database Recovery management: Transaction recovery	18-09-2019	
65	SQL constructs that grant access or revoke access from user or user groups	20-09-2019	
66	Basic PL/SQL procedures	20-09-2019	
67	Functions and triggers	20-09-2019	
68	Tutorial Class	21-09-2019	

UNIT-VI: Database File organization, File organization on disk, Heap Files and sorted file, Hashing, Single and multilevel indexes, Dynamic multilevel indexing using B-Tree, Dynamic multilevel indexing using B+-Tree, Index on multiple keys

No. of periods	TOPIC	Date	Mode of Delivery
69	Database File organization	23-09-2019	
70	File organization on disk	23-09-2019	Lecture interspersed with discussions
71	Heap Files and sorted file	24-09-2019	
72	Hashing	24-09-2019	
73	Single and multilevel indexes	26-09-2019	
74	Tutorial Class	27-09-2019	
75	Dynamic multilevel indexing using B-Tree	28-09-2019	
76	Dynamic multilevel indexing using B+-Tree	28-09-2019	
77	Index on multiple keys	28-09-2019	
78	Tutorial Class	30-09-2019	

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TENTATIVE LESSON PLAN: R1631055

Course Title : Operating Systems		
Section : Sec A	**Date : 9/6/2019**	**Page No : 01 of 03**
Revision No : 00	**Prepared By : Dr. D. Haritha**	**Approved By : HOD**

Tools: Black board, PPTs

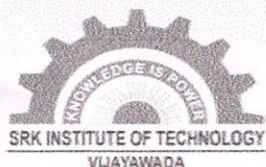| No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**Introduction to Operating System Concept**		
CO1:: Study the basic concepts and functions of operating systems and understand the structure and functions of OS			
TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.			
1.	Operating System definition	12/06/19	
2.	Introduction to Operating Systems	13/06/19	
3.	Operating System Concepts	14/06/19	
4.	Operating System Services	15/06/19	
5.	Introduction to System calls	17/06/19	
6.	System call types	18/06/19	Lecture interspersed with discussions
7.	Operating system structure	20/06/19	
8.	Operating System types	20/06/19	
9.	**Tutorial**	21/06/19	
UNIT -II PROCESS MANAGEMENT			
CO2::Demonstrate various Process Management Concepts and CPU Scheduling algorithms and			
TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.			
10.	Process Concept-the process, Process state, PCB	22/06/2019	
11.	Threads	27/06/19	
12.	Process Scheduling-Scheduling Queues	01/7/19	Lecture interspersed with discussions
13.	Schedulers, Context Switch	01/7/19	
14.	Operations on Processes	02/07/19	
15.	Inter process communication	02/07/19	
16.	Shared memory Systems	04/07/19	
17.	Message Passing Systems	05/07/19	
18.	Multi threaded programming models	06/7/19	
19.	Process scheduling criteria, FCFS	08/7/19	
20.	SJF, Priority algorithms	09/07/19	
21.	Round robin ,Multilevel queue scheduling	11/07/19	
22.	Multilevel Feedback queue scheduling	12/07/19	
23.	**Tutorial**	13/07/19	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

UNIT –III MEMORY MANAGEMENT

CO3:: Illustrate Memory management Techniques and Page replacement algorithms

TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

24.	Memory management: Introduction, Swapping	16/07/19	
25.	Contiguous Memory allocation	17/07/19	
26.	Paging, Structure of the page table	18/07/19	
27.	Virtual Memory Management: Virtual Memory	19/07/19	
28.	Demand paging	20/07/19	
29.	Performance of demand paging	21/07/19	
30.	Copy on write	22/07/19	Lecture interspersed with discussions
31.	Page Replacement Algorithms	24/07/19	
32.	FIFO Page replacement	25/07/19	
33.	Optimal Page replacement	25/07/19	
34.	LRU Page replacement	27/07/19	
35.	LRU approximation page replacement	28/07/19	
36.	Allocation of Frames	28/07/19	
37.	**Tutorial**	03/08/19	

UNIT - IV   CONCURRENCY

CO2::Understand the principles of concurrency and deadlock , applying the deadlock prevention and avoidance techniques.

TB: Operating system concepts, Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

No. of Periods	TOPIC	DATE	Mode of Delivery
38.	Process Synchronization	13/08/19	
39.	Critical Section problem	14/08/19	
40.	Petersons solution	14/08/19	
41.	Synchronization Hardware	16/08/19	
42.	Semaphores	17/08/19	Lecture

43.	Classic problems of synchronization The Bounded Buffer problem	17/08/19	
44.	The Readers -Writers Problem	17/08/19	
45.	The Dining Philosophers Problem	19/08/19	
46.	Monitors-Usage	19/08/19	
47.	Dining Philosophers Solution using Monitors	20/08/19	
48.	Implementing and resuming monitors using semaphores	21/08/19	
49.	Synchronization examples	22/08/19	
50.	Principles of Deadlock system model	23/08/19	
51.	Deadlock characterization	24/08/19	
52.	Methods for handling deadlocks	24/08/19	
53.	Deadlock prevention and Detection	26/08/19	
54.	Recovery from deadlock	26/08/19	
55.	**Tutorial**	26/08/19	

UNIT – File System Interface
CO3:: Demonstrate File System Concepts and Mass Storage Structures
TB: Operating system concepts, Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

56.	Concept of a file	27/08/19	
57.	Access methods, Directory structure	27/08/19	Lecture interspersed with discussions
58.	Acyclic graph directories	27/08/19	
59.	General graph directory	28/08/19	
60.	File system mounting	28/08/19	
61.	File sharing, Protection	29/08/19	
62.	**File system Implementation**-File System structure	29/08/19	
63.	Allocation methods-Contiguous allocation	30/08/19	
64.	Linked allocation, Indexed allocation	30/08/19	
65.	Free-Space Management	31/08/19	
66.	**Mass-storage structure**: Overview of Mass-storage structure	02/09/19	
67.	Disk structure, Disk attachment	03/08/19	
68.	Disk Scheduling	05/08/19	
69.	**Tutorial**	07/08/19	

UNIT VI–LINUX SYSTEM
CO6:: Discriminate about Android platforms and learn about the basics of Linux system and perform administrative tasks on Linux servers
TB 1:: Operating Systems – Internals and Design Principles, William Stallings, 7th Edition,
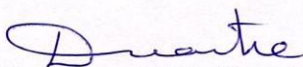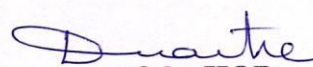
Prentice Hall, 2011.

TB 2::. Operating Systems-S Halder, Alex A Aravind Pearson Education Second Edition 2016.

REFERENCES

70.	Linux Systems Overview, components of Linux	08/09/19	
71.	Inter process communication	09/09/19	
72.	Synchronization	12/09/19	
73.	Interrupt	20/09/19	
74.	Exception and System call	21/09/19	Lecture interspersed with discussions
75.	**Android Software platform:** Android architecture	23/09/19	
76.	Operating System services	24/09/19	
77.	Android runtime application development	25/09/19	
78.	Application Structure, Application Process management	26/09/19	
79.	**Tutorial**	05/10/19	

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TENTATIVE LESSON PLAN: R1631055

Course Title : Operating Systems				
Section : Sec B	Date : 9/6/2019		Page No : 01 of 03	
Revision No : 00	Prepared By : T. Naga Raju		Approved By : HOD	

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**Introduction to Operating System Concept**		
CO1:: Study the basic concepts and functions of operating systems and understand the structure and functions of OS		
	TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.		
1.	Operating System definition	12/06/19	
2.	Introduction to Operating Systems	13/06/19	
3.	Operating System Concepts	14/06/19	
4.	Operating System Services	15/06/19	
5.	Introduction to System calls	17/06/19	Lecture interspersed with discussions
6.	System call types	18/06/19	
7.	Operating system structure	20/06/19	
8.	Operating System types	20/06/19	
9.	**Tutorial**	21/06/19	
UNIT -II PROCESS MANAGEMENT			
	CO2::Demonstrate various Process Management Concepts and CPU Scheduling algorithms and		
	TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.		
10.	Process Concept-the process, Process state, PCB	22/06/2019	
11.	Threads	27/06/19	
12.	Process Scheduling-Scheduling Queues	01/7/19	Lecture interspersed with discussions
13.	Schedulers, Context Switch	01/7/19	
14.	Operations on Processes	02/07/19	
15.	Inter process communication	02/07/19	
16.	Shared memory Systems	04/07/19	
17.	Message Passing Systems	05/07/19	
18.	Multi threaded programming models	06/7/19	
19.	Process scheduling criteria, FCFS	08/7/19	
20.	SJF, Priority algorithms	09/07/19	
21.	Round robin ,Multilevel queue scheduling	11/07/19	
22.	Multilevel Feedback queue scheduling	12/07/19	
23.	**Tutorial**	13/07/19	

UNIT –III MEMORY MANAGEMENT

CO3:: Illustrate Memory management Techniques and Page replacement algorithms

TB: Operating system concepts , Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

24.	Memory management: Introduction, Swapping	16/07/19	
25.	Contiguous Memory allocation	17/07/19	
26.	Paging, Structure of the page table	18/07/19	
27.	Virtual Memory Management: Virtual Memory	19/07/19	
28.	Demand paging	20/07/19	
29.	Performance of demand paging	21/07/19	
30.	Copy on write	22/07/19	Lecture interspersed with discussions
31.	Page Replacement Algorithms	24/07/19	
32.	FIFO Page replacement	25/07/19	
33.	Optimal Page replacement	25/07/19	
34.	LRU Page replacement	27/07/19	
35.	LRU approximation page replacement	28/07/19	
36.	Allocation of Frames	28/07/19	
37.	**Tutorial**	03/08/19	

UNIT - IV   CONCURRENCY

CO2::Understand the principles of concurrency and deadlock , applying the deadlock prevention and avoidance techniques.

