	LESSON PLAN	Date: 27/01/2016
	Sub. Name : COMPTER GRAPHICS Branch: CSE, Semester & Sections: IV & B	To 15/06/2016

S167 – COMPUTER GRAPHICS

Lecture	**: 5 Periods/week**	**Internal Marks**	**: 25**
Tutorial	**: 1**	**External Marks**	**: 75**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

UNIT - I

Introduction: Usage of Graphics and their applications, Presentation Graphics-Computer Aided Design-Computer Art- Entertainment- Education and Training-Visualization- Image Processing-Graphical User Interfaces. **Over view of Graphics systems:** Video Display Devices- Raster Scan systems-random scan systems-Graphics monitors and workstations, Input devices.

UNIT - II

Output primitives: Points and Lines-Line Drawing Algorithms- Loading the Frame buffer- Line function-Circle- Generating Algorithms- Ellipse Generating Algorithms-Other Curves- Parallel Curve Algorithrve Functions-Pixel Addressing- Filled Area Primitives-Filled Area Functions.

UNIT - III

Two Dimensional Geometric Transformations: Basic Transformations- Matrix Representations - Homogeneous Coordinates - Composite Transformations - Other Transformations-Transformations between Coordinate Systems - Affine Transformations Transformation Functions - Raster methods for Transformation.

UNIT - IV

Two Dimensional Viewing: The viewing Pipeline-Viewing Coordinate Reference Frame Window-to-Viewport Coordinate Transformation-Two Dimensional Viewing Functions Clipping Operations-Point Clipping-Line Clipping-Polygon Clipping.

UNIT - V Three Dimensional Concepts and Object representations: 3D display methods3DGraphics-Polygon Surfaces- Curved Lines and Surfaces- Quadratic Surfaces, **Three Dimensional Geometric and**

Modeling Transformations: Translation-Rotation-scaling-Other Transformations-Composite Transformations-3D Transformation Functions-Modeling and Coordinate Transformations

TEXT BOOK

1. Donald Hearn & M. Pauline Baker, "Computer Graphics C Version", Pearson Education, New Delhi, 2004 (Chapters 1 to 12 except 10-9 to 10-22 of the Text book)

REFERENCES

1. David F. Rogers; "Procedural Elements for Computer Graphics" TMH Publications.

2. J. D. Foley, S. K Feiner, A Van Dam F. H John; "Computer Graphics: Principles & Practice in C"; Pearson.

3. Franscis S Hill Jr; "Computer Graphics using Open GL"; Pearson Education, 2004.

Course Educational Objectives (CEO's):

- Students will have an appreciation of the history and evolution of computer graphics, both hardware and software.
- Students will have an understanding of 2D graphics and algorithms which includes line drawing, polygon filling, clipping, and transformations.
- Students will understand the concepts &techniques used in 3D computer graphics, including viewing transformations, hierarchical modeling, color, lighting and texture mapping.

Course Outcomes (CO's)

After completion of the course, students will able to:

CO1 : Understand the various applications of graphics and interactive input and output devices.

CO2 : Design and Implement the algorithms to draw the line, circle and ellipse.

CO3 : Apply different geometrical transformations such as translation, scaling, rotation, reflection and shear in 2D

CO4 : Understand 2D Coordinate transformation, viewing functions and various clipping algorithms

CO5 : Understand the various display methods , geometrical &coordinate transformations in 3D.

Prerequisite: Knowledge of coordinate system in mathematics.

	Lakireddy Bali Reddy College of Engineering	
	Department of Computer Science & Engineering	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Computer Graphics
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II	Section: B

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT –I: INTRODUCTION						
1	Introduction	27/1/16		2	1	1,2,3,5,7
2	CAD, Presentation Graphics	29/1/16		2	1	
3	Computer Art, Entertainment	30/1/16		2	1	
4	Education &Training , Image processing	1/2/16		9	1,9	
5	Visualization, GUI	2/2/16		2	1	
6	**Tutorial-1**	3/2/16		2		
7	CRT, Raster Scan Display	5/2/16		2	1	
8	Random scan Display, DVST	6/2/16		2	1	
9	Flat panel displays, refresh CRT	8/2/16		2	1	
10	Raster scan systems	9/2/16		2	1	
11	Random scan system	10/2/16		2	1	
12	Workstations, Graphics Monitors	12/2/16		9	1,9	
13	Input Devices	13/2/16		2		
14	**Tutorial - 2**	15/2/16		2		
UNIT –II:OUTPUT PRIMITIVES						
15	Points and lines	16/2/16		2	1	1,2,3,5,7
16	DDA line drawing algorithm	17/2/16		2	1,9	
17	DDA-Example	19/2/16		3	1,9	
18	Bresenham Algorithm for slope0<m<1	20/2/16		2	1,9	
19	Bresenham Algorithm for slope0<m<1	22/2/16		2	1,9	
20	Bresenham Example	23/2/16		3	1	
21	Parallel line drawing algorithm	24/2/16		2	1,9	
22	**Tutorial-3**	26/2/16		9	1,9	
23	Mid point circle algorithm	27/2/16		2	1,9	
24	Example – Mid Point Circle	29/2/16		3	1	
25	Ellipse Drawing Algorithm	1/3/16		2	1,9	1,2,3,5,7

26	Ellipse Drawing Algorithm	2/3/16		2	1,9	
27	Example - Ellipse Drawing Algorithm	4/3/16		3	1	
29	Loading the Frame Buffer, Line Functions, Parallel Curve algorithms	5/3/16		2	1	
30	Other Curves, Pixel Addressing, Filled Area Primitives	8/3/16		2	1	
31	Scan Line Polygon Fill Algorithm	9/3/16		2	1	
32	Inside-Outside Test, Boundary Fill	11/3/16		2	1	
33	Flood Fill Algorithm and Filled Area Functions	12/3/16		2	1	
34	**MID-1**	14/3/16				5
35		15/3/16				
36		16/3/16				
37		17/3/16				
38		18/3/16				
39		19/3/16				
UNIT –III: Two Dimensional Geometric Transformations						
40	Basic Transformations (translation, rotation ,scaling)	21/3/16		2	1	1,2,3,5,7
41	Matrix Representations	22/3/16		2	1	
42	Homogeneous Coordinates	26/3/16		2	1	
43	Composite Transformations	28/3/16		2	1	
44	Composite Transformations	29/3/16		9	1,9	
45	General pivot point rotation, Fixed point scaling	30/3/16		2	1	
46	Other Transformations (reflection, shear	02/4/16			1	
47	Transformations between Coordinate Systems	04/4/16		2	1	
48	Affine Transformations	05/4/16		2	1	

49	Transformation Functions	06/4/16		2	1	
50	Raster methods for Transformation	11/4/16		2	1	
51	**Tutorial-4**	11/4/16		9	1,9	
UNIT –IV: Two Dimensional Viewing						
52	The viewing Pipeline Viewing Coordinate Reference Frame	12/4/16		2	1	1,2,3,5,7
53	Window-to-Viewport Coordinate Transformation, Two Dimensional Viewing Functions	13/4/16		2	1	
54	Point Clipping, Line Clipping introduction	16/4/16		2	1	
55	Cohen-sutherland line clipping	18/4/16		2	1	
56	Cyrus-Beck Line Clipping	19/4/16		2	1	
57	Liang –Barsky Line Clipping	20/4/16		2	1	
58	Sutherland-Hodgeman polygon clipping	22/4/16		9	1,9	
59	Sutherland-hodgmen polygon clipping	23/4/16		2	1	
60	Weiler- Atherton Polygon Clipping	25/4/16		2	1	
61	**Tutorial-5**	26/4/16		9	1,9	
UNIT –V: Three Dimensional Concepts and Object Representations						
62	3D display methods (parallel ,perspective projections)	27/4/16		2	1	1,2,3,5,7
63	Depth Queuing, visible line and surface, identification	29/4/16		2	1	
64	Surface rendering ,Exploded and cutaway views, stereoscopic views	30/4/16		2	1	
65	Polygon Surfaces, Polygon Tables	02/5/16		2	1	
66	Curved Lines and Surfaces, Quadratic Surfaces	03/5/16		2	1	
67	Translation	04/5/16		2	1	

68	Rotation	06/5/16		2	1	
69	scaling	07/5/16		2	1	
70	Composite transformations	09/5/16		9	1,9	
71	Coordinate Axes Rotation, General 3DRotation	10/5/16		2	1	
72	Other Transformations (reflection, shear)	11/5/16		2	1	
73	3D Transformation Functions, Modeling& Coordinate Transformations	13/5/16		2	1	
74	**Tutorial-6**	14/5/16		9	1,9	
75	Revision	01/6/16		9	1	7
76	Revision	03/6/16		9	1	
77	Revision	04/6/16		9	1	
78	Revision	06/6/16		9	1	
79	Revision	07/6/16		9	1	
80	**MID-II**	8/6/16				5
81		9/6/16				
82		10/6/16				
83		13/6/16				
84		14/6/16				
85		15/6/16				

Resources Used:

TEXT BOOK

1. Donald Hearn & M. Pauline Baker, "Computer Graphics C Version", Pearson Education, New Delhi, 2004 (Chapters 1 to 12 except 10-9 to 10-22 of the Text book)

REFERENCES

1. David F. Rogers; "Procedural Elements for Computer Graphics" TMH Publications.
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Assessment Summary:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments	5					
Quizes						
Tutorials						
Surprise Tests	--					
Mid Exams	20					
Model Exams	--					
End Exam	75					
Attendance	--					
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S167	I	×					M		L												S			
	II		×				M	L													S			
	III			×			M	L													S			
	IV				×		M	L													S			
	V					×	M	L													S			

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	K.SUNDEEP SARADHI			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : COMPTER GRAPHICS Branch: CSE, Semester & Sections: IV & A	To 15/06/2016

S167 – COMPUTER GRAPHICS

Lecture	**: 5 Periods/week**	**Internal Marks**	**: 25**
Tutorial	**: 1**	**External Marks**	**: 75**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

UNIT - I

Introduction: Usage of Graphics and their applications, Presentation Graphics-Computer Aided Design-Computer Art- Entertainment- Education and Training-Visualization- Image Processing-Graphical User Interfaces. **Over view of Graphics systems:** Video Display Devices- Raster Scan systems-random scan systems-Graphics monitors and workstations, Input devices.

UNIT - II

Output primitives: Points and Lines-Line Drawing Algorithms- Loading the Frame buffer- Line function-Circle- Generating Algorithms- Ellipse Generating Algorithms-Other Curves- Parallel Curve Algorithms-Curve Functions-Pixel Addressing- Filled Area Primitives-Filled Area Functions.

UNIT - III

Two Dimensional Geometric Transformations: Basic Transformations- Matrix Representations - Homogeneous Coordinates - Composite Transformations - Other Transformations-Transformations between Coordinate Systems - Affine Transformations Transformation Functions- Raster methods for Transformation.

UNIT - IV

Two Dimensional Viewing: The viewing Pipeline-Viewing Coordinate Reference Frame Window-to-Viewport Coordinate Transformation-Two Dimensional Viewing Functions Clipping Operations-Point Clipping-Line Clipping-Polygon Clipping.

UNIT - V

Three Dimensional Concepts and Object representations: 3D display methods3DGraphics-Polygon Surfaces- Curved Lines and Surfaces- Quadratic Surfaces, **Three Dimensional Geometric and Modeling Transformations:** Translation-Rotation-scaling-Other Transformations-Composite Transformations-3D Transformation Functions-Modeling and Coordinate Transformations.

TEXT BOOK

2. Donald Hearn & M. Pauline Baker, "Computer Graphics C Version", Pearson Education, New Delhi, 2004 (Chapters 1 to 12 except 10-9 to 10-22 of the Text book)

REFERENCES

1. David F. Rogers; "Procedural Elements for Computer Graphics" TMH Publications.

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- Students will have an understanding of 2D graphics and algorithms which includes line drawing, polygon filling, clipping, and transformations.
- Students will understand the concepts &techniques used in 3D computer graphics, including viewing transformations, hierarchical modeling, color, lighting and texture mapping.

Course Outcomes (CO's)

After completion of the course, students will able to:

CO1 : Understand the various applications of graphics and interactive input and output devices.

CO2 : Design and Implement the algorithms to draw the line, circle and ellipse.

CO3 : Apply different geometrical transformations such as translation, scaling, rotation, reflection and shear in 2D

CO4 : Understand 2D Coordinate transformation, viewing functions and various clipping algorithms

CO5 : Understand the various display methods , geometrical &coordinate transformations in 3D.