TB: Operating system concepts, Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

No. of Periods	TOPIC	DATE	Mode of Delivery
38.	Process Synchronization	13/08/19	
39.	Critical Section problem	14/08/19	
40.	Petersons solution	14/08/19	
41.	Synchronization Hardware	16/08/19	
42.	Semaphores	17/08/19	Lecture

43.	Classic problems of synchronization The Bounded Buffer problem	17/08/19	
44.	The Readers -Writers Problem	17/08/19	
45.	The Dining Philosophers Problem	19/08/19	
46.	Monitors-Usage	19/08/19	
47.	Dining Philosophers Solution using Monitors	20/08/19	
48.	Implementing and resuming monitors using semaphores	21/08/19	
49.	Synchronization examples	22/08/19	
50.	Principles of Deadlock system model	23/08/19	
51.	Deadlock characterization	24/08/19	
52.	Methods for handling deadlocks	24/08/19	
53.	Deadlock prevention and Detection	26/08/19	
54.	Recovery from deadlock	26/08/19	
55.	**Tutorial**	26/08/19	

UNIT – File System Interface
CO3:: Demonstrate File System Concepts and Mass Storage Structures
TB: Operating system concepts, Abraham Silberschatz, Peter Baer Galvin and Greg Gagne 9th Edition, John Wiley and Sons Inc., 2012.

56.	Concept of a file	27/08/19	
57.	Access methods, Directory structure	27/08/19	Lecture interspersed with discussions
58.	Acyclic graph directories	27/08/19	
59.	General graph directory	28/08/19	
60.	File system mounting	28/08/19	
61.	File sharing, Protection	29/08/19	
62.	**File system Implementation**-File System structure	29/08/19	
63.	Allocation methods-Contiguous allocation	30/08/19	
64.	Linked allocation, Indexed allocation	30/08/19	
65.	Free-Space Management	31/08/19	
66.	**Mass-storage structure**: Overview of Mass-storage structure	02/09/19	
67.	Disk structure, Disk attachment	03/08/19	
68.	Disk Scheduling	05/08/19	
69.	**Tutorial**	07/08/19	

UNIT VI–LINUX SYSTEM
CO6:: Discriminate about Android platforms and learn about the basics of Linux system and perform administrative tasks on Linux servers
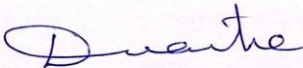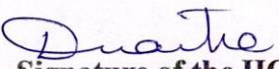**TB 1:: Operating Systems – Internals and Design Principles, William Stallings, 7th Edition,**

Prentice Hall, 2011.

TB 2::. Operating Systems-S Halder, Alex A Aravind Pearson Education Second Edition 2016.

REFERENCES

70.	Linux Systems Overview, components of Linux	08/09/19	
71.	Inter process communication	09/09/19	
72.	Synchronization	12/09/19	
73.	Interrupt	20/09/19	
74.	Exception and System call	21/09/19	Lecture interspersed with discussions
75.	**Android Software platform:** Android architecture	23/09/19	
76.	Operating System services	24/09/19	
77.	Android runtime application development	25/09/19	
78.	Application Structure, Application Process management	26/09/19	
79.	**Tutorial**	05/10/19	

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LESSON PLAN: R1641051

Course Title: CRYPTOGRAPHY & NETWORK SECURITY			
Section : CSE	Date :03/10/2019		Page No : 01 of 04
Revision No : 00	Prepared By : D V SUBBA RAO		Approved By : HOD
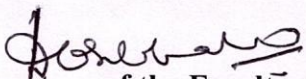
Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Basic Principles CO1: Classify various Security attacks ,Services, Mechanisms and Mathematics of Cryptography TEXT BOOK: Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
1	**UNIT:I** Introduction	10/6/19	
2	Security Goals	11/6/19	
3	Cryptographic Attacks	11/6/19	
4	Security Services	12/6/19	
5	Security Mechanisms	14/6/19	
6	Techniques	15/6/19	
7	Integer Arithmetic	25/6/19	Lecture interspersed with discussions
8,9,10	Modular Arithmetic	26/6/19	
	congruence	26/6/19	
	Operation on Z_N	27/6/19	
11,12	Matrices	28/6/19	
13,14	Linear congruence	29/6/19	
15	Tutorial class	29/6/19	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-II Symmetric Encryption **CO2:** **Relate Mathematics of Symmetric Key Cryptography and Apply the Symmetric key Cryptography like DES, AES.** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
15	**UNIT:II** Mathematics of Symmetric Key Cryptography	01/07/19	
16	Algebraic Structure	02/07/19	
17	Gf Fields	03/07/19	
18	Introduction to Modern Symmetric Key Ciphers	04/07/19	
19	Modern Block Ciphers	05/07/19	
20	Modern Stream Ciphers	06/07/19	
21	Introduction Data Encryption Standard	08/07/19	
22	DES Structure	09/07/19	Lecture interspersed with discussions
23	DES Analysis	10/07/19	
24	Multiple DES, Security of DES	11/07/19	
25	Advanced Encryption Standard	12/07/19	
26	Transformations	16/07/19	
27	Key Expansion	17/07/19	
28	Ciphers,Examples, Analysis of AES	18/07/19	
29	Tutorial	19/07/19	
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III: Asymmetric Encryption **CO3:** **Relate Mathematics of Asymmetric Key Cryptography and Apply the Asymmetric key cryptography** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
30	**UNIT-III** Asymmetric Encryption	20/07/19	
31,32	Mathematics of Asymmetric Key Cryptography: **PRIMES**	22/07/19	
33	Primality Testing	23/07/19	Lecture interspersed with discussions
34	Factorization	24/07/19	
35	Chinese Remainder Theorm	25/07/19	
36,37	Quadratic Congruence	30/07/19	
38,39,40	Asymmetric Key Cryptography	03/08/19	

| 41 | Tutorial | 03/8/19 | |

No. of Periods	TOPIC	Date	Mode of Delivery

UNIT-IV   Data Integrity, Digital Signature Schemes & Key Management
CO4:

Make use of Data Integrity, Digital Signature Schemes & Key Management for verifying the authenticity of digital messages
TEXT BOOK:
Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.

No. of Periods	TOPIC	Date	Mode of Delivery
42, 43	UNIT:IV Message Integrity and Message Authentication	16/8/19	
44,45	Cryptographic Hash Functions	16/8/19	
46,47	Digital Signature	24/8/19	Lecture interspersed with discussions
48,49	Key Management	30/8/19	
50	Tutorial	03/9/19	

No. of Periods	TOPIC	Date	Mode of Delivery

UNIT-V   Network Security-I
CO 5:

Select protocols like PGP,S/MIME in Application layer and SSL,TLS in Transport layer to Secure the Network during data transmission
TEXT BOOK:
Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.

No. of Periods	TOPIC	Date	Mode of Delivery
51,52	**UNIT-V:** Network Security-I	04/9/19	
53	Security at application layer	05/9/19	
54	PGP	09/9/19	
55,56	S/MIME	12/9/19	Lecture interspersed with discussions
57,58	Security at the Transport Layer	17/9/19	
59	SSL	20/9/19	
60,61	TLS	23/9/19	
62	Tutorial	23/9/19	

No. of Periods	TOPIC	Date	Mode of Delivery

UNIT-VI   Network Security-II
CO6:

Select protocols like PGP,S/MIME in Application layer and SSL,TLS in Transport layer to Secure the Network during data transmission
TEXT BOOK:
Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.

No. of Periods	TOPIC	Date	Mode of Delivery
63,64	**UNIT- VI:** Network Security-II	24/9/19	Lecture interspersed

65,66	Security at the Network Layer	25/9/19	with discussions
67,68,69	IPSec	27/9/19	
70,71	System Security	30/9/19	
72	Tutorial	1/10/19	

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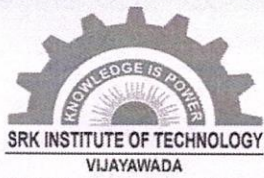
LESSON PLAN: R1641051

Course Title: CRYPTOGRAPHY & NETWORK SECURITY		
Section : CSE	Date :08/06/19	Page No : 01 of 04
Revision No : 00	Prepared By : D V SUBBA RAO	Approved By : HOD
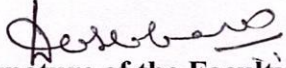
Tools : Black board, PPTs, Moodle
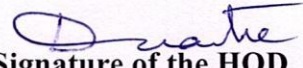
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Basic Principles			
CO1: Classify various Security attacks ,Services, Mechanisms and Mathematics of Cryptography			
TEXT BOOK: Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.			
1	**UNIT:I** Introduction	10/6/19	Lecture interspersed with discussions
2	Security Goals	11/6/19	
3	Cryptographic Attacks	11/6/19	
4	Security Services	12/6/19	
5	Security Mechanisms	14/6/19	
6	Techniques	15/6/19	
7	Integer Arithmetic	25/6/19	
8,9,10	Modular Arithmetic congruence Operation on Z_N	26/6/19	
		27/6/19	
		28/6/19	
11,12	Matrices	29/6/19	
13,14	Linear congruence	29/6/19	
15	Tutorial class	30/6/19	
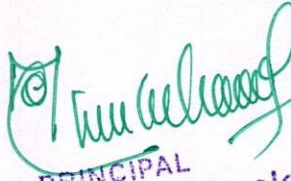
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-II   Symmetric Encryption **CO2:** **Relate Mathematics of Symmetric Key Cryptography and Apply the Symmetric key Cryptography like DES, AES.** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.
15	**UNIT:II** Mathematics of Symmetric Key Cryptography	01/07/19	
16	Algebraic Structure	02/07/19	
17	Gf Fields	03/07/19	
18	Introduction to Modern Symmetric Key Ciphers	04/07/19	
19	Modern Block Ciphers	05/07/19	
20	Modern Stream Ciphers	06/07/19	Lecture interspersed with discussions
21	Introduction Data Encryption Standard	06/07/19	
22	DES Structure	08/07/19	
23	DES Analysis	09/07/19	
24	Multiple DES, Security of DES	10/07/19	
25	Advanced Encryption Standard	11/07/19	
26	Transformations	12/07/19	
27	Key Expansion	13/07/19	
28	Ciphers, Examples, Analysis of AES	15/07/19	
29	Tutorial	15/07/19	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III: Asymmetric Encryption **CO3:** **Relate Mathematics of Asymmetric Key Cryptography and Apply the Asymmetric   key cryptography** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.
30,31	**UNIT-III** Asymmetric Encryption	16/07/19	
33,34,35	Mathematics of Asymmetric Key Cryptography: **PRIMES**	20/07/19	
36,37	Primality Testing	23/07/19	
38,39	Factorization	24/07/19	Lecture interspersed with discussions
40	Chinese Remainder Theorm	25/07/19	
41,42	Quadratic Congruence	30/07/19	
43,44	Asymmetric Key Cryptography	03/08/19	
45	Tutorial	03/8/19	

No. of Periods	TOPIC	Date	Mode of Delivery
	UNIT-IV Data Integrity, Digital Signature Schemes & Key Management **CO4:** **Make use of Data Integrity, Digital Signature Schemes & Key Management for verifying the authenticity of digital messages** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.		
46,47	**UNIT:IV** Message Integrity and Message Authentication	13/8/19	Lecture interspersed with discussions
48,49	Cryptographic Hash Functions	16/8/19	
50,5152	Digital Signature	21/8/19	
53,54,55	Key Management	26/8/19	
56	Tutorial	31/8/19	

No. of Periods	TOPIC	Date	Mode of Delivery
	UNIT-V Network Security-I **CO 5:** **Select protocols like PGP,S/MIME in Application layer and SSL,TLS in Transport layer to Secure the Network during data transmission** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.		
57	**UNIT-V:** Network Security-I	02/9/19	Lecture interspersed with discussions
58	Security at application layer	04/9/19	
59,60	PGP	05/9/19	
61,62	S/MIME	09/9/19	
63,64	Security at the Transport Layer	12/9/19	
65,66	SSL	17/9/19	
67,68	TLS	20/9/19	
69	Tutorial	23/9/19	

No. of Periods	TOPIC	Date	Mode of Delivery
	UNIT-VI Network Security-II **CO6:** **Select protocols like PGP,S/MIME in Application layer and SSL,TLS in Transport layer to Secure the Network during data transmission** **TEXT BOOK:** Cryptography and Network Security, Behrouz A Forouzan, Debdeep Mukhopadhyay,(3e) Mc Graw Hill.		
69,70	**UNIT- VI**: Network Security-II	21/9/19	Lecture interspersed with discussions
71,72	Security at the Network Layer	25/9/19	

73,74	IPSec	27/9/19	
75,76	System Security	30/9/19	
77	Tutorial	5/10/19	

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TENTATIVE LESSONPLAN: RT41052
SOFTWARE ARCHITECTURE & DESIGN PATTERNS

Course Title: SOFTWARE ARCHITECTURE & DESIGN PATTERNS			
Section : CSE- A	Date : 17-06-2019		Page No : 01 of 03
Revision No : 00	Prepared by: P. BHAGYA RAJU		Approved by : HOD

Tools: Black board, PPTs

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I			
Envisioning Architecture			
The Architecture Business Cycle, What is Software Architecture, Architectural patterns, reference models, reference architectures, architectural structures and views.			
Creating and Architecture Quality Attributes, Achieving qualities, Architectural styles and patterns, designing the Architecture, Documenting software architectures, Reconstructing Software Architecture.			
1	Envisioning Architecture	17-06-2019	Lecture interspersed with discussions
2	The Architecture Business Cycle	17-06-2019	
3	What is Software Architecture	17-06-2019	
4	Architectural patterns	18-06-2019	
5	Reference models	18-06-2019	
6	Reference architectures	19-06-2019	
7	Architectural structures and views	19-06-2019	
8	Creating and Architecture	20-06-2019	
9	Quality Attributes	21-06-2019	
10	Achieving qualities	22-06-2019	
11	Architectural styles and patterns	24-06-2019	
12	Designing the Architecture	25-06-2019	
13	Documenting software architectures	26-06-2019	
14	Reconstructing Software Architecture.	27-06-2019	
No. of periods	TOPIC	Date	Mode of Delivery
UNIT-II:			
Analyzing Architectures			
Architecture Evaluation, Architecture design decision making, ATAM, CBAM Moving from One System to Many			
Software Product Lines, Building systems from off the shelf components, Software architecture in future.			
15	Analyzing Architectures	03-07-2019	Lecture
16	Architecture Evaluation	04-07-2019	

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No. of periods	TOPIC	Date	Mode of Delivery
17	Architecture design decision making	06-07-2019	interspersed with discussions
18	ATAM- Architecture Tradeoff Analysis Method	09-07-2019	
19	CBAM- Cost Benefit Analysis Method	10-07-2019	
20	Moving from One System to Many	11-07-2019	
21	Software Product Lines	12-07-2019	
22	Building systems from off the shelf components	15-07-2019	
23	Software Architecture in future	16-07-2019	

UNIT-III:

Patterns Pattern Description, Organizing catalogs, role in solving design problems, Selection and usage. Creational Patterns Abstract factory, Builder, Factory method, Prototype, Singleton

No. of periods	TOPIC	Date	Mode of Delivery
24	Design Patterns	17-07-2019	Lecture interspersed with discussions
25	Pattern Description	17-07-2019	
26	Organizing catalogs	18-07-2019	
27	Role in solving design problems	19-07-2019	
28	Selection and usage	20-07-2019	
29	Creational Patterns	23-07-2019	
30	Abstract factory	24-07-2019	
31	Builder	27-07-2019	
32	Factory method	16-08-2019	
33	Prototype	17-08-2019	
34	Singleton	17-08-2019	

UNIT-IV:

Structural Patterns Adapter, Bridge, Composite, Decorator, Facade, Flyweight, PROXY

No. of periods	TOPIC	Date	Mode of Delivery
35	Structural Patterns	17-08-2019	Lecture interspersed with discussions
36	Adapter	17-08-2019	
37	Bridge	19-08-2019	
38	Composite	19-08-2019	
39	Decorator	20-08-2019	
40	Façade	20-08-2019	
41	Flyweight	22-08-2019	
42	PROXY	22-08-2019	

UNIT-V: Behavioral Patterns Chain of responsibility, command, Interpreter, iterator, mediator, memento, observer, state, strategy, template method, visitor

No. of periods	TOPIC	Date	Mode of Delivery

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43	Behavioral Patterns	27-08-2019	Lecture interspersed with discussions
44	Chain of responsibility	27-08-2019	
45	Command	29-08-2019	
46	Interpreter	30-08-2019	
47	Iterator	31-08-2019	
48	Mediator	03-09-2019	
49	Memento	03-09-2019	
50	Observer	04-09-2019	
51	State	05-09-2019	
52	Strategy	06-09-2019	
53	Template method	07-09-2019	
54	Visitor	09-09-2019	

UNIT-VI: Case Studies

A-7E — A case study in utilizing architectural structures, The World Wide Web - a case study in Interoperability, Air Traffic Control — a case study in designing for high availability, Celsius Tech — a case study in product line development.