Prerequisite: Knowledge of coordinate system in mathematics

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Computer Graphics
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II	Section: A

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT –I: INTRODUCTION						
1	Introduction	27/1/16		2	1	1,2,3,5,7
2	CAD, Presentation , Computer Art, Entertainment	28/1/16		2	1	
3	Education &Training , Image processing, visualization, GUI	30/1/16		2	1	
4	**Tutorial-1**	1/2/16		9	1,9	
5	CRT, Raster Scan Dispaly	2/2/16		2	1	
6	Random scan Display, DVST	3/2/16		2		
7	Flat panel displays, refresh CRT	4/2/16		2	1	
8	Raster scan systems	6/2/16		2	1	

9	Random scan system	8/2/16		2	1	
10	Workstations, Graphics Monitors	9/2/16		2	1	
11	Input Devices	10/2/16		2	1	
12	**Tutorial - 2**	11/2/16		9	1,9	
UNIT –II:OUTPUT PRIMITIVES						
13	Points and lines	13/2/16		2	1	1,2,3,5,7
14	DDA line drawing algorithm	15/2/16		2	1,9	
15	Example	16/2/16		3	1,9	
16	Bresenham Algorithm for slope0<m<1	17/2/16		2	1,9	
17	Bresenham Algorithm for slope0<m<1	18/2/16		2	1,9	
18	Example	20/2/16		3	1	
19	Parallel line drawing algorithm	22/2/16		2	1,9	
20	**Tutorial-3**	23/2/16		9	1,9	
21	Mid point circle algorithm	24/2/16		2	1,9	
22	Example	25/2/16		3	1	
23	Ellipse Generating Algorithms	27/2/16		2	1,9	1,2,3,5,7
24	Continuous of ellipse algorithm	29/2/16		2	1,9	
25	Example	1/3/16		3	1	
26	Loading the Frame buffer, Line function , Other Curves	2/3/16		2	1	
27	Parallel Curve Algorithms, curve functions	3/3/16		2	1	
29	pixel addressing, Filled Area Primitives	5/3/16		2	1	
30	Inside- Outside Tests	8/3/16		2	1	
31	Scan Line Polygon fill algorithm	9/3/16		2	1	
32	Boundary fill algorithm &Flood fill algorithm	10/3/16		2	1,9	
33	Filled area functions	12/3/16		2	1	
34		14/3/16				5
35		15/3/16				

36	**MID-1**	16/3/16				
37		17/3/16				
38		19/3/16				
39		21/3/16				
UNIT –III: Two Dimensional Geometric Transformations						
40	Basic Transformations (translation, rotation ,scaling)	22/3/16		2	1	1,2,3,5,7
41	Matrix Representations	24/3/16		2	1	
42	Homogeneous Coordinates	26/3/16		2	1	
43	Composite Transformations	28/3/16		2	1	
44	**Tutorial-4**	29/3/16		9	1,9	
45	General pivot point rotation, Fixed point scaling	30/3/16		2	1	
46	Other Transformations (reflection, shear	31/3/16			1	
47	Transformations between Coordinate Systems	02/4/16		2	1	
48	Affine Transformations	04/4/16		2	1	
49	Transformation Functions	05/4/16		2	1	
50	Raster methods for Transformation	06/4/16		2	1	
51	**Tutorial-5**	07/4/16		9	1,9	
UNIT –IV: Two Dimensional Viewing						
52	The viewing Pipeline Viewing Coordinate Reference Frame	11/4/16		2	1	1,2,3,5,7
53	Window-to-Viewport Coordinate Transformation, Two Dimensional Viewing Functions	12/4/16		2	1	
54	Point Clipping, Line Clipping introduction	13/4/16		2	1	
55	Cohen-sutherland line clipping	16/4/16		2	1	

56	Cyrus-Beck Line Clipping	18/4/16		2	1	
57	Liang –Barsky Line Clipping	19/4/16		2	1	
58	**Tutorial-6**	20/4/16		9	1,9	
59	Sutherland-hodgmen polygon clipping	21/4/16		2	1	
60	Weiler- Atherton Polygon Clipping	23/4/16		2	1	
61	**Tutorial-7**	25/4/16		9	1,9	
	UNIT –V: Three Dimensional Concepts and Object Representations					
62	3D display methods (parallel ,perspective projections)	26/4/16		2	1	1,2,3,5,7
63	Depth Queuing, visible line and surface, identification	27/4/16		2	1	
64	Surface rendering ,Exploded and cutaway views, stereoscopic views	28/4/16		2	1	
65	Polygon Surfaces, Polygon Tables	30/4/16		2	1	
66	Curved Lines and Surfaces, Quadratic Surfaces	02/5/16		2	1	
67	Translation	03/5/16		2	1	
68	Rotation	04/5/16		2	1	
69	scaling	05/5/16		2	1	
70	**Tutorial-8**	07/5/16		9	1,9	
71	Coordinate Axes Rotation, General 3DRotation	09/5/16		2	1	
72	Composite transformations Other Transformations (reflection, shear)	10/5/16		2	1	
73	3D Transformation Functions, Modeling& Coordinate Transformations	11/5/16		2	1	
74	**Tutorial-9**	12/5/16		9	1,9	
75	Revision	14/5/16		9	1	7

76	Revision	01/6/16		9	1	
77	Revision	02/6/16		9	1	
78	Revision	04/6/16		9	1	
79	Revision	06/6/16		9	1	
80	Revision	07/6/16		9	1	
81	II MID EXAMS	8/6/16				5
82		9/6/16				
83		11/6/16				
84		13/6/16				
85		14/6/16				
86		15/6/16				

Resources Used:

TEXT BOOK

2. Donald Hearn & M. Pauline Baker, "Computer Graphics C Version", Pearson Education, New Delhi, 2004 (Chapters 1 to 12 except 10-9 to 10-22 of the Text book)

REFERENCES

1. David F. Rogers; "Procedural Elements for Computer Graphics" TMH Publications.

2. J. D. Foley, S. K Feiner, A Van Dam F. H John; "Computer Graphics: Principles & Practice in C"; Pearson.

3. Franscis S Hill Jr; "Computer Graphics using Open GL"; Pearson Education, 2004.

Assessment Summary:

Assessment Task	Weight age (Marks)	**Course Outcomes**				
		CO1	CO2	CO3	CO4	CO5
Assignments	5					
Quizes						
Tutorials						
Surprise Tests	--					

Mid Exams	20					
Model Exams	--					
End Exam	75					
Attendance	--					
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S167	I	×					M		L												S			
	II		×				M	L													S			
	III			×			M	L													S			
	IV				×		M	L													S			
	V					×	M	L													S			

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	T.V.NAGA RAJU			Dr. N. Ravi Shankar
Sign with Date				

LakireddyBalireddy College of Engineering (Autonomous)

L.B.Reddy Nagar, Mylavaram , Krishna District, A.P

Freshmen engineering Department

LESSON PLAN

Subject :	**PROBABILITY & STATISTICS (P&S) - S 351**			
Academic Year :	**2015-16**	Semester :	**IV**	**Date: 27.01.2016**
Faculty name :	**D.Vijay Kumar**	Branch :	**CSE-A**	**To 07.06.2016**

SYLLABUS

UNIT - I

PROBABILITY AND RANDOM VARIABLES

Conditional probability – Multiplication theorem-Baye's theorem. Random variables – Discrete and continuous Random Variables and their distribution functions, Mathematical Expectation of Univariate Random Variable.

UNIT - II

PROBABILITY DISTRIBUTIONS

Probability Distributions-Binomial, Poisson, Normal and Gamma distributions-related properties, simple applications. Moment Generating Function and properties. Moment Generating Function for standard distributions.

UNIT - III

SAMPLING DISRIBUTION AND ESTIMATION

Population and samples. Sampling distribution of mean (with known and unknown variance), proportion, variances. - Sampling distribution of sums and differences. Point and interval estimators for mean, variance and proportions.

UNIT - IV

TESTING OF HYPOTHESIS

Null and Alternative Hypothesis, One tail and two tailed tests,Type I and Type II errors. Testing of hypothesis concerning means, proportions and their differences using Z-test.Tests of hypothesis using Student's t-test, F-test and $\chi 2$ test. Applications of decision making using the above tests.

UNIT - V

CORRELATION AND CURVE FITTING

Simple Bivariate Correlation and Regression lines.Curve fitting: Fitting a straight line – Second degree curve-exponential curve by method of least squares and goodness of fit.

TEXT BOOKS

1. Miller & Freund's "Probability and Statistics for Engineers" Prentice Hall of India, New Delhi, 8th edition. 2011.

2. William W. Hines "Probability and Statistics in Engineering" John Wiley & Sons, 4th edition.2002

REFERENCES

1. Jay L.Devore "Probability and Statistics for engineering and the sciences." Cengage Learning india, 8th edition, 2012.

2. S.C.Gupta&V.K.Kapoor "Fundamentals of Mathematical Statistics" Sultan Chand and sons, New Delhi. 11thedition 2002.

3. T.K.V.Iyangar "Probability and Statistics" S.Chand& Company, New Delhi, edition 2012.

4. B.V.Ramana "Higher Engineering Mathematics" TMH, New Delhi, 1st Edition, 2010.

Course Educational Objectives:

The main objectives of this course are

0. To revise elementary concepts and techniques encountered in probability.
1. To extend and formalize knowledge of the concepts of probability and probability distributions.
2. To introduce the techniques for carrying out sampling methods and estimation of parameters.
3. To motivate the use of sampling tests using tests of significance.
4. To study the concepts of correlation and linear, non linear regression lines.

Course Outcomes:

After the completion of the course, students should be able to

CO1: Apply knowledge of mathematics & probability techniques in engineering.

CO2: Design as well as to analyze and interpret the problems using Probability distributions.

CO3: Apply the methods of sampling and estimation of parameter values.
CO4: Identify, formulate and solve problems using tests of hypothesis.
CO5: To measure the association between the variables and prediction of variables.

S. No.	Tentative Date	Topics to be covered	Actual Date	Number of Classes	Delivery Method
UNIT- I					
1	29-01-2016	Introduction class		1	DM1
2	30-01-2016	Syllabus and Basic concepts		1	DM1
3	30-01-2016	Introduction to probability		1	DM1
4	01-02-2016	Basic definitions, simple problems		1	DM1
5	02-02-2016	Problem on addition theorem		1	DM1
6	04-02-2016	Conditional probability		1	DM1
7	05-02-2016	Multiplication theorem, examples		1	DM1
8	06-02-2016	Independent events, theorems		1	DM1
9	06-02-2016	Problems on multiplication theorem		1	DM1
10	09-02-2016	Problems on independent events		1	DM1
11	11-02-2016	Baye's theorem		1	DM1
12	12-02-2016	Problems on baye's theorem		1	DM1
13	13-02-2016	Tutorial		1	DM2
14	13-02-2016	Assignment & Quiz questions		1	DM2,4
UNIT- II					
15	16-02-2016	Random variables,(discrete and continuous)		1	DM1
16	16-02-2016	Mathematical Expectation ,relations		1	DM1
17	18-02-2016	Problems on PMF		1	DM1
18	19-02-2016	Problems on PDF		1	DM1
19	20-02-2016	Problems on pdf		1	DM1
20	22-02-2016	Binomial Distribution , mean and variance		1	DM1
21	23-02-2016	Problems on Binomial distribution		1	DM1
22	23-02-2016	Fitting of Binomial distribution		1	DM1
23	26-02-2016	Poisson distribution, mean and variance		1	DM1
24	27-02-2016	Problems on Poisson distribution, MGF		1	DM1
25	29-02-2016	Fitting of Poisson Distribution.		1	DM1
26	01-03-2016	Normal distribution		1	DM1

27	03-03-2016	Problems on Normal Distribution		1	DM1
28	04-03-2016	Problems on Normal Distribution		1	DM1
29	05-03-2016	Gamma distribution, simple applications		1	DM1
30	08-03-2016	Moment Generating Function and properties		1	DM1
31	10-03-2016	MGF of Binomial, Poisson and Normal		1	DM1
32	11-03-2016	Tutorial		1	DM1
33	12-03-2016	Assignment & Quiz questions		1	DM2,4
34	14-03-2016	I Mid Exams			
35	15-03-2016	I Mid Exams			
36	17-03-2016	I Mid Exams			
37	18-03-2016	I Mid Exams			
38	19-03-2016	I Mid Exams			
		UNIT III			
39	21-03-2016	Population and samples		1	DM1
40	22-03-2016	Sampling distribution of mean		1	DM1
41	24-03-2016	Sampling distribution of mean		1	DM1
42	26-03-2016	Sampling distribution of proportions		1	DM1
43	28-03-2016	Sampling distribution of variances		1	DM1
44	29-03-2016	Sampling distribution of sums and differences		1	DM1
45	31-03-2016	Point and interval estimation of mean		1	DM1
46	01-04-2016	Point and interval estimation of mean		1	DM1
47	02-04-2016	Point and interval estimation of proportions.		1	DM1
48	04-04-2016	Tutorial		1	DM2
49	05-04-2016	Assignment & Quiz questions		1	DM2,4
		UNIT IV			
50	07-04-2016	Testing of Hypothesis , definitions		1	DM1
51	11-04-2016	Type I and Type II errors		1	DM1
52	12-04-2016	Large samples- Z-test for single mean		1	DM1
53	16-04-2016	Z-test for single mean		1	DM1
54	18-04-2016	Z-test for difference of means		1	DM1

	19-04-2016	Z-test for single proportion		1	DM1
56	21-04-2016	Z-test for difference of proportions		1	DM1
57	22-04-2016	t-test for single mean		1	DM1
58	23-04-2016	t-test for difference of means		1	DM1
59	25-04-2016	Problems on t-tests		1	DM1
60	26-04-2016	F-test for population variances		1	DM1
61	28-04-2016	χ^2 test for goodness of fit		1	DM1
62	29-04-2016	χ^2 test for independence of attributes		1	DM1
63	30-04-2016	Problems on χ^2 test		1	DM1
64	02-05-2016	Tutorial		1	DM2
65	03-05-2016	Assignment & Quiz questions		1	DM2,4
		UNIT V			
66	05-05-2016	Simple Bi-variate Correlation		1	DM1
67	06-05-2016	Problems on Pearson's Correlation		1	DM1
68	07-05-2016	Problems on Pearson's Correlation		1	DM1
69	09-05-2016	Problems on rank Correlation		1	DM1
70	10-05-2016	Regression lines		1	DM1
71	12-05-2016	Problems on Regression lines		1	DM1
72	13-05-2016	Problems on Regression lines		1	DM1
73	02-06-2016	Curve fitting- method of least squares		1	DM1
74	03-06-2016	Fitting a straight line, Second degree curve		1	DM1
75	04-06-2016	Fitting of exponential and other curves		1	DM1
76	06-06-2016	Tutorial		1	DM2
77	07-06-2016	Assignment & Quiz questions		1	DM2,4

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	D.Vijay Kumar			Dr. A. Rami Reddy
Sign with Date				

	LakireddyBalireddy College of Engineering (Autonomous) L.B.Reddy Nagar, Mylavaram , Krishna District, A.P Freshmen engineering Department			
	LESSONPLAN			
Subject :	**PROBABILITY & STATISTICS (P&S) - S 351**			
Academic Year :	**2015-16**	Semester :	**IV**	**Date: 27.01.2016**
Faculty name :	**M.Rami Reddy**	Branch :	**CSE-B**	**To 07.06.2016**

SYLLABUS

UNIT - I

PROBABILITY AND RANDOM VARIABLES

Conditional probability – Multiplication theorem-Baye's theorem. Random variables – Discrete and continuous Random Variables and their distribution functions, Mathematical Expectation of Univariate Random Variable.

UNIT - II

PROBABILITY DISTRIBUTIONS

Probability Distributions-Binomial, Poisson, Normal and Gamma distributions-related properties, simple applications. Moment Generating Function and properties. Moment Generating Function for standard distributions.