A Case Study (Designing a Document Editor): Design Problems, Document Structure, Formatting, Embellishing the User Interface, Supporting Multiple Look-and-Feel Standards, Supporting Multiple Window Systems, User Operations, Spelling Checking and Hyphenation.

No. of periods	TOPIC	Date	Mode of Delivery
55	Case Studies	16-09-2019	Lecture interspersed with discussions
56	A-7E - A case study in utilizing architectural structures	17-09-2019	
57	The World Wide Web - a case study in Interoperability	18-09-2019	
58	Air Traffic Control – a case study in designing for high availability	19-09-2019	
59	Celsius Tech – a case study in product line development	20-09-2019	
60	A Case Study (Designing a Document Editor): Design Problems	23-09-2019	
61	Document Structure	24-09-2019	
62	Formatting, Embellishing the User Interface	25-09-2019	
63	Supporting Multiple Look-and-Feel Standards	25-09-2019	
64	Supporting Multiple Window Systems	25-09-2019	
65	User Operations	25-09-2019	
66	Spelling Checking and Hyphenation	26-09-2019	

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TENTATIVE LESSONPLAN: RT41052
SOFTWARE ARCHITECTURE & DESIGN PATTERNS

Course Title: SOFTWARE ARCHITECTURE & DESIGN PATTERNS		
Section : CSE- B	**Date : 17-06-2019**	**Page No : 01 of 03**
Revision No : 00	**Prepared by: P. BHAGYA RAJU**	**Approved by : HOD**

Tools: Black board, PPTs

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I			

Envisioning Architecture

The Architecture Business Cycle, What is Software Architecture, Architectural patterns, reference models, reference architectures, architectural structures and views.

Creating and Architecture Quality Attributes, Achieving qualities, Architectural styles and patterns, designing the Architecture, Documenting software architectures, Reconstructing Software Architecture.

No. of periods	TOPIC	Date	Mode of Delivery
1	Envisioning Architecture	17-06-2019	
2	The Architecture Business Cycle	18-06-2019	
3	What is Software Architecture	19-06-2019	
4	Architectural patterns	20-06-2019	
5	Reference models	20-06-2019	
6	Reference architectures	21-06-2019	
7	Architectural structures and views	21-06-2019	Lecture interspersed with discussions
8	Creating and Architecture	22-06-2019	
9	Quality Attributes	22-06-2019	
10	Achieving qualities	24-06-2019	
11	Architectural styles and patterns	25-06-2019	
12	Designing the Architecture	26-06-2019	
13	Documenting software architectures	27-06-2019	
14	Reconstructing Software Architecture.	28-06-2019	

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-II:			

Analyzing Architectures

Architecture Evaluation, Architecture design decision making, ATAM, CBAM
Moving from One System to Many
Software Product Lines, Building systems from off the shelf components, Software architecture in future.

No. of periods	TOPIC	Date	Mode of Delivery
15	Analyzing Architectures	03-07-2019	Lecture
16	Architecture Evaluation	03-07-2019	

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No.	TOPIC	Date	Mode of Delivery
17	Architecture design decision making	04-07-2019	interspersed with discussions
18	ATAM- Architecture Tradeoff Analysis Method	05-07-2019	
19	CBAM- Cost Benefit Analysis Method	06-07-2019	
20	Moving from One System to Many	08-07-2019	
21	Software Product Lines	09-07-2019	
22	Building systems from off the shelf components	10-07-2019	
23	Software Architecture in future	11-07-2019	

No. of periods	TOPIC	Date	Mode of Delivery

UNIT-III:

Patterns Pattern Description, Organizing catalogs, role in solving design problems, Selection and usage. Creational Patterns Abstract factory, Builder, Factory method, Prototype, Singleton

No. of periods	TOPIC	Date	Mode of Delivery
24	Design Patterns	12-07-2019	Lecture interspersed with discussions
25	Pattern Description	12-07-2019	
26	Organizing catalogs	15-07-2019	
27	Role in solving design problems	16-07-2019	
28	Selection and usage	17-07-2019	
29	Creational Patterns	18-07-2019	
30	Abstract factory	19-07-2019	
31	Builder	19-07-2019	
32	Factory method	22-07-2019	
33	Prototype	23-07-2019	
34	Singleton	24-07-2019	

UNIT-IV:

Structural Patterns Adapter, Bridge, Composite, Decorator, Facade, Flyweight, PROXY

No. of periods	TOPIC	Date	Mode of Delivery
35	Structural Patterns	24-07-2019	Lecture interspersed with discussions
36	Adapter	25-07-2019	
37	Bridge	26-07-2019	
38	Composite	29-07-2019	
39	Decorator	30-07-2019	
40	Façade	31-07-2019	
41	Flyweight	31-07-2019	
42	PROXY	01-08-2019	

UNIT-V: Behavioral Patterns Chain of responsibility, command, Interpreter, iterator, mediator, memento, observer, state, strategy, template method, visitor

No. of periods	TOPIC	Date	Mode of Delivery

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43	Behavioral Patterns	02-08-2019	Lecture interspersed with discussions
44	Chain of responsibility	02-08-2019	
45	Command	02-08-2019	
46	Interpreter	20-08-2019	
47	Iterator	22-08-2019	
48	Mediator	30-08-2019	
49	Memento	30-08-2019	
50	Observer	09-09-2019	
51	State	12-09-2019	
52	Strategy	13-09-2019	
53	Template method	13-09-2019	
54	Visitor	13-09-2019	

UNIT-VI: Case Studies

A-7E — A case study in utilizing architectural structures, The World Wide Web - a case study in Interoperability, Air Traffic Control — a case study in designing for high availability, Celsius Tech — a case study in product line development.

A Case Study (Designing a Document Editor): Design Problems, Document Structure, Formatting, Embellishing the User Interface, Supporting Multiple Look-and-Feel Standards, Supporting Multiple Window Systems, User Operations, Spelling Checking and Hyphenation.

No. of periods	TOPIC	Date	Mode of Delivery
55	Case Studies	16-09-2019	Lecture interspersed with discussions
56	A-7E - A case study in utilizing architectural structures	16-09-2019	
57	The World Wide Web - a case study in Interoperability	16-09-2019	
58	Air Traffic Control – a case study in designing for high availability	16-09-2019	
59	Celsius Tech – a case study in product line development	17-09-2019	
60	A Case Study (Designing a Document Editor): Design Problems	17-09-2019	
61	Document Structure	18-09-2019	
62	Formatting, Embellishing the User Interface	19-09-2019	
63	Supporting Multiple Look-and-Feel Standards	19-09-2019	
64	Supporting Multiple Window Systems	20-09-2019	
65	User Operations	23-09-2019	
66	Spelling Checking and Hyphenation	25-09-2019	

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TENTATIVE LESSON PLAN : R1641053

Course Title: Web Technologies			
Section : Sec A	Date : 10/06/2019	Page No : 01 of 04	
Revision No : 00	Prepared By : Dr.N.Neelima Priyanka	Approved By : HOD	

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Introduction to HTML,CSS			
CO1:Ability to Understood the Static web page creation, creating rich web pages using CSS and DHTML with Javascript			
TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book,Dream Tech.			
1	Basic Syntax	24/6/19	Lecture Interspersed With discussions
2	, Standard HTML Document Structure	25/6/19	
3	Basic Text Markup, Images	26/6/19	
4	HypertextLinks, Lists, Tables	26/6/19	
5	Forms, HTML5	26/6/19	
6	CSS: Levels of Style Sheet	28/6/19	
7	CSS: Style Specification Formats	28/6/19	
8	CSS: Selector Forms	29/619	
9	CSS: The Box Model	3/7/19	
10	CSS: Conflict Resolution	4/6-7/19	
11			
UNIT-II Java script			
CO2: Ability to understanding of validating HTML Pages			
TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly			
1	The Basic of Java script: Objects, Primitives Operations and Expressions	5/7/19	
2	The Basic of Java script: Screen Output andKeyboard Input	5/7/19	

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No. of Periods	TOPIC	Date	Mode of Delivery
3	The Basic of Java script: Control Statements	8/7/19	Lecture interspersed with discussions
4	The Basic of Java script:Object Creation and Modification	8/7/19	
5	The Basic of Java script: Arrays	9/7/19	
6	The Basic of Java script: Functions	9/7/19	
7	The Basic of Java script: Constructors,	10/7/19	
8	Pattern Matching using	10/7/19	
9	Regular Expressions	11/7/19	
10	DHTML: Positioning Moving and Changing Elements	11/7/19	

No. of Periods	TOPIC	Date	Mode of Delivery

UNIT-III : XML

CO3: Ability to understood a technique for creating fast and dynamic web pages using AJAX (asynchronous Request processing)

TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book,Dream Tech.

No. of Periods	TOPIC	Date	Mode of Delivery
1	UNIT-III XML: Document type Definition, XML schemas	12/7/19	Lecture interspersed with discussions
2	XML: Document type Definition, XML schemas,	12/7/19	
3	XML:, Document object model,	15/7/19	
4	XML: XSLT,	16/7/19	

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5	XML:,DOM and SAX Approaches,	17/7/19	
6	**AJAX A New Approach:** Introduction to AJAX, Integrating PHP and AJAX.	18/7/19	
7	tutorial	22/7/19	

UNIT-IV :PHP Programming: Introducing PHP
CO4: Ability to create Dynamic applications using PHP
TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book,Dream Tech.

No. of Periods	TOPIC	Date	Mode of Delivery
1	**PHP Programming: Introducing PHP:** Creating PHP script, Running PHP script..	22/7/19	Lecture interspersed with discussions
2	**PHP Programming: Introducing PHP:** Running PHP script.	23/7/19	
3	**PHP Programming: Introducing PHP:** **Working with variables and constants:** Using variables	24/7/19	
4	Tutorial Hour	25/7/19	
5	**PHP Programming:** Using constants	26/8/19	
6	**PHP Programming:** Data types	29/7/19	
7	**PHP Programming:** Operators.	29/7/19	

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8	**PHP Programming: Controlling program flow:** Conditional statements,Control statements,	1/819	
9	**PHP Programming:** Arrays	2/8/19	
10	**PHP Programming:** functions.	3/819	
11	**PHP Programming:**Working with forms and Databases such as MySQL.	30/8/19	

UNIT-V :Introduction to PERL
CO5: To Ability to developthe programs in Perl to develop GUI application as well as web applications
TB1: Programming Perl, 4ed, Tom Christiansen, Jonathan Orwant, Oreilly (2012)

1	*Introduction to PERL*	31/8/19	
2	*Operators and if statements,*	3/9/19	Lecture interspersed with discussions
3	*Program design and control structures.*	9/9/19	
4	*Arrays, Hashs*	9/9/19	
5	*File handling, Regular expressions,*	11/9/19	
6	*Subroutines, Retrieving documents from the web with Perl.*	11/9/19	

UNIT-VI: Introduction to Ruby,
CO6: Ability to developthe programs in Ruby to develop GUI application as well as web applications using Ruby on Rails
TB1: Ruby on Rails Up and Running, Lightning fast Web development, Bruce

Lecture interspersed

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Department of Computer Science and Engineering

Tate, CurtHibbs, Oreilly (2006)			with discussions
1	Introduction to Ruby	12/9/19	
2	Introduction to Ruby, Variables	13/9/19	
3	Variables, types,	16/9/19	
4	simple I/O, Control	17/9/19	
5	Arrays	17/9/19	
6	Hashes	19/9/19	
7	Methods	20/9/19	
8	Classes	23/9/19	
9	Iterators	24/9/19	
10	Pattern Matching.	25/9/19	
11	Overview of Rails.	26/9/19	
12	tutorial	30/9/19	

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TENTATIVE LESSON PLAN : R1641053

Course Title: Web Technologies		
Section : Sec B	**Date : 10/06/2019**	**Page No : 01 of 05**
Revision No : 00	**Prepared By : J. Niranjani**	**Approved By : HOD**

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Introduction to HTML,CSS CO1:Ability to Understood the Static web page creation, creating rich web pages using CSS and DHTML with Javascript TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book,Dream Tech.			
1	Basic Syntax	25/6/19	Lecture Interspersed With discussions
2	, Standard HTML Document Structure	25/6/19	
3	Basic Text Markup, Images	26/6/19	
4	HypertextLinks, Lists, Tables	26/6/19	
5	Forms, HTML5	26/6/19	
6	CSS: Levels of Style Sheet	28/6/19	
7	CSS: Style Specification Formats	28/6/19	
8	CSS: Selector Forms	29/619	
9	CSS: The Box Model	3/7/19	
10	CSS: Conflict Resolution	4/6-7/19	
11			
UNIT-II Java script CO2: Ability to understanding of validating HTML Pages TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly			
1	The Basic of Java script: Objects, Primitives Operations and Expressions	5/7/19	
2	The Basic of Java script: Screen Output andKeyboard Input	5/7/19	

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3	The Basic of Java script: Control Statements	8/7/19	Lecture interspersed with discussions
4	The Basic of Java script:Object Creation and Modification	8/7/19	
5	The Basic of Java script: Arrays	9/7/19	
6	The Basic of Java script: Functions	9/7/19	
7	The Basic of Java script: Constructors,	10/7/19	
8	Pattern Matching using	10/7/19	
9	Regular Expressions	11/7/19	
10	DHTML: Positioning Moving and Changing Elements	11/7/19	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III : XML CO3: Ability to understood a technique for creating fast and dynamic web pages using AJAX (asynchronous Request processing) TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book,Dream Tech.			
1	UNIT-III XML: Document type Definition, XML schemas	12/7/19	Lecture interspersed with discussions
2	XML: Document type Definition, XML schemas,	12/7/19	
3	XML:, Document object model,	15/7/19	
4	XML: XSLT,	16/7/19	

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5	XML:,DOM and SAX Approaches,	17/7/19	
6	**AJAX A New Approach:** Introduction to AJAX, Integrating PHP and AJAX.	18/7/19	
7	tutorial	22/7/19	

UNIT-IV :PHP Programming: Introducing PHP
CO4: Ability to create Dynamic applications using PHP
TB1: Web Technologies, HTML< JavaScript, PHP, Java, JSP, XML and AJAX, Black book,Dream Tech.

No. of Periods	TOPIC	Date	Mode of Delivery
1	**PHP Programming: Introducing PHP:** Creating PHP script, Running PHP script..	22/7/19	Lecture interspersed with discussions
2	**PHP Programming: Introducing PHP:** Running PHP script.	23/7/19	
3	**PHP Programming: Introducing PHP:** **Working with variables and constants:** Using variables	24/7/19	
4	Tutorial Hour	25/7/19	
5	**PHP Programming:** Using constants	26/8/19	
6	**PHP Programming:** Data types	29/7/19	
7	**PHP Programming:** Operators.	29/7/19	

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8	**PHP Programming: Controlling program flow:** Conditional statements,Control statements,	1/819	
9	**PHP Programming:** Arrays	2/8/19	
10	**PHP Programming:** functions.	3/819	
11	**PHP Programming:**Working with forms and Databases such as MySQL.	30/8/19	

UNIT-V :Introduction to PERL

CO5: To Ability to developthe programs in Perl to develop GUI application as well as web applications

TB1: Programming Perl, 4ed, Tom Christiansen, Jonathan Orwant, Oreilly (2012)

1	*Introduction to PERL*	31/8/19	
2	*Operators and if statements,*	3/9/19	Lecture interspersed with discussions
3	*Program design and control structures.*	9/9/19	
4	*Arrays, Hashs*	9/9/19	
5	*File handling, Regular expressions,*	11/9/19	
6	*Subroutines, Retrieving documents from the web with Perl.*	11/9/19	

UNIT-VI: Introduction to Ruby,

CO6: Ability to developthe programs in Ruby to develop GUI application as well as web applications using Ruby on Rails

TB1: Ruby on Rails Up and Running, Lightning fast Web development, Bruce

Lecture interspersed

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Tate, CurtHibbs, Oreilly (2006)			with discussions
1	Introduction to Ruby	12/9/19	
2	Introduction to Ruby, Variables	13/9/19	
3	Variables, types,	16/9/19	
4	simple I/O, Control	17/9/19	
5	Arrays	17/9/19	
6	Hashes	19/9/19	
7	Methods	20/9/19	
8	Classes	23/9/19	
9	Iterators	24/9/19	
10	Pattern Matching.	25/9/19	
11	Overview of Rails.	26/9/19	
12	tutorial	30/9/19	