UNIT - III

SAMPLING DISRIBUTION AND ESTIMATION

Population and samples. Sampling distribution of mean (with known and unknown variance), proportion, variances. - Sampling distribution of sums and differences. Point and interval estimators for mean, variance and proportions.

UNIT - IV

TESTING OF HYPOTHESIS

Null and Alternative Hypothesis, One tail and two tailed tests,Type I and Type II errors. Testing of hypothesis concerning means, proportions and their differences using Z-test.Tests of hypothesis using Student's t-test, F-test and $\chi 2$ test. Applications of decision making using the above tests.

UNIT - V

CORRELATION AND CURVE FITTING

Simple Bivariate Correlation and Regression lines.Curve fitting: Fitting a straight line – Second degree curve-exponential curve by method of least squares and goodness of fit.

TEXT BOOKS

1. Miller & Freund's "Probability and Statistics for Engineers" Prentice Hall of India, New Delhi, 8th edition. 2011.

2. William W. Hines "Probability and Statistics in Engineering" John Wiley & Sons, 4th edition.2002

REFERENCES

1. Jay L.Devore "Probability and Statistics for engineering and the sciences." Cengage Learning india, 8th edition, 2012.

2. S.C.Gupta&V.K.Kapoor "Fundamentals of Mathematical Statistics" Sultan Chand and sons, New Delhi. 11thedition 2002.

3. T.K.V.Iyangar "Probability and Statistics" S.Chand& Company, New Delhi, edition 2012.

4. B.V.Ramana "Higher Engineering Mathematics" TMH, New Delhi, 1st Edition, 2010.

Course Educational Objectives:

The main objectives of this course are

5. To revise elementary concepts and techniques encountered in probability.
6. To extend and formalize knowledge of the concepts of probability and probability distributions.
7. To introduce the techniques for carrying out sampling methods and estimation of parameters.
8. To motivate the use of sampling tests using tests of significance.
9. To study the concepts of correlation and linear, non linear regression lines.

Course Outcomes:

After the completion of the course, students should be able to

CO1: Apply knowledge of mathematics & probability techniques in engineering.

CO2: Design as well as to analyze and interpret the problems using Probability distributions.

CO3: Apply the methods of sampling and estimation of parameter values.
CO4: Identify, formulate and solve problems using tests of hypothesis.
CO5: To measure the association between the variables and prediction of variables.

S. No.	Tentative Date	Topics to be covered	Actual Date	Number of Classes	Delivery Method
UNIT- I					
1	28-01-2016	Introduction class		1	DM1
2	29-01-2016	Syllabus and Basic concepts		1	DM1
3	30-01-2016	Introduction to probability		1	DM1
4	01-02-2016	Basic definitions, simple problems		1	DM1
5	02-02-2016	Problem on addition theorem		1	DM1
6	04-02-2016	Conditional probability		1	DM1
7	05-02-2016	Multiplication theorem, examples		1	DM1
8	06-02-2016	Independent events, theorems		1	DM1
9	08-02-2016	Problems on multiplication theorem		1	DM1
10	09-02-2016	Problems on independent events		1	DM1
11	11-02-2016	Baye's theorem		1	DM1
12	12-02-2016	Problems on baye's theorem		1	DM1
13	13-02-2016	Tutorial		1	DM2
14	15-02-2016	Assignment & Quiz questions		1	DM2,4
UNIT- II					
15	15-02-2016	Random variables,(discrete and continuous)		1	DM1
16	16-02-2016	Mathematical Expectation ,relations		1	DM1
17	18-02-2016	Problems on PMF		1	DM1
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20	22-02-2016	Binomial Distribution , mean and variance		1	DM1
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22	25-02-2016	Fitting of Binomial distribution		1	DM1
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		UNIT III			
39	21-03-2016	Population and samples		1	DM1
40	22-03-2016	Sampling distribution of mean		1	DM1
41	24-03-2016	Sampling distribution of mean		1	DM1
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		UNIT IV			
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67	06-05-2016	Problems on Pearson's Correlation		1	DM1
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74	03-06-2016	Fitting a straight line, Second degree curve		1	DM1
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76	06-06-2016	Tutorial		1	DM2
77	07-06-2016	Assignment & Quiz questions		1	DM2,4

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	M.Rami Reddy			Dr. A. Rami Reddy
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : DATABASE MANAGEMENT SYSTEMS LAB Branch: CSE Semester & Sections: IV & B	To 15/06/2016

S180 - DATABASE MANAGEMENT SYSTEMS LAB

Lecture	**: 4 Periods/week**	**Internal Marks**	**: 25**
Tutorial	**: 1**	**External Marks**	**: 75**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

CYCLE-1

1) Create a table STUDENT with appropriate data types and perform the following queries.

Roll number, student name, date of birth, branch and year of study.

1. Insert 5 to 10 rows in a table?
2. List all the students of all branches
3. List student names whose name starts with 's'
4. List student names whose name contains 's' as third literal
5. List student names whose contains two 's' anywhere in the name
6. List students whose branch is NULL
7. List students of CSE & ECE who born after 1980
8. List all students in reverse order of their names
9. Delete students of any branch whose name starts with 's'
10. Update the branch of CSE students to ECE
11. Display student name padded with '*' after the name of all the students

2) Create the following tables based on the above Schema Diagram with appropriate data types and constraints and perform the following queries.

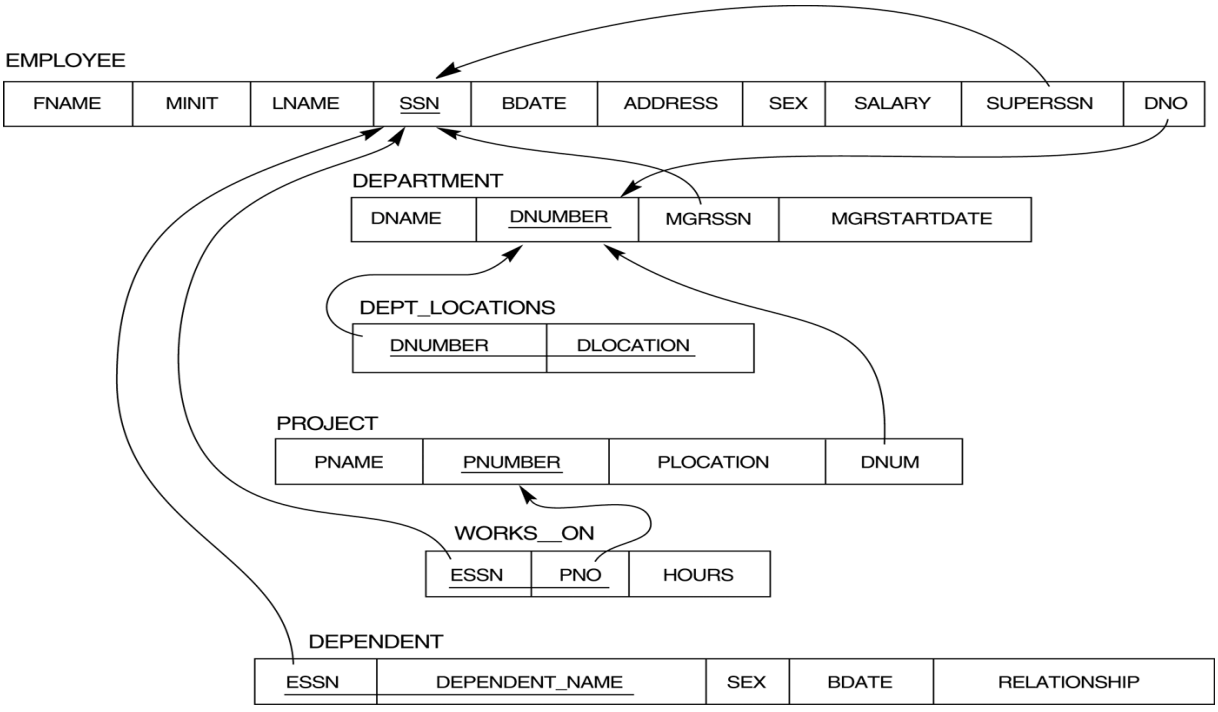
SAILORS (Saild, Salname, Rating, Age)

RESERVES (Sailid, boatid, Day)

BOATS (Boatid, Boat-name, Color)

1. Insert 5 to 10 rows in all tables?
2. Find the name of sailors who reserved boat number 3.
3. Find the name of sailors who reserved green boat.
4. Find the colors of boats reserved by “Ramesh”.
5. Find the names of sailors who have reserved atleast one boat.
6. Find the all sailid of sailors who have a rating of 10 or have reserved boated 104.
7. Find the Sailid’s of sailors with age over 20 who have not registered a red boat.
8. Find the names of sailors who have reserved a red or green boat.
9. Find sailors whose rating is better than some sailor called ‘Salvador’.
10. Find the names of sailors who are older than the oldest sailor with

Schema Diagram for the rest of the SQL and PLSQL Programs.



3) Create the following tables based on the above Schema Diagram with appropriate data types and constraints.

EMPLOYEE (Fname, Mname, Lname, SSN, Bdate, Address, Gender, Salary, SuperSSN, Dno)

DEPARTMENT(Dnumber, Dname, MgrSSN, Mgrstartdate)

DEPENDENT (ESSN, Dependent_Name, Gender, Bdate, Relationship)

1) Insert 5 to 10 rows into all the tables.
2) Display all employee's names along with their department names.
3) Display all employee's names along with their dependent details.
4) Display name and address of all employees who work for 'ECE' department.
5) List the names of all employees with two or more dependents.
6) List the names of employee who have no dependents.
7) List the names of employees who have at least one dependent.
8) List the names of the employees along with names of their supervisors using aliases.
9) Display name of the department and name of manager for all the departments.
10) Display the name of each employee who has a dependent with the same first name and gender as the employee.
11) List the names of managers who have at least one dependent.
12) Display the sum of all employees' salaries as well as maximum, minimum and average salary in the entire departments department wise if the department has more than two employees.
13) List the departments of each female employee along with her name.
14) List all employee names and also the name of the department they manage if they happen to manage a dept.
15) Display the name of the employee and his / her supervisor's name.

4) Create the following tables based on the above Schema Diagram with appropriate data types and constraints in addition to the tables in Experiment 2.

DEPT_LOCATIONS (Dnumber, Dloaction)

PROJECT (Pname, Pnumber, Plocation, Dnum)

WORKS_ON(ESSN, Pno, Hours).

1) Insert 5 to 10 rows into all the tables.
2) Find the names of the employees who work on all the projects controlled by the department 'ECM'.
3) List the project number, name and no. Of employees who work on that project for all the projects.
4) List the names of all the projects controlled by the departments department wise.
5) Retrieve the names of employees who work on all projects that 'John' works on.
6) List the project numbers for projects that involve an employee either as worker or as a manager of the department that controls the project.
7) List the names of all employees in one department who work more than 10 hours on one specific project.
8) For each project, list the project name and total hours (by all employees) spent on that project.
9) Retrieve the names of all employees who work on every project.
10) Retrieve the names of all employees who do not work on any project.
11) Display the name and total no. of hours worked by an employee who is working on maximum no. of projects among all the employees.
12) Display the names of all employees and also no. of hours, project names that they work on if they happen to work on any project(use outer join).
13) List the employee name, project name on which they work and the department they belong to for all the employees using alias names for the resulting columns.
14) Retrieve the names of all employees who work on more than one project department wise.
15) List all the departments that contain at least one occurrence of 'C' in their names.

5) Create a view that has project name, controlling department name, number of employees and total hours worked on the project for each project with more than one employee working on it.

1) List the projects that are controlled by one department from this view.
2) List the managers of the controlling departments for all the projects.
3) Demonstrate one update operation on this view.
4) List the Location of the controlling departments for all the projects.
5) Retrieve the data from the view.

PL/SQL LAB CYCLE

CYCLE-II

6. Write a PL/SQL Block to find whether the number is Armstrong or not.
7. Write a PL/SQL program for generating Fibonacci series
8. Write an anonymous PL/SQL block that fetches and displays the data from employee table to the console.
9. Write a program that updates salaries of all employees with 10% hike (use cursors).
10. Write a program to fetch salary and employee name from employee table for a given user input. When no data found raise an exception that prints the message "no data found".
11. Write a program to find the number of records of any given table using % ROWCOUNT.
12. Write a cursor to display the list of employees and total salary department wise.
13. Write a database trigger on employee table so that the trigger fires when all the DML statements are executed (print appropriate message).
14. Write a trigger in such a way that it should not allow insert or update or delete on Wednesday and Thursday and display the proper message.
15. Write a procedure to display the name and salary of employee when user inputs SSN using IN/OUT parameters.
16. Write a function to check the validity of the given employee number from the employee table (print the appropriate message using PL/SQL block).
17. Visit TPC and submit report.

Course Educational Objectives:

The major objective of this lab is to provide a strong formal foundation in database concepts, technology and practice to the participants to groom them into well-informed database application developers.