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TENTATIVE LESSION PLAN: R1641054
MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS

Course Title: MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS (R1641054)		
Section : Sec A & B	Date : 25/11/2019	Page No : 01 of 03
Revision No : 00	Prepared By : B.NAVEEN	Approved By : HOD

Tools : Black board, PPTs,

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**INTRODUCTION TO MANAGERIAL ECONOMICS**		
CO1: To acquaint the student with basic knowledge of managerial economics, managerial decision areas, basic economics tools, concept of demand, law of demand, elasticity of demand, types of elasticity measurements of elasticity and demand forecasting.		
	TB :: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH.		
1.	Introduction to Managerial Economics, Definitions, Characteristics of ME	14-06-2019	
2.	Nature and Scope of Managerial Economics	14-06-2019	
3.	Managerial Economics related to Other Areas	18-06-2019	
4.	Basic Economic Tools in ME	18-06-2019	Lecture interspersed with discussions
5.	Introduction to Demand – Meaning & Definition, Features of Demand	19-06-2019	
6.	Determinants of Demand	20-06-2019	
7.	Law of Demand & Its exceptions, Demand Function	21-06-2019	
8.	Introduction to Elasticity of Demand	24-06-2019	
9.	Types of Elasticity of Demand	25-06-2019	
10.	Types of price Elasticity of Demand	26-06-2019	
11.	Measurement of Price Elasticity of Demand	27-06-2019	
12.	Introduction Demand Forecasting	30-06-2019	
13.	Importance of Demand Forecasting	01-07-2019	
14.	Demand Forecasting Methods	03-07-2019 & 04-07-2019	
15.	**Tutorial**	04-07-2019	
UNIT –II	**PRODUCTION, PRODUCTION FUNCTION&COST ANALYSIS**		
	CO2: TO acquaint the student with basic knowledge of production, factors of production, various production functions, least cost combinations of inputs, cost concepts, breakeven analysis to avoid losses.		
	TB: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH.		
16.	Introduction to Production : Meaning & Definition, Production Function	06/07/2019	Lecture interspersed with discussions
17.	Factors of production, production function with one variable factor	06/07/2019	
18.	Law of Variable Proportions	07/07/2019	
19.	Factors of production, production function with two variable factors	10/07/2019	
20.	Concept of Isocosts, Isoquants	09/07/2019	
21.	MRTS, Least Cost Combination	14/07/2019	

No. of Periods	TOPIC	DATE	Mode of Delivery
22.	Cobb-Douglas Production Function	14/07/2019	Lecture interspersed with discussions
23.	Economies of Scale& diseconomies of scale	15/07/2019	
24.	Returns to Scale & returns to factors	15/07/2019	
25.	Concept of cost & Various Cost Concepts	16/07/2019	
26.	Introduction to Break Even Analysis	18/07/2019	
27.	Determination of Break Even Point with Graph	18/07/2019	
28.	Calculation of Break Even Point (BEP) algebraic method	30/07/2019	
29.	**Tutorial**	30/07/2019	

UNIT - III   MARKETS AND COMPETITION , PRICING POLICIES
CO3: Gain knowledge about market, types of markets, competition, price determination under different market conditions, And various pricing methods.
TB: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH.

No. of Periods	TOPIC	DATE	Mode of Delivery
30.	Introduction to Markets: Meaning & Definition, Features	01/08/2019	Lecture interspersed with discussions
31.	Types of markets, market structure	02/08/2019	
32.	Price Determination under perfect competition	03/08/2019	
33.	Equilibrium point of firm and industry	05/08/2019	
34.	Price Determination under Monopoly	07/08/2019	
35.	Equilibrium point of firm and industry in monopoly	12/08/2019	
36.	Price Determination under Monopolistic Competition	12/08/2019	
37.	Price Determination under Oligopoly	13/08/2019	
38.	Managerial Theories of the Firm	13/08/2019	
39.	Marries and Williamson theory of firm	14/08/2019	
40.	Pricing, pricing objectives.	14/08/2019	
41.	Various Methods of Pricing	16/08/2019	

UNIT – IV   FORMS OF BUSINESS ORGANIZATIONS AND BUSINESS CYCLE
CO4: TO understand about business, types of business like sole trader ship, partnership, joint stock companies, business cycle.
TB: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH

No. of Periods	TOPIC	DATE	Mode of Delivery
42.	Introduction to Business: Definition, Features	16/08/2019	Lecture interspersed with discussions
43.	Sole Proprietorship : Features, Merits, Demerits	17/08/2019	
44.	Partnership : Features, Merits, Demerits,kinds of partners	17/08/2019	
45.	Joint Stock Company : Features, Merits, Demerits	19/08/2019	
46.	Public limited and private limited companies, features	19/08/2019	
47.	Public Enterprises : Features, Merits, Demerits	20/08/2019	
48.	Phases of Business Cycles	20/08/2019 & 21/08/2019	

UNIT – V   INTRODUCTION TO FINANCIAL ACCOUNTING

CO5: **TO know and understand about accounting process, types of accounts, principles of accounting, preparation of journal, ledger, trail balance and final accounts with**

No. of Periods	TOPIC	DATE	Mode of Delivery
49.	Introduction to Accounting : Meaning & Definition, Classification of Accounts	25/08/2019	
50.	Accounting Process	30/08/2019	
51.	Principles of accounting(GAAP)	03/09/2019	
52.	Accounting cycle	03/09/2019	
53.	Preparation of Journal : Problems	04/09/2019	Lecture interspersed with discussions
54.	Preparation of Ledger : Problems	05/09/2019	
55.	Preparation of Trail Balance : Problems	05/09/2019	
56.	Final Accounts (Trading ,profit & loss A/C, Balance Sheet)	06/09/2019	
57.	Final Accounts with Adjustments	06/09/2019	
58.	Treatment of adjustments in preparation of final accounts.	06/09/2019	
59.	Introduction to Financial Statement Analysis: Importance, Objectives.	09/09/2019	
60.	Classification of Ratios : Liquidity Ratios	10/09/2019	Lecture interspersed with discussions
61.	Classification of Ratios : Activity Ratios	12/09/2019	
62.	Classification of Ratios : Solvency Ratios	12/09/2019	
63.	Classification of Ratios :Profitability Ratios	12/09/2019	
64.	Preparation of Changes in Working Capital	13/09/2019	
65.	Preparation of Funds Flow Statement	13/09/2019	
66.	Preparation of Cash Flow Statement	13/09/2019	

UNIT – VI   CAPITAL, CAPITAL BUDGETING DECISIONS

CO6: **TO understand about Capital, types of capital, capital budgeting decisions, process of capital budgeting, methods or techniques of capital budgeting.**
TB: A.R.Arya sri, "Managerial Economics & Financial Analysis", 2005, TMH

No. of Periods	TOPIC	DATE	Mode of Delivery
67.	Introduction to Capital Budgeting: Meaning, Definition, Need.	13/10/2019	
68.	Methods of Capital Budgeting: Pay Back Period (PBP),	14/10/2019	
69.	Calculation of Accounting Rate of Return (ARR)	15/10/2019	Lecture interspersed with discussions
70.	Calculation of Net Present Value (NPV)	16/10/2019	
71.	Calculation of Internal Rate of Return (IRR)	19/10/2019	
72.	Calculation of Profitability Index	23/10/2019	
73.	Merits and Demerits of Capital Budgeting Techniques.	25/10/2019	
74.	Previous QP problems solution	25/10/2019	

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TENTATIVE LESSON PLAN: R164105A
BIG DATA ANALYTICS

Course Title: Big Data Analytics(R164105A)		
Section : Sec A	Date : 10/06/2019	Page No : 01 of 04
Revision No : 00	Prepared By : M.V.Sumanth	Approved By : HOD
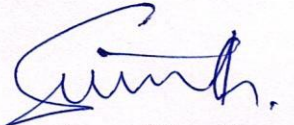
Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Data structures in Java **CO1: To learn Data structure concepts and implementation in java** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**			
1	Data structures in java : Linked list	17/06/19	Lecture Interspersed With discussions
2	stacks, Queues	18/6/19	
3	Sets	22/6/19	
4	Maps	24/6/19	
5	Generic class, Type Parameters	25/6/19	
6	Tutorial: Data Structures	25/6/19	
7	Implementing Generic Methods	27/6/19	
8	Wrapper classes	28/6/19	
9	Concept of serialization	1/7/19	
10	Serialization	2/7/19	
11	Tutorial	4/7/19	
UNIT-II Working with Big Data **CO1: To gain knowledge on different file systems in Hadoop like Google File System(GFS) and Hadoop Distributive File System(HDFS)** **TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly**			
1	Working with Big Data: Google File System	5/7/19	
2	Hadoop File System(HDFS)	6/7/19 8/7/19	
3	Name Node, Data Node	9/7/19	
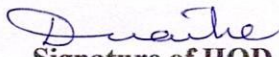
No. of Periods	TOPIC	Date	Mode of Delivery
4	Secondary node	11/7/19	Lecture interspersed with discussions
5	Job Tracker, Task Tracker	12/7/19	
6	Standalone Mode	13/7/19	
7	Tutorial	15/7/19	
8	Local Pseudo-distributed mode	16/7/19	
9	Fully Distributed mode	18/7/19	
10	Configuring XML Files	19/7/19	