The sub-objectives are:

1. To give a good formal foundation on the relational model of data
2. To present SQL and procedural interfaces to SQL comprehensively
3. To give an introduction to systematic database design approaches covering conceptual design, logical design and an overview of physical design

Course Outcomes:

After the completion of the course, students should be able to

CO1: Understand, and effectively explain the underlying concepts of database design.
CO2: Design & implement a database schema for a given problem-domain.
CO3: Query a database using SQL DML/DDL commands and apply enforce integrity constraints on a database.
CO4: Executing PL/SQL including stored procedures, stored functions, cursors and Triggers.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Database Management Systems Lab
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II (IV sem)	Section: B

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
1	Introduction to SQL	27/01/2016		1	1	4,6
2	**CYCLE-1 EXP-1**	06/02/2016		1	1	
3	**CYCLE-1 EXP-1**	13/02/2016		1	1	
4	**CYCLE-1 EXP-2**	20/02/2016		1	1	
5	**CYCLE-1 EXP-2**	27/02/2016		1	1	
6	**CYCLE-1 EXP-3**	05/03/2016		1	1	
7	**CYCLE-1 EXP-3**	26/03/2016		1	1	
8	**CYCLE-1 EXP-4**	02/04/2016		1	1,2	
9	**CYCLE-1 EXP-4**	09/04/2016		1	1	

10	**CYCLE-1 EXP-5**	16/04/2016		1	1,9	
11	**CYCLE-2 EXP-1,2,3**	23/04/2016		1	1,9	
12	**CYCLE-2 EXP-4,5,6**	30/04/2016		1	1,9	
13	**CYCLE-2 EXP-7,8,9**	07/05/2016		1	1,9	
14	**CYCLE-2 EXP-10,11,12**	14/05/2016		1	1,9	
15	**CYCLE-2 EXP-13,14,15**	04/06/2016		1	1,9	

Resources Used:

TEXT BOOKS

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Assessment Summary:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments						
Quizzes						
Tutorials						
Surprise Tests	--					
Mid Exams	25					
Model Exams	--					
End Exam	75					
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S180	I	×						L												S	M			
	II		×				S	S			L								M	S				
	III			×			M	M												S				
	IV				×		M	L												S				L
	V					×	M	L												S				M

` **(S=strongly (100%) M=moderately (70%) L=lightly(50%))**

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	M.Naveen			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : DATABASE MANAGEMENT SYSTEMS Branch: CSE Semester & Sections: IV & A	To 09/07/2016

S180 - DATABASE MANAGEMENT SYSTEMS

Lecture	**: 4 Periods/week**	**Internal Marks**	**: 25**
Tutorial	**: 1**	**External Marks**	**: 75**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

CYCLE-1

1) Create a table STUDENT with appropriate data types and perform the following queries.

Roll number, student name, date of birth, branch and year of study.

12. Insert 5 to 10 rows in a table?
13. List all the students of all branches
14. List student names whose name starts with 's'
15. List student names whose name contains 's' as third literal
16. List student names whose contains two 's' anywhere in the name
17. List students whose branch is NULL
18. List students of CSE & ECE who born after 1980
19. List all students in reverse order of their names
20. Delete students of any branch whose name starts with 's'
21. Update the branch of CSE students to ECE
22. Display student name padded with '*' after the name of all the students

2) Create the following tables based on the above Schema Diagram with appropriate data types and constraints and perform the following queries.

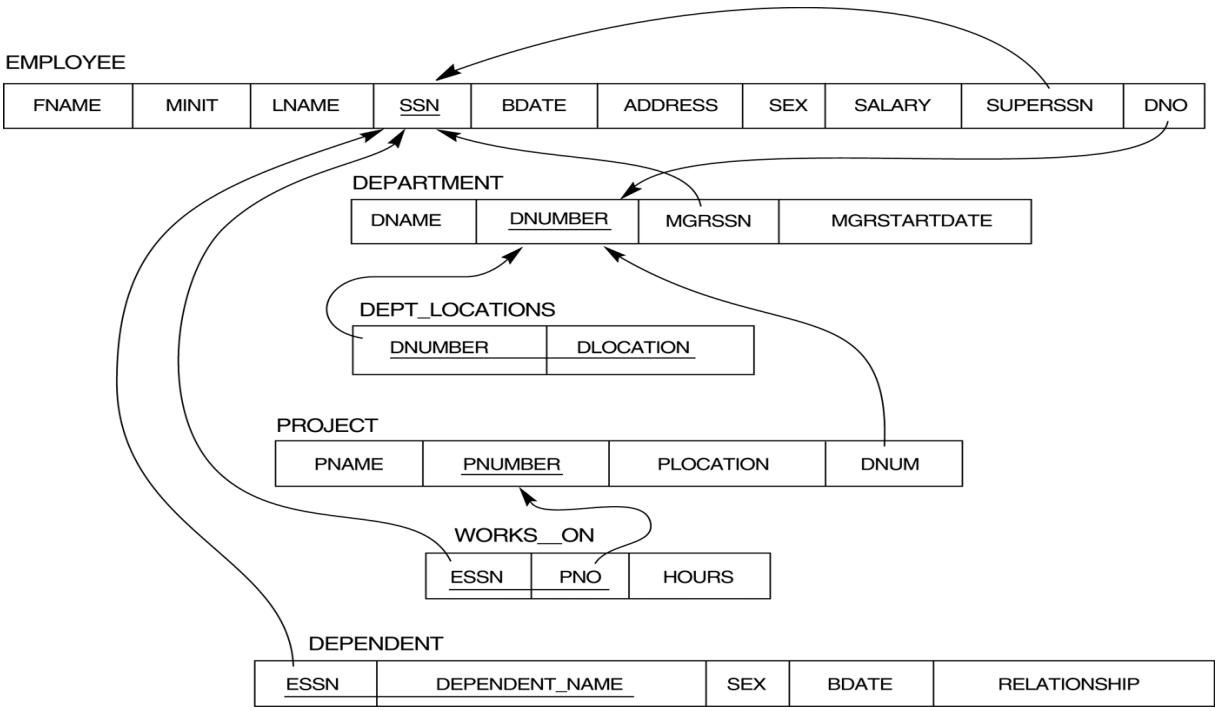
SAILORS (Saild, Salname, Rating, Age)

RESERVES (Sailid, boatid, Day)

BOATS (Boatid, Boat-name, Color)

11. Insert 5 to 10 rows in all tables?
12. Find the name of sailors who reserved boat number 3.
13. Find the name of sailors who reserved green boat.
14. Find the colors of boats reserved by “Ramesh”.
15. Find the names of sailors who have reserved atleast one boat.
16. Find the all sailid of sailors who have a rating of 10 or have reserved boated 104.
17. Find the Sailid’s of sailors with age over 20 who have not registered a red boat.
18. Find the names of sailors who have reserved a red or green boat.
19. Find sailors whose rating is better than some sailor called ‘Salvador’.
20. Find the names of sailors who are older than the oldest sailor with a rating of 10.

Schema Diagram for the rest of the SQL and PLSQL Programs.



3) Create the following tables based on the above Schema Diagram with appropriate data types and constraints.

EMPLOYEE (Fname, Mname, Lname, SSN, Bdate, Address, Gender, Salary, SuperSSN, Dno)

DEPARTMENT(Dnumber, Dname, MgrSSN, Mgrstartdate)

DEPENDENT (ESSN, Dependent_Name, Gender, Bdate, Relationship)

16) Insert 5 to 10 rows into all the tables.
17) Display all employee's names along with their department names.
18) Display all employee's names along with their dependent details.
19) Display name and address of all employees who work for 'ECE' department.
20) List the names of all employees with two or more dependents.
21) List the names of employee who have no dependents.
22) List the names of employees who have at least one dependent.
23) List the names of the employees along with names of their supervisors using aliases.
24) Display name of the department and name of manager for all the departments.
25) Display the name of each employee who has a dependent with the same first name and gender as the employee.
26) List the names of managers who have at least one dependent.
27) Display the sum of all employees' salaries as well as maximum, minimum and average salary in the entire departments department wise if the department has more than two employees.
28) List the departments of each female employee along with her name.
29) List all employee names and also the name of the department they manage if they happen to manage a dept.
30) Display the name of the employee and his / her supervisor's name.

4) Create the following tables based on the above Schema Diagram with appropriate data types and constraints in addition to the tables in Experiment 2.

DEPT_LOCATIONS (Dnumber, Dloaction)

PROJECT (Pname, Pnumber, Plocation, Dnum)

WORKS_ON(ESSN, Pno, Hours).

16) Insert 5 to 10 rows into all the tables.
17) Find the names of the employees who work on all the projects controlled by the department 'ECM'.
18) List the project number, name and no. Of employees who work on that project for all the projects.
19) List the names of all the projects controlled by the departments department wise.
20) Retrieve the names of employees who work on all projects that 'John' works on.
21) List the project numbers for projects that involve an employee either as worker or as a manager of the department that controls the project.
22) List the names of all employees in one department who work more than 10 hours on one specific project.
23) For each project, list the project name and total hours (by all employees) spent on that project.
24) Retrieve the names of all employees who work on every project.
25) Retrieve the names of all employees who do not work on any project.
26) Display the name and total no. of hours worked by an employee who is working on maximum no. of projects among all the employees.
27) Display the names of all employees and also no. of hours, project names that they work on if they happen to work on any project(use outer join).
28) List the employee name, project name on which they work and the department they belong to for all the employees using alias names for the resulting columns.
29) Retrieve the names of all employees who work on more than one project department wise.
30) List all the departments that contain at least one occurrence of 'C' in their names.

5) Create a view that has project name, controlling department name, number of employe es and total hours worked on the project for each project with more than one employee working on it.

6) List the projects that are controlled by one department from this view.
7) List the managers of the controlling departments for all the projects.
8) Demonstrate one update operation on this view.
9) List the Location of the controlling departments for all the projects.
10) Retrieve the data from the view.

PL/SQL LAB CYCLE

CYCLE-II

18. Write a PL/SQL Block to find whether the number is Armstrong or not.
19. Write a PL/SQL program for generating Fibonacci series
20. Write an anonymous PL/SQL block that fetches and displays the data from employee table to the console.
21. Write a program that updates salaries of all employees with 10% hike (use cursors).
22. Write a program to fetch salary and employee name from employee table for a given user input. When no data found raise an exception that prints the message "no data found".
23. Write a program to find the number of records of any given table using % ROWCOUNT.
24. Write a cursor to display the list of employees and total salary department wise.
25. Write a database trigger on employee table so that the trigger fires when all the DML statements are executed (print appropriate message).
26. Write a trigger in such a way that it should not allow insert or update or delete on Wednesday and Thursday and display the proper message.
27. Write a procedure to display the name and salary of employee when user inputs SSN using IN/OUT parameters.
28. Write a function to check the validity of the given employee number from the employee table (print the appropriate message using PL/SQL block).
29. Visit TPC and submit report.

Course Educational Objectives:

The major objective of this lab is to provide a strong formal foundation in database concepts, technology and practice to the participants to groom them into well-informed database application developers.

The sub-objectives are:

4. To give a good formal foundation on the relational model of data
5. To present SQL and procedural interfaces to SQL comprehensively
6. To give an introduction to systematic database design approaches covering conceptual design, logical design and an overview of physical design

Course Outcomes:

After the completion of the course, students should be able to

CO1: Understand, and effectively explain the underlying concepts of database design.
CO2: Design & implement a database schema for a given problem-domain.

CO3: Query a database using SQL DML/DDL commands and apply enforce integrity constraints on a database.
CO4: Executing PL/SQL including stored procedures, stored functions, cursors and Triggers.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Database Management Systems Lab
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II (IV sem)	Section: A

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
1	Introduction to SQL	01/02/2016		1	1	4,6
2	**CYCLE-1 EXP-1**	08/02/2016		1	1	
3	**CYCLE-1 EXP-1**	15/02/2016		1	1	
4	**CYCLE-1 EXP-2**	22/02/2016		1	1	
5	**CYCLE-1 EXP-2**	29/02/2016		1	1	
6	**CYCLE-1 EXP-3**	21/03/2016		1	1	
7	**CYCLE-1 EXP-3**	28/03/2016		1	1	
8	**CYCLE-1 EXP-4**	04/04/2016		1	1,2	
9	**CYCLE-1 EXP-4**	11/04/2016		1	1	

10	**CYCLE-1 EXP-5**	18/04/2016		1	1,9	
11	**CYCLE-2 EXP-1,2,3**	25/04/2016		1	1,9	
12	**CYCLE-2 EXP-4,5,6**	02/05/2016		1	1,9	
13	**CYCLE-2 EXP-7,8,9**	09/05/2016		1	1,9	
14	**CYCLE-2 EXP-10,11,12**	06/06/2016		1	1,9	
15	**CYCLE-2 EXP-13,14,15**	13/06/2016		1	1,9	

Resources Used:

TEXT BOOKS

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Assessment Summary:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments						
Quizzes						
Tutorials						
Surprise Tests	--					
Mid Exams	25					
Model Exams	--					
End Exam	75					
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S180	I	×						L												S	M			
	II		×				S	S			L								M	S				
	III			×			M	M												S				
	IV				×		M	L												S				L
	V					×	M	L												S				M

` **(S=strongly (100%) M=moderately (70%) L=lightly(50%))**

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	V.Siva Krishna			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : DATABASE MANAGEMENT SYSTEMS Branch: CSE Semester & Sections: IV-A	To 09/07/2016

S180 - DATABASE MANAGEMENT SYSTEMS

Lecture	**: 4 Periods/week**	**Internal Marks**	**: 25**
Tutorial	**: 1**	**External Marks**	**: 75**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

UNIT - I

Introduction: An overview of database management system, database system Vs file system, Database system concepts and architecture, data models schema and instances, data independence and data base language and interfaces, Data definitions language, DML, Overall Database Structure.

Data modeling using the Entity Relationship Model: ER model concepts, notation for ER diagram, mapping constraints, keys, Concepts of Super Key, candidate key, primary key, Generalization, aggregation, reduction of an ER diagrams to tables, extended ER model, relationships of higher degree.

UNIT - II

Relational data Model and Language: Relational data model concepts, integrity constraints: entity integrity, referential integrity, Keys constraints, Domain constraints, relational algebra.

Introduction to SQL: Characteristics of SQL, Advantage of SQL. SQL data types and literals. Types of SQL commands.SQL operators and their procedure. Tables, views and indexes. Queries and sub queries. Aggregate functions. Insert, update and delete operations. Joins, Unions, Intersection, Minus, Cursors in SQL.

UNIT - III

Normalization: Functional dependencies, normal forms, first, second, third normal forms, BCNF, inclusion dependences, loss less join decompositions, normalization using FD, MVD, and JDs, alternative approaches to database design.

UNIT – IV

Transaction Processing Concepts*:* Transaction system, Testing of serializability, Serializability of schedules, conflict & view serializable schedule, recoverability, log based recovery, checkpoints, ARIES algorithm, deadlock handling. **Concurrency Control Techniques:** Concurrency control, locking Techniques for concurrency control, Time stamping protocols for concurrency control, validation based protocol, multiple granularity, Recovery with concurrent transactions.

UNIT-V

Storage and Indexing: RAID levels, page formats, record formats, file types and organization, ISAM, B-tree, B+-tree.

TEXT BOOK

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Prerequisite: Elementary set theory, concepts of relations and functions, propositional logic data structures (trees, Graphs, dictionaries)& File Concepts.

Course Educational Objectives:

This course enables the students to know about

- DBMS basic concepts, Database Languages.
- Data base Design.
- Normalization process and Transaction processing.
- Indexing.

Course Outcomes:

After the completion of the course, students should be able to

CO1: Understand DBMS concepts, architecture & Data model.
CO2: Apply the concepts of relational algebra, calculus, and also SQL.
CO3: Apply the normalization process for data base design.
CO4: Understand the issues in transaction processing and Analyze different Concurrency and recovery strategies of DBMS
CO5: Analyze different file organization techniques & Indexing Techniques.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Database Management systems
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II (IV sem)	Section: A

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT –I: Introduction & Data modeling using the Entity Relationship Model						
1	Introduction	28/01/2016		2	1	12,,3,5,7
2	An overview of database management system	29/01/2016		2	1	
3	database system Vs file system	30/01/2016		2	1	
4	Database system concepts and architecture	1/02/2016		2	1	
5	data models schema and instances	2/02/2016		2	1	
6	data independence and data base language and interfaces	4/02/2016		2	1	
7	Data definitions language, DML	5/02/2016		2	1	

8	Overall Database Structure	6/02/2016		2	1,2	
9	ER model concepts- notation for ER diagram	8/02/2016		2	1	
10	mapping constraints, keys	9/02/2016		2	1,9	
11	Concepts of Super Key, candidate key, primary key	11/02/2016		2	1,9	
12	Generalization, aggregation	12/02/2016		2	1,9	
13	reduction of an ER diagrams to tables	13/02/2016		2	1,9	
14	extended ER model	15/02/2016		2	1,9	
15	relationships of higher degree	16/02/2016		2	1,9	
16	**Tutorial – I**	18/02/2016				
UNIT –II: Relational data Model and Language & Introduction to SQL						
17	Relational data model concepts	19/02/2016		2	1	
18	integrity constraints: entity integrity, referential integrity	20/02/2016		2	1,9	
19	Keys constraints, Domain constraints	22/02/2016		2	1,9	
20	relational algebra	23/02/2016		2	1,9	
21	Characteristics of SQL, Advantage of SQL	25/02/2016		2	1	
22	SQL data types and literals	26/02/2016		2	1	
23	Types of SQL commands	27/02/2016		2	1,9	
24	SQL operators and their procedure	29/02/2016		2	1,9	
25	Tables, views and indexes	01/03/2016		2	1,9	
26	Queries and sub queries	03/03/2016		2	1,9	
27	Aggregate functions	04/03/2016		2	1,9	
28	Insert, update and delete operations	05/03/2016		2	1,9	1,2,3,5,7
29	Unions, Intersection, Minus	08/03/2016		2	1,9	
30	Cursors in SQL	10/03/2016		2	1,9	
31	**Tutorial – II**	11/03/2016				
32		12/03/2016				
33	MID – I EXAMS	15/03/2016				
34		17/03/2016				

35		18/03/2016				
36		19/03/2016				
UNIT –III: Normalization						
37	Functional dependencies	21/03/2016		2	1	1,2,3,5,7
38	normal forms: first, second	22/03/2016		2	1,9	
39	third normal forms	26/03/2016		2	1,9	
40	BCNF	28/03/2016		2	1,9	
41	inclusion dependences	29/03/2016		2	1,9	
42	loss less join decompositions	31/03/2016		2	1,9	
43	**Tutorial – III**	01/04/2016				
44	normalization using FD	02/04/2016		2	1,9	
45	normalization using MVD	04/04/2016		2	1,9	
46	normalization using JD	05/04/2016		2	1,9	
47	alternative approaches to database design	07/04/2016		2	1,9	
48	alternative approaches to database design	11/04/2016		2	1,9	
49	**Tutorial – IV**	12/04/2016				
UNIT –IV: Transaction Processing Concepts & Concurrency Control Techniques						
50	Transaction system	14/04/2016		2	1	1,2,3,5,7
51	Testing of serializability	16/04/2016		2	1	
52	Serializability of schedules	18/04/2016		2	1	
53	conflict & view serializable schedule	19/04/2016		2	1	
54	recoverability, log based recovery	21/04/2016		2	1	
55	Checkpoints	22/04/2016		2	1	
56	ARIES algorithm	23/04/2016		2	1	
57	deadlock handling	25/04/2016		2	1	
58	**Tutorial –V**	26/04/2016				
59	Concurrency control	28/04/2016		2	1	
60	Techniques for concurrency control	29/04/2016		2	1	

61	Time stamping protocols for concurrency control	30/04/2016		2	1	
62	Locking	02/04/2016		2	1	
63	validation based protocol	03/05/2016		2	1	
64	multiple granularity	05/05/2016		2	1	
65	Recovery with concurrent transactions	06/05/2016		2	1	
UNIT-V: Storage and Indexing						
66	RAID levels	07/05/2016		2	1	1,2,3,5,7
67	RAID levels	09/05/2016		2	1	
68	page formats	10/05/2016		2	1	
69	record formats	12/05/2016		2	1	
70	file types and organization	13/05/2016		2	1	
71	file types and organization	31/05/2016		2	1	
72	ISAM	02/06/2016		2	1	
73	B-tree	03/06/2016		2	1	
74	B+-tree.	04/06/2015		2	1	
75	B+-tree.	06/06/2016		2	1	
76	**Tutorial – VI**	07/06/2016				
77	II MID EXAMS	09/06/2016				
78		10/06/2016				
79		13/06/2016				
80		14/062016				
81		15/06/2016				

Resources Used:

TEXT BOOKS

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Assessment Summary:

Assessment Task	Weightage (Marks)	**Course Outcomes**				
		CO1	CO2	CO3	CO4	CO5
Assignments	5					
Quizzes						
Tutorials						
Surprise Tests	--					
Mid Exams	20					
Model Exams	--					
End Exam	75					
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S180	I	×						L												S	M			
	II		×				S	S			L								M	S				
	III			×			M	M												S				
	IV				×		M	L												S				L
	V					×	M	L												S				M

` **(S=strongly (100%) M=moderately (70%) L=lightly(50%))**

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	V.Siva Krishna			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : DATABASE MANAGEMENT SYSTEMS Branch: CSE Semester & Sections: IV & B	To 15/06/2016

S180 - DATABASE MANAGEMENT SYSTEMS

Lecture	**: 4 Periods/week**	**Internal Marks**	**: 25**
Tutorial	**: 1**	**External Marks**	**: 75**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

UNIT - I

Introduction: An overview of database management system, database system Vs file system, Database system concepts and architecture, data models schema and instances, data independence and data base language and interfaces, Data definitions language, DML, Overall Database Structure.

Data modeling using the Entity Relationship Model: ER model concepts, notation for ER diagram, mapping constraints, keys, Concepts of Super Key, candidate key, primary key, Generalization, aggregation, reduction of an ER diagrams to tables, extended ER model, relationships of higher degree.

UNIT - II

Relational data Model and Language: Relational data model concepts, integrity constraints: entity integrity, referential integrity, Keys constraints, Domain constraints, relational algebra.

Introduction to SQL: Characteristics of SQL, Advantage of SQL. SQL data types and literals. Types of SQL commands.SQL operators and their procedure. Tables, views and indexes. Queries and sub queries. Aggregate functions. Insert, update and delete operations. Joins, Unions, Intersection, Minus, Cursors in SQL.

UNIT - III

Normalization: Functional dependencies, normal forms, first, second, third normal forms, BCNF, inclusion dependences, loss less join decompositions, normalization using FD, MVD, and JDs, alternative approaches to database design.

UNIT – IV

Transaction Processing Concepts*:* Transaction system, Testing of serializability, Serializability of schedules, conflict & view serializable schedule, recoverability, log based recovery, checkpoints, ARIES algorithm, deadlock handling. **Concurrency Control Techniques:** Concurrency control, locking Techniques for concurrency control, Time stamping protocols for concurrency control, validation based protocol, multiple granularity, Recovery with concurrent transactions.

UNIT-V

Storage and Indexing: RAID levels, page formats, record formats, file types and organization, ISAM, B-tree, B+-tree.

TEXT BOOK

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Prerequisite: Elementary set theory, concepts of relations and functions, propositional logic data structures (trees, Graphs, dictionaries)& File Concepts.

Course Educational Objectives:

This course enables the students to know about

- DBMS basic concepts, Database Languages.
- Data base Design.
- Normalization process and Transaction processing.
- Indexing.

Course Outcomes:

After the completion of the course, students should be able to

CO1: Understand Database concepts, architecture, Data base languages, Data models and design of database.

CO2: Apply the concepts of relational algebra, calculus, and also SQL.

CO3: Apply the normalization process for data base.

CO4: Understand the issues in transaction processing and analyze different Concurrency and recovery strategies of DBMS.

CO5: Analyze different file organization techniques & Indexing Techniques.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Database Management systems
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II (IV sem)	Section: B

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT –I: Introduction & Data modeling using the Entity Relationship Model						
1	Introduction	27/01/2016		2	1	1,2,3,5,7
2	An overview of database management system	29/01/2016		2	1	
3	database system Vs file system	30/01/2016		2	1	
4	Database system concepts and architecture	1/02/2016		2	1	
5	data models schema and instances	2/02/2016		2	1	
6	data independence and data base language and interfaces	3/02/2016		2	1	
7	Data definitions language, DML	5/02/2016		2	1	

8	Overall Database Structure	6/02/2016		2	1,2	
9	ER model concepts- notation for ER diagram	8/02/2016		2	1	
10	mapping constraints, keys	9/02/2016		2	1,9	
11	Concepts of Super Key, candidate key, primary key	10/02/2016		2	1,9	
12	Generalization, aggregation	12/02/2016		2	1,9	
13	reduction of an ER diagrams to tables	13/02/2016		2	1,9	
14	extended ER model	15/02/2016		2	1,9	
15	relationships of higher degree	16/02/2016		2	1,9	
16	**Tutorial – I**	17/02/2016				
UNIT –II: Relational data Model and Language & Introduction to SQL						
17	Relational data model concepts	19/02/2016		2	1	
18	integrity constraints: entity integrity, referential integrity	20/02/2016		2	1,9	
19	Keys constraints, Domain constraints	22/02/2016		2	1,9	
20	relational algebra	23/02/2016		2	1,9	
21	Characteristics of SQL, Advantage of SQL	24/02/2016		2	1	
22	SQL data types and literals	26/02/2016		2	1	
23	Types of SQL commands	27/02/2016		2	1,9	
24	SQL operators and their procedure	29/02/2016		2	1,9	
25	Tables, views and indexes	01/03/2016		2	1,9	
26	Queries and sub queries	02/03/2016		2	1,9	
27	Aggregate functions	04/03/2016		2	1,9	
28	Insert, update and delete operations	05/03/2016		2	1,9	1,2,3,5,7
29	Unions, Intersection, Minus	08/03/2016		2	1,9	
30	Cursors in SQL	09/03/2016		2	1,9	
31	**Tutorial – II**	11/03/2016				
32		12/03/2016				
33	MID – I EXAMS	15/03/2016				
34		16/03/2016				

35		18/03/2016				
36		19/03/2016				
UNIT –III: Normalization						
37	Functional dependencies	21/03/2016		2	1	1,2,3,5,7
38	normal forms: first, second	22/03/2016		2	1,9	
39	third normal forms	26/03/2016		2	1,9	
40	BCNF	28/03/2016		2	1,9	
41	inclusion dependences	29/03/2016		2	1,9	
42	loss less join decompositions	30/03/2016		2	1,9	
43	**Tutorial – III**	01/04/2016				
44	normalization using FD	02/04/2016		2	1,9	
45	normalization using MVD	04/04/2016		2	1,9	
46	normalization using JD	05/04/2016		2	1,9	
47	alternative approaches to database design	06/04/2016		2	1,9	
48	alternative approaches to database design	11/04/2016		2	1,9	
49	**Tutorial – IV**	12/04/2016				
UNIT –IV: Transaction Processing Concepts & Concurrency Control Techniques						
50	Transaction system	13/4/2016		2	1	1,2,3,5,7
51	Testing of serializability	16/04/2016		2	1	
52	Serializability of schedules	18/04/2016		2	1	
53	conflict & view serializable schedule	19/04/2016		2	1	
54	recoverability, log based recovery	20/04/2016		2	1	
55	Checkpoints	22/04/2016		2	1	
56	ARIES algorithm	23/04/2016		2	1	
57	deadlock handling	25/04/2016		2	1	
58	**Tutorial –V**	26/04/2016				
59	Concurrency control	27/04/2016		2	1	
60	Techniques for concurrency control	29/04/2016		2	1	

61	Time stamping protocols for concurrency control	30/04/2016		2	1	
62	Locking	02/04/2016		2	1	
63	validation based protocol	03/05/2016		2	1	
64	multiple granularity	04/05/2016		2	1	
65	Recovery with concurrent transactions	06/05/2016		2	1	
UNIT-V: Storage and Indexing						
66	RAID levels	07/05/2016		2	1	1,2,3,5,7
67	RAID levels	09/05/2016		2	1	
68	page formats	10/05/2016		2	1	
69	record formats	11/05/2016		2	1	
70	file types and organization	12/05/2016		2	1	
71	file types and organization	13/05/2016		2	1	
72	ISAM	01/06/2016		2	1	
73	B-tree	03/06/2016		2	1	
74	B+-tree.	04/06/2015		2	1	
75	B+-tree.	06/06/2016		2	1	
76	**Tutorial – VI**	07/06/2016				
77	II MID EXAMS	08/06/2016				
78		10/06/2016				
79		13/06/2016				
80		14/062016				
81		15/06/2016				

Resources Used:

TEXT BOOKS

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Assessment Summary:

Assessment Task	Weightage (Marks)	**Course Outcomes**				
		CO1	CO2	CO3	CO4	CO5
Assignments Quizzes Tutorials	5					
Surprise Tests	--					
Mid Exams	20					
Model Exams	--					
End Exam	75					
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S180	I	×						L												S	M			
	II		×				S	S			L								M	S				
	III			×			M	M												S				
	IV				×		M	L												S				L
	V					×	M	L												S				M

(S=strongly (100%) M=moderately (70%) L=lightly(50%))

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	M.Naveen			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : DATABASE MANAGEMENT SYSTEMS Branch: CSE Semester & Sections: IV-B	To 09/07/2016

S180 - DATABASE MANAGEMENT SYSTEMS

Lecture	**: 4 Periods/week**	**Internal Marks**	**: 25**
Tutorial	**: 1**	**External Marks**	**: 75**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

UNIT - I

Introduction: An overview of database management system, database system Vs file system, Database system concepts and architecture, data models schema and instances, data independence and data base language and interfaces, Data definitions language, DML, Overall Database Structure.