UNIT-III   Writing MapReduce Programs
CO3: To learn basic Map Reduce Frame work in Hadoop.
TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly

No. of Periods	TOPIC	Date	Mode of Delivery
1	Map-Reduce Program	20/7/19	Lecture interspersed with discussions
2	Old-Map Reduce Frame work	22/7/19	
3	New-Map Reduce Frame work	23/7/19	
4	Driver Code	26/7/19	
5	Mapper Code, Reducer Code	29/7/19	
6	Record Reader	31/7/19	
7	Combiner, Partitioner	1/8/19	

UNIT-IV   Hadoop I/O
CO4: To assimilate Hadoop Writable and Readable interface.
TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly

No. of Periods	TOPIC	Date	Mode of Delivery
1	Hadoop I/O: The Writable Interface	12/8/19	Lecture interspersed with discussions
2	Writable Comparable	13/8/19	
3	Comparators	14/8/19	
4	Writable classes: Writable Wrappers for java Primitives	14/8/19	
5	Writable classes	16/8/19	

6	Text, Bytes Writable	17/8/19	
7	Null Writable, Object Writable	19/8/19	
8	Generic Writable	20/8/19	
9	Tutorial	20/8/19	
10	Writable Collections	22/8/19	
11	Custom Writable	22/8/19	
12	Implementing a Raw Comparator for speed	27/8/19	
13	Implementing a Raw Comparator for speed	30/8/19	
14	Tutorial	30/8/19	
15	Custom Comparators	31/8/19	

UNIT-V   Pig: Hadoop Programming Made Easier
CO5: To gain knowledge on Pig Scripting language
TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly

1	PIG: Hadoop Programming made easier: Admiring the Pig Architecture	3/9/19	
2	Working with Pig	9/9/19	Lecture interspersed with discussions
3	Running Pig scripts	9/9/19	
4	Checking out the pig script interfaces	11/9/19	
5	Tutorial	12/9/19	
6	Scripting with *pig* Latin	13/9/19	

UNIT-VI   Applying Structure to Hadoop Data with Hive
CO6: To learn Query language related to Hive like Hive Query Langugae
TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly

1	Applying structure to Hadoop data with Hive:	17/9/19	
2	Saying hello to Hive	17/9/19	
3	Seeing how the Hive is put together	18/9/19	
4	Tutorial	18/9/19	Lecture interspersed

5	Getting started with Apache Hive	20/9/19	with discussions
6	Examining the Hive Clients	21/9/19	
7	Working with Hive Data Types	24/9/19	
8	Creating and managing databases and tables	25/9/19	
9	Seeing how the Hive data Manipulation language works	25/9/19	
10	Querying and analyzing data	26/9/19	
11	Tutorial	27/9/19	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TENTATIVE LESSON PLAN

Course Title: Big Data Analytics (R164105A)		
Section : Sec B	Date : 10/06/2019	Page No : 01 of 04
Revision No : 00	Prepared By : N.V.Madhu Bindu	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Data structures in Java CO1: To learn Data structure concepts and implementation in java TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly			
1	Data structures in java : Linked list	17/6/19	Lecture Interspersed With discussions
2	stacks, Queues	18/6/19	
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4	Maps	19/6/19	
5	Generic class, Type Parameters	20/6/19	
6	Tutorial: Data Structures	21/6/19	
7	Implementing Generic Methods	22/6/19	
8	Wrapper classes	25/6/19	
9	Concept of serialization	26/6/19	
10	Serialization	27/6/19	
11	Tutorial	28/6/19	
UNIT-II Working with Big Data CO1: To gain knowledge on different file systems in Hadoop like Google File System(GFS) and Hadoop Distributive File System(HDFS) TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly			
1	Introduction to Big Data	3/7/19	
2	Google File System	4/7/19	

No. of Periods	TOPIC	Date	Mode of Delivery
3	Architecture	5/7/19	Lecture interspersed with discussions
4	Difference between Structured	6/7/19	
5	HDFS nodes	8/7/19	
6	HDFS Architecture	9/7/19	
7	Blocks of HDFS	10/7/19	
8	Difference between Structured	11/7/19	
9	Characteristics of Big Data	11/7/19	
10	Tutorial	12/7/19	
11	Hadoop installation and modes	15/7/19	
12	Diff between RDBMS and Big Data	16/7/19	
13	Configuring XML Files	16/7/19	
14	Driver classes	17/7/19	
15	Comparison of HDFS & GFS	18/7/19	
16	Tutorial	18/7/19	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III Writing MapReduce Programs CO3: To learn basic Map Reduce Frame work in Hadoop. TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly			
1	Map-Reduce Program	20/7/19	Lecture interspersed with discussions
2	Old-Map Reduce Frame work	22/7/19	
3	New-Map Reduce Frame work	23/7/19	
4	Driver Code	26/7/19	
5	Mapper Code, Reducer Code	29/7/19	

No. of Periods	TOPIC	Date	Mode of Delivery
6	Record Reader	31/7/19	
7	Combiner, Partitioner	1/8/19	

UNIT-IV   Hadoop I/O

CO4: To assimilate Hadoop Writable and Readable interface.

TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly

No. of Periods	TOPIC	Date	Mode of Delivery
1	Hadoop I/O: The Writable Interface	12/8/19	Lecture interspersed with discussions
2	Writable Comparable	13/8/19	
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10	Writable Collections	22/8/19	
11	Custom Writable	22/8/19	
12	Implementing a Raw Comparator for speed	27/8/19	
13	Implementing a Raw Comparator for speed	30/8/19	
14	Tutorial	30/8/19	
15	Custom Comparators	31/8/19	

UNIT-V   Pig: Hadoop Programming Made Easier

CO5: To gain knowledge on Pig Scripting language

TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly

No. of Periods	TOPIC	Date	Mode of Delivery
1	PIG: Hadoop Programming made easier: Admiring the Pig	3/9/19	

	Architecture		
2	Working with Pig	9/9/19	Lecture interspersed with discussions
3	Running Pig scripts	9/9/19	
4	Checking out the pig script interfaces	11/9/19	
5	Tutorial	12/9/19	
6	Scripting with pig Latin	13/9/19	

UNIT-VI   **Applying Structure to Hadoop Data with Hive**
CO6: To learn Query language related to Hive like Hive Query Langugae
TB1: Hadoop: The Definitive Guide by Tom White, 3rd Edition, O'reilly

1	Applying structure to Hadoop data with Hive:	17/9/19	
2	Saying hello to Hive	17/9/19	
3	Seeing how the Hive is put together	18/9/19	
4	Tutorial	18/9/19	Lecture interspersed with discussions
5	Getting started with Apache Hive	20/9/19	
6	Examining the Hive Clients	21/9/19	
7	Working with Hive Data Types	24/9/19	
8	Creating and managing databases and tables	25/9/19	
9	Seeing how the Hive data Manipulation language works	25/9/19	
10	Querying and analyzing data	26/9/19	
11	Tutorial	27/9/19	

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S.R.K INSTITUTE OF TECHNOLOGY

Enikepadu, Krishna District, Andhra Pradesh – 512108.
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TENTATIVE LESSON PLAN