Data modeling using the Entity Relationship Model: ER model concepts, notation for ER diagram, mapping constraints, keys, Concepts of Super Key, candidate key, primary key, Generalization, aggregation, reduction of an ER diagrams to tables, extended ER model, relationships of higher degree.

UNIT - II

Relational data Model and Language: Relational data model concepts, integrity constraints: entity integrity, referential integrity, Keys constraints, Domain constraints, relational algebra.

Introduction to SQL: Characteristics of SQL, Advantage of SQL. SQL data types and literals. Types of SQL commands.SQL operators and their procedure. Tables, views and indexes. Queries and sub queries. Aggregate functions. Insert, update and delete operations. Joins, Unions, Intersection, Minus, Cursors in SQL.

UNIT - III

Normalization: Functional dependencies, normal forms, first, second, third normal forms, BCNF, inclusion dependences, loss less join decompositions, normalization using FD, MVD, and JDs, alternative approaches to database design.

UNIT – IV

Transaction Processing Concepts*:* Transaction system, Testing of serializability, Serializability of schedules, conflict & view serializable schedule, recoverability, log based recovery, check points, ARIES algorithm, deadlock handling. **Concurrency Control Techniques:** Concurrency control, locking Techniques for concurrency control, Time stamping protocols for concurrency control, validation based protocol, multiple granularity, Recovery with concurrent transactions.

UNIT-V

Storage and Indexing: RAID levels, page formats, record formats, file types and organization, ISAM, B-tree, B+-tree.

TEXT BOOK

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Prerequisite: Elementary set theory, concepts of relations and functions, propositional logic data structures (trees, Graphs, dictionaries)& File Concepts.

Course Educational Objectives:

This course enables the students to know about

- DBMS basic concepts, Database Languages.
- Data base Design.
- Normalization process and Transaction processing.
- Indexing.

Course Outcomes:

After the completion of the course, students should be able to

CO1: Understand DBMS concepts, architecture & Data model.
CO2: Apply the concepts of relational algebra, calculus, and also SQL.
CO3: Apply the normalization process for data base design.
CO4: Understand the issues in transaction processing and Analyze different Concurrency and recovery strategies of DBMS
CO5: Analyze different file organization techniques & Indexing Techniques.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Database Management systems
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II (IV sem)	Section: A

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT –I: Introduction & Data modeling using the Entity Relationship Model						
1	Introduction	28/01/2016		2	1	12,,3,5,7
2	An overview of database management system	29/01/2016		2	1	
3	database system Vs file system	30/01/2016		2	1	
4	Database system concepts and architecture	1/02/2016		2	1	
5	data models schema and instances	2/02/2016		2	1	
6	data independence and data base language and interfaces	4/02/2016		2	1	
7	Data definitions language, DML	5/02/2016		2	1	

8	Overall Database Structure	6/02/2016		2	1,2	
9	ER model concepts- notation for ER diagram	8/02/2016		2	1	
10	mapping constraints, keys	9/02/2016		2	1,9	
11	Concepts of Super Key, candidate key, primary key	11/02/2016		2	1,9	
12	Generalization, aggregation	12/02/2016		2	1,9	
13	reduction of an ER diagrams to tables	13/02/2016		2	1,9	
14	extended ER model	15/02/2016		2	1,9	
15	relationships of higher degree	16/02/2016		2	1,9	
16	**Tutorial – I**	18/02/2016				
UNIT –II: Relational data Model and Language & Introduction to SQL						
17	Relational data model concepts	19/02/2016		2	1	
18	integrity constraints: entity integrity, referential integrity	20/02/2016		2	1,9	
19	Keys constraints, Domain constraints	22/02/2016		2	1,9	
20	relational algebra	23/02/2016		2	1,9	
21	Characteristics of SQL, Advantage of SQL	25/02/2016		2	1	
22	SQL data types and literals	26/02/2016		2	1	
23	Types of SQL commands	27/02/2016		2	1,9	
24	SQL operators and their procedure	29/02/2016		2	1,9	
25	Tables, views and indexes	01/03/2016		2	1,9	
26	Queries and sub queries	03/03/2016		2	1,9	
27	Aggregate functions	04/03/2016		2	1,9	
28	Insert, update and delete operations	05/03/2016		2	1,9	1,2,3,5,7
29	Unions, Intersection, Minus	08/03/2016		2	1,9	
30	Cursors in SQL	10/03/2016		2	1,9	
31	**Tutorial – II**	11/03/2016				
32		12/03/2016				
33	MID – I EXAMS	15/03/2016				
34		17/03/2016				

35		18/03/2016				
36		19/03/2016				
UNIT –III: Normalization						
37	Functional dependencies	21/03/2016		2	1	1,2,3,5,7
38	normal forms: first, second	22/03/2016		2	1,9	
39	third normal forms	26/03/2016		2	1,9	
40	BCNF	28/03/2016		2	1,9	
41	inclusion dependences	29/03/2016		2	1,9	
42	loss less join decompositions	31/03/2016		2	1,9	
43	**Tutorial – III**	01/04/2016				
44	normalization using FD	02/04/2016		2	1,9	
45	normalization using MVD	04/04/2016		2	1,9	
46	normalization using JD	05/04/2016		2	1,9	
47	alternative approaches to database design	07/04/2016		2	1,9	
48	alternative approaches to database design	11/04/2016		2	1,9	
49	**Tutorial – IV**	12/04/2016				
UNIT –IV: Transaction Processing Concepts & Concurrency Control Techniques						
50	Transaction system	14/04/2016		2	1	1,2,3,5,7
51	Testing of serializability	16/04/2016		2	1	
52	Serializability of schedules	18/04/2016		2	1	
53	conflict & view serializable schedule	19/04/2016		2	1	
54	recoverability, log based recovery	21/04/2016		2	1	
55	Checkpoints	22/04/2016		2	1	
56	ARIES algorithm	23/04/2016		2	1	
57	deadlock handling	25/04/2016		2	1	
58	**Tutorial –V**	26/04/2016				
59	Concurrency control	28/04/2016		2	1	
60	Techniques for concurrency control	29/04/2016		2	1	

61	Time stamping protocols for concurrency control	30/04/2016		2	1	
62	Locking	02/04/2016		2	1	
63	validation based protocol	03/05/2016		2	1	
64	multiple granularity	05/05/2016		2	1	
65	Recovery with concurrent transactions	06/05/2016		2	1	
UNIT-V: Storage and Indexing						
66	RAID levels	07/05/2016		2	1	1,2,3,5,7
67	RAID levels	09/05/2016		2	1	
68	page formats	10/05/2016		2	1	
69	record formats	12/05/2016		2	1	
70	file types and organization	13/05/2016		2	1	
71	file types and organization	31/05/2016		2	1	
72	ISAM	02/06/2016		2	1	
73	B-tree	03/06/2016		2	1	
74	B+-tree.	04/06/2015		2	1	
75	B+-tree.	06/06/2016		2	1	
76	**Tutorial – VI**	07/06/2016				
77	II MID EXAMS	09/06/2016				
78		10/06/2016				
79		13/06/2016				
80		14/062016				
81		15/06/2016				

Resources Used:

TEXT BOOKS

1. "Database Concepts", Korth, Silbertz, Sudarshan, McGraw Hill.
2. "Fundamentals Of Database Systems", Elmasri, Navathe, Addision Wesley.

REFERENCES

1. "Database Management System", Raghu Ramakrishnan, McGraw Hill
2. "DBMS: Complete Practical Approach", Maheshwari Jain, Firewall Media, New Delhi.
3. "An Introduction To Database System", Date C J, Addision Wesley.

Assessment Summary:

Assessment Task	Weightage (Marks)	**Course Outcomes**				
		CO1	CO2	CO3	CO4	CO5
Assignments	5					
Quizzes						
Tutorials						
Surprise Tests	--					
Mid Exams	20					
Model Exams	--					
End Exam	75					
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S180	I	×						L												S	M			
	II		×				S	S			L								M	S				
	III			×			M	M												S				
	IV				×		M	L												S				L
	V					×	M	L												S				M

` **(S=strongly (100%) M=moderately (70%) L=lightly(50%))**

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	V.Siva Krishna			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : JAVA PROGRAMMING LAB Branch: CSE Semester & Section: IV & A	To 09/07/2016

L155 – JAVA PROGRAMMING LAB

Lecture	**: 3 Periods/week**	**Internal Marks**	**: 25**
		External Marks	**: 50**
Credits	**: 2**	**External Examination**	**: 3 Hrs**

Course Educational Objectives:

To make students enable to

- Know the importance of implementing application in JAVA.
- Understand and Execute applications through JAVA (at core level).
- Implements concurrent execution of processes (threads), handling exceptions and OOP principles.
- Introduce the base for developing GUI based applications and Networking concepts.

Course Outcomes:

After completion of this course student shall able to,

CO1: Design & Implement various Packages, Interfaces, Exception handling& Multithreading.

CO2: Design various Applet programs Using Graphics class& AWT.

CO3: Develop applications on Database connectivity using JDBC.

Pre requisite: Knowledge of java syntaxes and notations.

1. a) Write a java program to generate Fibonacci series.

b) Write a java program to check whether given number is prime or not?

2. a) Write a java program to find out area of a circle.

   b) Write a java program to reverse the given number.

3. a) Write a java program to find the sum of the numbers by using Command line arguments.

   b) Write a java program to find the roots of a quadratic equation.

4. a) Write a java program to find the factorial of a given number using recursion.

   b) Write a java program to find sum of 'n' numbers using Recursion?

5. a) Write a java program to find min and max number of given Array.

   b) Write a java program to perform matrix Multiplication.

6 a) Write a java program to search an element by using linear search.

   b) Write a java program by using Bubble sort?

7 a) Write a java program to implement Over Loading?

   b) Write a java program using Constructors.

8 a) Write a java program using StringBuffer?

   b) Write a java program to check whether the given string is palindrome (or) not?

   c) Write a java program length and capacity using StringBuffer class.

9 a) Write a java program to sort the Strings in ascending order.

   b) Write a java program to implement stack ADT?

10 a) Write a java program using Inheritance.

   b) Write a java program by using super key word.

11 a) Write a java program using Abstract class.

   b) Write a java program by using final variables and final methods.

12 a) Write a java program to implement Overriding?

b) Write a java program to implement Dynamic method dispatch?

13 a) Write a java program to demonstrate Packages.

b) Write a java program to implement Multiple inheritance using interfaces.

14 a) Write a java program by using Exception handling mechanism.

b) Write a java program to create Multiple Threads.

15 a) Write a java program to find sum of n numbers using String Tokenizer.

b) Write a java program to find sum of the numbers using String Tokenizer.

16 a) Write a simple Applet program.

b) Write an applet program using Graphics.

17 a) Write an applet program to pass parameters to Applet.

b) Write an applet program to display information an applet.

18 a) Write an applet program to handle Mouse events.

b) Write an applet program using Key events?

19 a) Write a java program by using AWT components.

b) Write a java program to implement arithmetic calculator.

20 a) Write a java program to establish a connection with data base and perform some SQL Commands like create, insert, update delete.

b) Write a JDBC program to perform SQL commands using prepared statement.

21 a) Write a JDBC Program to execute stored procedure using callable statement.

b) Write a JDBC program to execute stored function using callable statement.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Java Programming Lab
	Programme: B.Tech	Exp No: 1 to 21
	Year & Sem: II & II (IV sem)	Section: B

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
1	Introduction to JAVA	29/01/2016		1	1,2	2,4,6
2	EXP-1, EXP-2	05/02/2016		1	1	
3	EXP-3, EXP-4	12/02/2016		1	1	
4	EXP-5, EXP-6	19/02/2016		1	1	
5	EXP-7, EXP-8	26/02/2016		1	1	
6	EXP-9, EXP-10	04/03/2016		1	1	
7	EXP-11, EXP-12	11/03/2016		1	1	
8	EXP-13, EXP-14	01/04/2016		1	1,2	
09	EXP-15, EXP-16	22/04/2016		1	1	
10	EXP-17, EXP-18	29/04/2016		1	1	

11	EXP-19	06/05/2016		1	1,2,9	
12	EXP-20, EXP21	13/05/2016		1	1,2,9	
13	Internal Exam	03/06/2016				

Resources Used:

TEXT BOOK

Herbert Schildt, Java: the complete reference, TMH Publications, 5th edition.

REFERENCES

1. E. Balaguruswamy, 'Programming with JAVA', TMH Publications, 2nd Edition.
2. Patrick Niemeyer & Jonathan Knudsen, Learning Java, O'Reilly P.
3. David Flanagan, Java – In a nutshell – A desktop quick reference, O'REILLY
4. Java Examples In a nutshell – A Tutorial companion to java in a nutshell (O'REILLY)
5. N.B.Venkateswarlu, E.V.Prasad, OOP through java, S chand 2010.

Assessment Summary:

Assessment Task	Weightage (Marks)	**Course Outcomes**		
		CO1	CO2	CO3
Day-Day Performance	10			
Record	05			
Internal Test	10			
Surprise Tests	--			
Model Exams	--			

End Exam	50			
Total	75			

Mapping Course Outcomes with Programme Outcomes:

Course Code	Course Outcomes			Programme Outcomes												PSO's					
	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
L155	x															S					L
		x				M										S					
			x			L										S	M			M	

` **(S=strongly (100%) (M=moderately (70%) (L=lightly (50%))**

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	S.Govindu			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date: 27/01/2016
	Sub. Name : JAVA PROGRAMMING LAB Branch: CSE Semester & Section: IV & B	To 09/07/2016

L155 – JAVA PROGRAMMING LAB

Lecture	**: 3 Periods/week**	**Internal Marks**	**: 25**
		External Marks	**: 50**
Credits	**: 2**	**External Examination**	**: 3 Hrs**

Course Educational Objectives:

To make students enable to

- Know the importance of implementing application in JAVA.
- Understand and Execute applications through JAVA (at core level).
- Implements concurrent execution of processes (threads), handling exceptions and OOP principles.
- Introduce the base for developing GUI based applications and Networking concepts.

Course Outcomes:

After completion of this course student shall able to,

CO1: Design & Implement various Packages, Interfaces, Exception handling& Multithreading.

CO2: Design various Applet programs Using Graphics class& AWT.

CO3: Develop applications on Database connectivity using JDBC.

Pre requisite: Knowledge of java syntaxes and notations.

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b) Write a java program to check whether given number is prime or not?

2. a) Write a java program to find out area of a circle.

   b) Write a java program to reverse the given number.

3. a) Write a java program to find the sum of the numbers by using Command line arguments.

   b) Write a java program to find the roots of a quadratic equation.

4. a) Write a java program to find the factorial of a given number using recursion.

   b) Write a java program to find sum of 'n' numbers using Recursion?

5. a) Write a java program to find min and max number of given Array.

   b) Write a java program to perform matrix Multiplication.

6 a) Write a java program to search an element by using linear search.

   b) Write a java program by using Bubble sort?

7 a) Write a java program to implement Over Loading?

   b) Write a java program using Constructors.

8 a) Write a java program using StringBuffer?

   b) Write a java program to check whether the given string is palindrome (or) not?

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   b) Write a java program to implement stack ADT?

10 a) Write a java program using Inheritance.

   b) Write a java program by using super key word.

11 a) Write a java program using Abstract class.

   b) Write a java program by using final variables and final methods.

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b) Write a java program to implement Dynamic method dispatch?

13 a) Write a java program to demonstrate Packages.

b) Write a java program to implement Multiple inheritance using interfaces.

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b) Write a java program to create Multiple Threads.

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b) Write a java program to find sum of the numbers using String Tokenizer.

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b) Write an applet program to display information an applet.

18 a) Write an applet program to handle Mouse events.

b) Write an applet program using Key events?

19 a) Write a java program by using AWT components.

b) Write a java program to implement arithmetic calculator.

20 a) Write a java program to establish a connection with data base and perform some SQL Commands like create, insert, update delete.

b) Write a JDBC program to perform SQL commands using prepared statement.

21 a) Write a JDBC Program to execute stored procedure using callable statement.

b) Write a JDBC program to execute stored function using callable statement.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Java Programming Lab
	Programme: B.Tech	Exp No: 1 to 21
	Year & Sem: II & II (IV sem)	Section: B

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
1	Introduction to JAVA	28/01/2016		1	1,2	2,4,6
2	EXP-1, EXP-2	04/02/2016		1	1	
3	EXP-3, EXP-4	11/02/2016		1	1	
4	EXP-5, EXP-6	18/02/2016		1	1	
5	EXP-7, EXP-8	25/02/2016		1	1	
6	EXP-9, EXP-10	03/03/2016		1	1	
7	EXP-11, EXP-12	10/03/2016		1	1	
8	EXP-13	24/03/2016		1	1,2	
9	EXP-14	31/03/2016		1	1	
10	EXP-15, EXP-16	07/04/2016		1	1	

11	EXP-17, EXP-18	21/04/2016		1	1	
12	EXP-19	28/04/2016		1	1,2,9	
13	EXP-20	05/05/2016		1	1,2,9	
14	EXP-21	12/05/2016		1	1,2,9	
15	Internal Exam	02/06/2016				

Resources Used:

TEXT BOOK

Herbert Schildt, Java: the complete reference, TMH Publications, 5th edition.

REFERENCES

1. E. Balaguruswamy, 'Programming with JAVA', TMH Publications, 2nd Edition.
2. Patrick Niemeyer & Jonathan Knudsen, Learning Java, O'Reilly P.
3. David Flanagan, Java – In a nutshell – A desktop quick reference, O'REILLY
4. Java Examples In a nutshell – A Tutorial companion to java in a nutshell (O'REILLY)
5. N.B.Venkateswarlu, E.V.Prasad, OOP through java, S chand 2010.

Assessment Summary:

Assessment Task	Weightage (Marks)	**Course Outcomes**		
		CO1	CO2	CO3
Day-Day Performance	10			
Record	05			
Internal Test	10			

Surprise Tests	--			
Model Exams	--			
End Exam	50			
Total	75			

Mapping Course Outcomes with Programme Outcomes:

Course Code	Course Outcomes			Programme Outcomes											PSO's					
	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
L155	x															S					L
		x				M										S					
			x			L										S	M			M	

` **(S=strongly (100%) (M=moderately (70%) (L=lightly (50%))**

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	P Vamsi Naidu			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date
	Sub. Name : JAVA PROGRAMMING Branch: CSE Semester & Sections: IV & A	27/01/2016 To 09/07/2016

S284 - JAVA PROGRAMMING

Lecture	**:**	**4 Periods/week**	**Internal Marks**	**:**	**25**
Tutorial	**:**	**1**	**External Marks**	**:**	**75**
Credits	**:**	**3**	**External Examinations**	**:**	**3**
Hrs					

UNIT - I

Java Language: History of Java, The Byte code, Java Buzzwords, arrays, type conversion and casting, simple java program,

Introducing classes: class fundamentals, declaring objects, access control, constructors, methods,

garbage collection, Simple example programs of String and StringBuffer classes, Wrapper classes..

UNIT - II

Packages and Interfaces: Defining a package, Accessing a Package, Understanding CLASSPATH, importing packages, exploring java.utilpackage (StringTokenizer, date classes)

Interfaces: Defining an interface, implementing interface, applying interfaces, variables in interface and extending interfaces and abstract classes. Differences between classes and interfaces, object serialization

Exception handling: Exception handling fundamentals, exception types, usage of try& catch, throw, throws and finally, java's built in exceptions, creating own exception sub classes

UNIT - III

Multithreading -. Differences between multi threading and multitasking, java thread model, creating thread, multiple threads, and synchronizing threads.

Applet Class: Concepts of Applets, differences between applets and applications, applet architecture, skeleton, creating applets, passing parameters to applets, working with graphics class.

UNIT – IV

Event Handling: Events handling mechanisms, Events, Event sources, Event classes, Event Listeners interfaces, Delegation event model, handling mouse and keyboard events, Adapter classes, inner classes.

AWT controls: label, button, scrollbars, text components, check box, check box groups, choices controls, lists, scrollbar, text field, layout managers – border, grid, flow, card, Containers.

UNIT-V

JDBC: Introduction, Types of Drivers, Procedure to establish a connection between java applications and database, types of statements, Result set types.

Networking: basics, address, ports, sockets.

TEXT BOOK

Herbert schildt, Java: the complete reference, TMH Publications,5th edition.

REFERENCES

1. E. Balaguruswamy, 'Programming with JAVA', TMH Publications, 2nd Edition.

2. Patrick Niemeyer & Jonathan Knudsen, Learning Java, O'Reilly P.

3. David Flanagan, Java – In a nutshell – A desktop quick reference, O'REILLY

4. Java Examples In a nutshell – A Tutorial companion to java in a nutshell (O'REILLY)

5. N.B.Venkateswarlu, E.V.Prasad, OOP through java, S chand 2010.

Prerequisite: The basic knowledge of Object oriented programming methodology and Graphical User Interface components.

Course Educational Objectives:

To make students enable to

- Concentrates on the methodological and technical aspects of software design and programming based on OOP.
- Acquire the basic knowledge and skills necessary to implement object-oriented programming techniques in software development through JAVA.

- Know about the importance of GUI based applications and the development of those applications through JAVA.
- Get sufficient knowledge to enter the job market related to Web development.

Course Outcomes:

After completion of this course student should be able to,

CO1: Understand &learn the history, Buzz words and the basic constructs of Java as per OOP concepts.

CO2: Understand the importance of Packages, Interfaces, Exception handling and have the ability to implement them as per real time scenarios.

CO3: Understand and analyze how Applet class &Multithreading are implemented in Java.

CO4: Analyze the importance of GUI, Event Handling and Implement GUI based applications using AWT.

CO5: Learn the basic concepts of JDBC and networking and to develop applications on Database Connectivity.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Java Programming
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II (IV sem)	Section: A

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT-I: Java Language & Introducing classes						
1	History of Java	27/01/2016		2	1	
2	The Byte code, Java Buzzwords	28/01/2016		2	1	
3	Arrays Introduction	29/01/2016		2	1	
4	1-D and 2-D Arrays	30/01/2016		2	1	
5	Multidimensional Arrays with Example Programs	02/02/2016		2	1	
6	Type conversion and casting	03/02/2016		2	1	
7	Simple java programs	04/02/2016		2	1	
8	Class fundamentals, declaring objects	05/02/2016		2	1,2	1,3,5,7
9	Access control	09/02/2016		2	1	
10	Constructors, Constructor Overloading	09/02/2016		2	1,9	
11	Methods ,Static methods	10/02/2016		2	1,9	
12	Method Overloading	11/02/2016		2	1,9	
13	Introduction to garbage collection	12/02/2016		2	1,9	
14	Ways to make an object eligible for Garbage Collection	13/02/2016		2	1,9	
15	String class and it's methods	16/02/2016		2	1,9	
16	StringBuffer class and it's methods	17/02/2016		2	1,9	
17	Example programs on String and StringBuffer class	18/02/2016		2	1,9	
18	Wrapper classes and it's basics	19/02/2016		2	1	
19	Methods in Wrapper classes	20/02/2016		2	1	
20	**Tutorial – I**	23/02/2016				
UNIT –II: Packages and Interfaces, Exception handling						
21	Defining a package, Accessing a package	24/02/2016		2	1,2,9	
22	Understanding the CLASSPATH	26/02/2016		2	1,9	

23	Importing packages	26/02/2016		2	1,9	1,3,5,7
24	Exploring java.utilpackage: StringTokenizer class	27/02/2016		2	1,9	
25	Date class	01/03/2016		2	1	
26	Defining an interface, applying interfaces	02/03/2016		2	1	
27	Variables in interfaces and extending interfaces	03/03/2016		2	1,9	
28	Abstract classes	03/03/2016		2	1,9	
29	Differences between interfaces and classes	03/03/2016		2	1,9	
30	Object serialization	04/03/2016		2	1,9	
31	Exception handling fundamentals	04/03/2016		2	1,9	
32	Exception types and examples	04/03/2016		2	1,9	
33	Usage of try & catch	05/03/2016		2	1,9	
34	Throw, throws keywords	05/03/2016		2	1,9	
35	Finally keyword and example programs	09/03/2016		2	1	
36	Java's built in exceptions	10/03/2016		2	1	
37	Creating own exception sub classes	10/03/2016		2	1	
38	**Tutorial – II**	11/03/2016		2		
39	MID – I EXAMS	14/03/2016				
40		15/03/2016				
41		16/03/2016				
42		17/03/2016				
43		18/03/2016				
44		19/03/2016				
UNIT –III: Multithreading, Applet class						
45	Differences between multi threading and multitasking	22/03/2016		2	1	1,3,5,7
46	Java thread model	22/03/2016		2	1	
47	Creating thread	29/03/2016		2	1,9	
48	Multiple threads	29/03/2016		2	1,9	
49	Synchronizing threads	30/03/2016		2	1,9	

50	Concepts of Applets	30/03/2016		2	1,9	
51	**Tutorial – III**	31/04/2016				
52	Differences between applets and applications	01/04/2016		2	1,9	
53	Applet architecture, skeleton	02/04/2016		2	1,9	
54	Creating applets, passing parameters to applets	05/04/2016		2	1,9	
55	Working with graphics class	06/04/2016		2	1,9	
56	**Tutorial – IV**	07/04/2016				
UNIT –IV: Event Handling, AWT controls						
57	Events handling mechanisms	12/04/2016		2	1,9	1,3,5,7
58	Events, Event sources	12/04/2016		2	1,9	
59	Event classes, Event Listeners interfaces	13/04/2016		2	1,9	
60	Delegation event model	16/04/2016		2	1,9	
61	Handling mouse and keyboard events	20/04/2016		2	1,9	
62	Adapter classes, inner classes.	20/04/2016		2	1,9	
63	label, button	22/04/2016		2	1,9	
64	Scrollbars, text components	22/04/2016		2	1,9	
65	**Tutorial –V**	23/04/2016				
66	Check box, check box groups	26/04/2016		2	1,9	
67	Choices controls, lists	27/04/2016		2	1,9	
68	Scrollbar, text field	28/04/2016		2	1,9	
69	layout managers – border, grid	29/04/2016		2	1,9	
70	Flow, card, Containers	30/04/2016		2	1,9	
UNIT-V: JDBC, Networking						
71	JDBC Introduction	03/05/2016		2	1	1,3,5,7
72	Types of Drivers	03/05/2016		2	1	
73	Procedure to establish a connection between java applications and database	04/05/2016, 06/05/2016		2	1	

74	Types of statements, Result set types.	07/05/2016, 10/05/2016		2	1	
75	Networking basics	11/05/2016, 12/05/2016		2	1	
76	Address, ports	13/05/2016, 01/06/2016		2	1	
77	Sockets	02/06/2016, 03/06/2016, 07/06/2016		2	1	
78	**Tutorial – VI**	07/06/2016				
79	MID-II EXAMS	08/06/2016				
80		09/06/2016				
81		10/06/2016				
82		11/062016				
83		13/06/2016				
84		14/06/2016				
85		15/06/2016				

Resources Used:

TEXT BOOKS

1. Herbert schildt, Java: the complete reference, TMH Publications,5th edition.

REFERENCES

1. E. Balaguruswamy, 'Programming with JAVA', TMH Publications, 2nd Edition.

2. Patrick Niemeyer & Jonathan Knudsen, Learning Java, O'Reilly P.

3. David Flanagan, Java – In a nutshell – A desktop quick reference, O'REILLY

4. Java Examples In a nutshell – A Tutorial companion to java in a nutshell (O'REILLY)

5. N.B.Venkateswarlu, E.V.Prasad, OOP through java, S chand 2010.

Assessment Summary:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments	05					
Quizzes						
Tutorials						
Surprise Tests						
Mid Exams	20					
Model Exams	--					
End Exam	75					
Attendance						
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S284	I	×																	S		L			
	II		×								L								S					
	III			×			L												S					M
	IV				×				M										S					
	V					×			L										S	M			M	

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	S.Govindu			Dr. N. Ravi Shankar
Sign with Date				

	LESSON PLAN	Date
	Sub. Name : JAVA PROGRAMMING Branch: CSE Semester & Sections: IV & B	27/01/2016 To 09/07/2016

S284 - JAVA PROGRAMMING

Lecture	**:**	**4 Periods/week**	**Internal Marks**	**:**	**25**
Tutorial	**:**	**1**	**External Marks**	**:**	**75**
Credits	**:**	**3**	**External Examinations**	**:**	**3**
Hrs					

UNIT - I

Java Language: History of Java, The Byte code, Java Buzzwords, arrays, type conversion and casting, simple java program,

Introducing classes: class fundamentals, declaring objects, access control, constructors, methods,

garbage collection, Simple example programs of String and StringBuffer classes, Wrapper classes..