Course Title : Cloud Computing (R164105D)		
Section : Sec A&B	Date : 17-06-2019	
Revision No : 00	Prepared By : S.SURESH BABU	Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1(Systems modeling, Clustering and virtualization)			
CO1: . Describe Scalable Computing over the Internet			
TB: Distributed and Cloud Computing, Kai Hwang, Geoffry C. Fox, Jack J. Dongarra MK Elsevie.			
1.	Scalable Computing over the Internet	20/6/19	
2.	Technologies for Network based systems	21/6/19	
3.	System models for Distributed and Cloud Computing	24/6/19	
4.	Attribute grammars	25/6/19	Lecture interspersed with discussions
5.	Software environments for distributed systems and clouds	27/6/19	
6.	Performance	28/6/19	
7.	Security	4/7/19	
8.	Energy Efficiency	5/7/19	
UNIT-2(Virtual Machines and Virtualization of Clusters and Data Centers):			
CO2: Explain Levels of virtualization structures / Tools I/o Devices, Resource managment.			
TB: Distributed and Cloud Computing, Kai Hwang, Geoffry C. Fox, Jack J. Dongarra MK Elsevier.			
9.	Virtual Machines and Virtualization of Clusters and Data Centers	8/7/19	
10.	Virtualization Structures	9/7/19	
11.	Tools and mechanisms	11/7/19	
12.	Virtualization of CPU	12/7/19	
13.	Memory	13/7/19	Lecture interspersed with discussions
14.	I/O Devices	16/7/19	
15.	Virtual Clusters	17/7/19	
16.	Resource Management	18/7/19	
17.	Virtualization for Data Center Automation	18/7/19	
UNIT3(Cloud Platform Architecture)			
CO 3: Explain Cloud computing models service, message oriented middleware			
TB: Cloud Computing, Theory and Practice, Dan C Marinescu, MK Elsevier.			
18.	Cloud Computing and service Models	19/7/19	
19.	Architectural Design of Compute and Storage Clouds	20/7/19	
20.	Public Cloud Platforms	17/7/19	
21.	Inter Cloud Resource Management	16/8/19	Lecture interspersed with discussions
22.	Cloud Security.	17/8/19	
23.	Trust Management	18/8/19	
24.	Service Oriented Architecture	21/8/19	

25.	Message Oriented Middleware	22/8/19	

UNIT-4(Cloud Programming and Software Environments):

CO4: Creating Azure accounts and doing cloud based problems

TB: Cloud Computing, A Hands on approach, ArshadeepBahga, Vijay Madisetti, University Press

No. of Periods	TOPIC	DATE	Mode of Delivery
26.	Features of Cloud and Grid Platforms	23/8/19	Lecture interspersed with discussions
27.	Parallel & Distributed Programming Paradigms	24/8/19	
28.	Programming Support of Google App Engine	25/8/19	
29.	Programming on Amazon AWS and Microsoft Azure	30/8/19	
30.	Emerging Cloud Software Environments	1/9/19	

UNIT-5(Cloud Resource Management and Scheduling):

CO 5: Understand and adopt policies task scheduling, thresholds, deadlines.

TB: Cloud Computing, Theory and Practice, Dan C Marinescu, MK Elsevier.

No. of Periods	TOPIC	DATE	Mode of Delivery
31.	Policies and Mechanisms for Resource Management Applications of Control Theory to Task Scheduling on a Cloud	2/9/19	Lecture interspersed with discussions
32.	Stability of a Two Level Resource Allocation Architecture	3/9/19	
33.	Feedback Control Based on Dynamic Thresholds	4/9/19	
34.	Coordination of Specialized Autonomic Performance Managers, Resource Bundling	9/9/19	
35.	Scheduling Algorithms for Computing Clouds	5/9/19	
36.	Fair Queuing, Start Time Fair Queuing	17/9/19	
37.	Borrowed Virtual Time	18/9/19	
38.	Cloud Scheduling Subject to Deadlines	19/9/19	
39.	Scheduling MapReduce Applications Subject to Deadlines.	24/9/19	

UNIT-6 (Storage Systems):

CO 5: Creating hadoop, Big Table, AmazonStorage services

TB: Cloud Computing, A Hands on approach, ArshadeepBahga, Vijay Madisetti, University Press.

No. of Periods	TOPIC	DATE	Mode of Delivery
40.	Evolution of storage technology	25/9/19	Lecture interspersed with discussions
41.	storage models	26/9/19	
42.	file systems and database	27/9/19	
43.	distributed file systems	28/9/19	
44.	general parallel file systems	2/10/19	
45.	Google file system	3/10/19	
46.	Apache Hadoop	4/10/19	
47.	Big Table, Megastore, Amazon Simple Storage Service (S3)	5/10/19	

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Department of Computer Science and Engineering

TENTATIVE LESSON PLAN- R164105F

Course Title:SCRIPTING LANGUAGES		
Year /Sem : IV/I	Date : 20/6/19	AY: 2019-20
Revision No :	Prepared By : : D.V.V.Brahmachari Assistant Professor	Approved By : HOD

Tools: Black Board , PPT , Video Lectures

UNIT-I Introduction
CO1 . Web Scripting, and the universe of Scripting Languages
TB: World of Scripting Languages, David Barron, Wiley Publications.

No.of Periods	Topic	Date	Mode of delivry
1	**UNIT – I:**	20/6/19	Lecture with discussions
2	Origin of Scripting , Scripting Today	21/6/19	
3	Characteristics of Scripting Languages, Uses for	24/6/19	
4	Web Scripting, and the	25/6/19	
5	PERL- Names and Values, Variables, Scalar	27/6/19	
6,7	Control Structures, arrays	28/6/19	
8,9	list, hashes, strings	4/7/19	
10	pattern and regular expressions, subroutines.	5/7/19	
11	Tutorial	21/6/19	

UNIT-II: Advanced perl Finer points of looping
CO2: Data structures, packages, modules, objects, interfacing to the operating system
TB: . World of Scripting Languages, David Barron, Wiley Publications

12	**UNIT - II**	9/7/19	Lecture with discussions
13	pack and unpack, file system	11/7/19	
14	eval, data structures, packages, modules	12/7/19	
15	objects, interfacing to the operating system	13/7/19	
16	Creating Internet ware applications, Dirty Hands	16/7/19	
17	security Issues	17/7/19	
18	Tutorial	18/7/19	

UNIT-III: PHP Basics PHP Basics
CO3:   Function Libraries, Arrays, strings and Regular Expressions.

TB: World of Scripting Languages, David Barron, Wiley Publications

19	**UNIT- III :** PHP Basics PHP Basics- Features	19/7/19	Lecture with discussions
20	Embedding PHP Code in your Web pages,	20/7/19	
21	Data types, Variables, Constants	17/7/19	
22	expressions, string interpolation, control	16/8/19	
23	Function, Creating a Function	17/8/19	
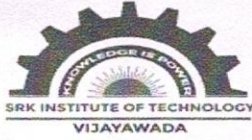
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24	Function Libraries, Arrays, strings	18/8/19	
25	Regular Expressions	21/8/19	
26	Tutorial	22/8/19	

UNIT-IV: Advanced PHP Programming PHP and Web Forms
CO4: Sending Email using PHP, PHP Encryption Functions
TB: World of Scripting Languages, David Barron, Wiley Publications

27	**UNIT - IV**	23/8/19	
28	PHP and Web Forms, Files	24/8/19	
29	PHP Authentication and Methodologies -Hard Coded	25/8/19	
30	File Based, Database Based	30/8/19	
31	IP Based, Login Administration	1/9/19	Lecture with discussions
32	Uploading Files with PHP, Sending Email using	2/9/19	
33	PHP Encryption Functions	3/9/19	
34	the Mcrypt package	4/9/19	
35	Building Web sites for the World	9/9/19	
36	Tutorial	5/9/19	

UNIT-V: TCL Structure

CO5: Data Structures, input/output, procedures , strings , patterns

TB:. World of Scripting Languages, David Barron, Wiley Publications

37	**UNIT -V** TCL Structure, syntax	17/9/19	
38	Variables and Data in TC	17/9/19	
39	Control Flow	18/9/19	
40	Data Structures	18/9/19	
41	input/output, procedures	19/9/19	
42	strings , patterns, files	19/9/19	
43	Advance TCL- eval, source, exec	24/9/19	Lecture with discussions
44	uplevel commands	24/9/19	
45	Name spaces, trapping errors	25/9/19	
46	event driven programs	26/9/19	
47	making applications internet aware	26/9/19	
48	Nuts and Bolts Internet Programming	27/9/19	
49	Security Issues, C Interface	27/9/19	
50	Tk-Visual Tool Kits, Fundamental Concepts of	28/9/19	
51	Tutorial	28/9/19	

UNIT-VI: Python Introduction to Python language
CO6: in python, Exception Handling. Integrated Web Applications
TB: World of Scripting Languages, David Barron, Wiley Publications

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52	**UNIT- VI**	28/9/19	
53	python-syntax	30/9/19	
54	statements, functions	1/10/19	
55	Built-in-functions and Methods	2/10/19	
56	Modules in python	3/10/19	Lecture with discussions
57	Exception Handling	3/10/19	
58	Integrated Web Applications in Python	4/10/19	
59	Building Small, Efficient Python Web Systems	4/10/19	
60	Web Application Framework	5/10/19	
31	Tutorial	5/10/19	

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