UNIT - II

Packages and Interfaces: Defining a package, Accessing a Package, Understanding CLASSPATH, importing packages, exploring java.utilpackage (StringTokenizer, date classes)

Interfaces: Defining an interface, implementing interface, applying interfaces, variables in interface and extending interfaces and abstract classes. Differences between classes and interfaces, object serialization

Exception handling: Exception handling fundamentals, exception types, usage of try& catch, throw, throws and finally, java's built in exceptions, creating own exception sub classes

UNIT - III

Multithreading -. Differences between multi threading and multitasking, java thread model, creating thread, multiple threads, and synchronizing threads.

Applet Class: Concepts of Applets, differences between applets and applications, applet architecture, skeleton, creating applets, passing parameters to applets, working with graphics class.

UNIT – IV

Event Handling: Events handling mechanisms, Events, Event sources, Event classes, Event Listeners interfaces, Delegation event model, handling mouse and keyboard events, Adapter classes, inner classes.

AWT controls: label, button, scrollbars, text components, check box, check box groups, choices controls, lists, scrollbar, text field, layout managers – border, grid, flow, card, Containers.

UNIT-V

JDBC: Introduction, Types of Drivers, Procedure to establish a connection between java applications and database, types of statements, Result set types.

Networking: basics, address, ports, sockets.

TEXT BOOK

Herbert schildt, Java: the complete reference, TMH Publications,5th edition.

REFERENCES

1. E. Balaguruswamy, 'Programming with JAVA', TMH Publications, 2nd Edition.

2. Patrick Niemeyer & Jonathan Knudsen, Learning Java, O'Reilly P.

3. David Flanagan, Java – In a nutshell – A desktop quick reference, O'REILLY

4. Java Examples In a nutshell – A Tutorial companion to java in a nutshell (O'REILLY)

5. N.B.Venkateswarlu, E.V.Prasad, OOP through java, S chand 2010.

Prerequisite: The basic knowledge of Object oriented programming methodology and Graphical User Interface components.

Course Educational Objectives:

To make students enable to

- Concentrates on the methodological and technical aspects of software design and programming based on OOP.
- Acquire the basic knowledge and skills necessary to implement object-oriented programming techniques in software development through JAVA.

- Know about the importance of GUI based applications and the development of those applications through JAVA.
- Get sufficient knowledge to enter the job market related to Web development.

Course Outcomes:

After completion of this course student should be able to,

CO1: Understand &learn the history, Buzz words and the basic constructs of Java as per OOP concepts.

CO2: Understand the importance of Packages, Interfaces, Exception handling and have the ability to implement them as per real time scenarios.

CO3: Understand and analyze how Applet class &Multithreading are implemented in Java.

CO4: Analyze the importance of GUI, Event Handling and Implement GUI based applications using AWT.

CO5: Learn the basic concepts of JDBC and networking and to develop applications on Database Connectivity.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2015-16	Course: Java Programming
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & II (IV sem)	Section: B

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real world problem	Chalk & Talk	Assignments
2	Explaining application before theory	ICT tools	Quiz
3	Solving problems	Group discussions	Tutorials
4	Designing of experiments	Industrial visit	Surprise Tests
5	Problems on environmental, economics, health & safety	Field work	Mid Exams
6	Problems on professional & ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT-I: Java Language & Introducing classes						
1	History of Java	27/01/2016		2	1	1,3,5,7
2	The Byte code, Java Buzzwords	28/01/2016		2	1	
3	Arrays Introduction	29/01/2016		2	1	
4	1-D and 2-D Arrays	01/02/2016		2	1	
5	Multidimensional Arrays with Example Programs	02/02/2016		2	1	
6	Type conversion and casting	03/02/2016		2	1	

7	Simple java programs	04/02/2016		2	1	
8	Class fundamentals, declaring objects	05/02/2016		2	1,2	
9	Access control	08/02/2016		2	1	
10	Constructors, Constructor Overloading	09/02/2016		2	1,9	
11	Methods ,Static methods	10/02/2016		2	1,9	
12	Method Overloading	11/02/2016		2	1,9	
13	Introduction to garbage collection	12/02/2016		2	1,9	
14	Ways to make an object eligible for Garbage Collection	15/02/2016		2	1,9	
15	String class and it's methods	16/02/2016		2	1,9	
16	StringBuffer class and it's methods	17/02/2016		2	1,9	
17	Example programs on String and StringBuffer class	18/02/2016		2	1,9	
18	Wrapper classes and it's basics	19/02/2016		2	1	
19	Methods in Wrapper classes	22/02/2016		2	1	
20	**Tutorial – I**	23/02/2016				
UNIT –II: Packages and Interfaces, Exception handling						
21	Defining a package, Accessing a package	24/02/2016		2	1,2,9	
22	Understanding the CLASSPATH	25/02/2016		2	1,9	
23	Importing packages	26/02/2016		2	1,9	
24	Exploring java.utilpackage: StringTokenizer class	29/02/2016		2	1,9	
25	Date class	01/03/2016		2	1	
26	Defining an interface, applying interfaces	02/03/2016		2	1	
27	Variables in interfaces and extending interfaces	03/03/2016		2	1,9	
28	Abstract classes	03/03/2016		2	1,9	
29	Differences between interfaces and classes	03/03/2016		2	1,9	1,3,5,7
30	Object serialization	04/03/2016		2	1,9	
31	Exception handling fundamentals	04/03/2016		2	1,9	
32	Exception types and examples	04/03/2016		2	1,9	

33	Usage of try & catch	08/03/2016		2	1,9	
34	Throw, throws keywords	08/03/2016		2	1,9	
35	Finally keyword and example programs	09/03/2016		2	1	
36	Java's built in exceptions	10/03/2016		2	1	
37	Creating own exception sub classes	10/03/2016		2	1	
38	**Tutorial – II**	11/03/2016		2		
39	MID – I EXAMS	14/03/2016				
40		15/03/2016				
41		16/03/2016				
42		17/03/2016				
43		18/03/2016				
44		19/03/2016				
UNIT –III: Multithreading, Applet class						
45	Differences between multi threading and multitasking	21/03/2016		2	1	1,3,5,7
46	Java thread model	22/03/2016		2	1	
47	Creating thread	24/03/2016		2	1,9	
48	Multiple threads	28/03/2016		2	1,9	
49	Synchronizing threads	29/03/2016		2	1,9	
50	Concepts of Applets	30/03/2016		2	1,9	
51	**Tutorial – III**	31/04/2016				
52	Differences between applets and applications	01/04/2016		2	1,9	
53	Applet architecture, skeleton	04/04/2016		2	1,9	
54	Creating applets, passing parameters to applets	05/04/2016		2	1,9	
55	Working with graphics class	06/04/2016		2	1,9	
56	**Tutorial – IV**	07/04/2016				
UNIT –IV: Event Handling, AWT controls						
57	Events handling mechanisms	11/04/2016		2	1,9	1,3,5,7
58	Events, Event sources	12/04/2016		2	1,9	

59	Event classes, Event Listeners interfaces	13/04/2016		2	1,9	
60	Delegation event model	18/04/2016		2	1,9	
61	Handling mouse and keyboard events	19/04/2016		2	1,9	
62	Adapter classes, inner classes.	20/04/2016		2	1,9	
63	label, button	21/04/2016		2	1,9	
64	Scrollbars, text components	22/04/2016		2	1,9	
65	**Tutorial –V**	25/04/2016				
66	Check box, check box groups	26/04/2016		2	1,9	
67	Choices controls, lists	27/04/2016		2	1,9	
68	Scrollbar, text field	28/04/2016		2	1,9	
69	layout managers – border, grid	29/04/2016		2	1,9	
70	Flow, card, Containers	02/05/2016		2	1,9	
UNIT-V: JDBC, Networking						
71	JDBC Introduction	03/05/2016		2	1	
72	Types of Drivers	04/05/2016		2	1	
73	Procedure to establish a connection between java applications and database	05/05/2016, 06/05/2016		2	1	
74	Types of statements, Result set types.	09/05/2016, 10/05/2016		2	1	
75	Networking basics	11/05/2016, 12/05/2016		2	1	1,3,5,7
76	Address, ports	13/05/2016, 01/06/2016		2	1	
77	Sockets	02/06/2016, 03/06/2016, 06/06/2016		2	1	
78	**Tutorial – VI**	07/06/2016				
79	MID-II EXAMS	08/06/2016				
80		09/06/2016				

81		10/06/2016				
82		11/062016				
83		13/06/2016				
84		14/06/2016				
85		15/06/2016				

Resources Used:

TEXT BOOKS

1. Herbert schildt, Java: the complete reference, TMH Publications,5th edition.

REFERENCES

1. E. Balaguruswamy, 'Programming with JAVA', TMH Publications, 2nd Edition.
2. Patrick Niemeyer & Jonathan Knudsen, Learning Java, O'Reilly P.
3. David Flanagan, Java – In a nutshell – A desktop quick reference, O'REILLY
4. Java Examples In a nutshell – A Tutorial companion to java in a nutshell (O'REILLY)
5. N.B.Venkateswarlu, E.V.Prasad, OOP through java, S chand 2010.

Assessment Summary:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments	05					
Quizzes						
Tutorials						
Surprise Tests						
Mid Exams	20					
Model Exams	--					
End Exam	75					
Attendance						
Total	100					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes											PSO's					
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
S284	I	×																	S		L			
	II		×								L								S					
	III			×			L												S					M
	IV				×				M										S					
	V					×			L										S	M			M	

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	P Vamsi Naidu			Dr. N. Ravi Shankar
Sign with Date				

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
		UNIT-I: Human Values			
1.	29-01-2016	Introduction about Values		1	DM1
2.	30-01	Morals ethics and Values		1	DM1
3.	03-02	Integrity Work ethics		1	DM1
4.	05-02	Service Learning		1	DM1
5.	06-02	Civic Virtue		1	DM1
6.	10-02	Respect for others ,Living peacefully		1	DM1
7.	12-02	Caring, Sharing ,Honesty, Courage		1	DM1
8.	13-02	Valuing time Cooperation, Commitment		1	DM1
9.	17-02	Empathy, Self confidence character, Spirituality		1	DM1
10	19-02	Review the entire unit		1	DM1
		Unit-II: Engineering Ethics			
11	20-02	Introduction about engineering ethics		1	DM1
12	24-02	Senses of engineering ethics		1	DM1
13	26-02	Variety of moral issued		1	DM1
14	27-02	Moral dilemmas moral autonomy		1	DM1
15	02-03	Kohlberg's theory		1	DM1
16	04-03	Gilligan theory		1	DM1
17	05-03	Comparison of Kohlberg's theory and Gilligan theory			DM1
18	09-03	Consensus and controversy		1	DM1
19	11-03	Models of professional roles about right action self interest		1	DM1
20	12-03	Customs and religion uses of ethical theories		1	DM1
21	18-03	Customs and religion uses of ethical theories			DM1
22	19-03	Engineering as experimentation introduction			DM1
23	28-03	Professional roles		1	DM1
24	30-03	Customs and religion uses of ethical theories		1	DM1
25	01-04	Ethical theories		1	DM1
26	02-04	Code of ethics- sample		1	DM1
27	06-04	Engineering as experimentation introduction		1	DM1
28	13-04	Engineering Projects VS. Standard Experiments			DM1
29	16-04	Engineers as responsible experimenters			DM1
30	19-04	Codes of ethics - Industrial Standards			DM1
31	20-04	Introduction about Safety, and rights		1	DM1
32	20-04	Safety and risk		1	DM1
33	22-04	Assessment of safety and risk		1	DM1
34	23-04	Risk benefit analysis and reducing risk		1	DM1
35	29-04	Three Mile Island and Chernobyl case study		1	DM1
36	30-04	Three Mile Island and Chernobyl case study		1	DM1
37	03-05	Collegiality and loyalty		1	DM1

38	05-05	Respect for authority, collective bargaining		1	DM1
39	06-05	Confidentiality- Conflicts of interest		1	DM1
40	07-05	**Unit –V GLOBAL ISSUES-** sample code of Ethics		1	DM1
41	12-05	Multinational Corporation's- Environmental ethics-computer ethics		1	DM1
42	01-06	Engineers as managers consulting engineers			DM1
43	08-06	engineers as expert witnesses and advisors Moral leadership		1	DM1
44	10-06	Internals		1	DM1
45	15-06	Internals		1	DM1
Total number of classes available as per Schedule			**45**		

Faculty Signature **Head of the dept.**
signature

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
		UNIT-I: Human Values			
46	29-01-2016	Introduction about Values		1	DM1
47	29-01	Morals ethics and Values		1	DM1
48	01-02	Integrity Work ethics		1	DM1
49	05-02	Service Learning		1	DM1
50	06-02	Civic Virtue		1	DM1
51	08-02	Respect for others ,Living peacefully		1	DM1
52	12-02	Caring, Sharing ,Honesty, Courage		1	DM1
53	13-02	Valuing time Cooperation, Commitment		1	DM1
54	15-02	Empathy, Self confidence character, Spirituality		1	DM1
55	19-02	Review the entire unit		1	DM1
		Unit-II: Engineering Ethics			
56	20-02	Introduction about engineering ethics		1	DM1
57	22-02	Senses of engineering ethics		1	DM1
58	25-02	Variety of moral issued		1	DM1
59	26-02	Moral dilemmas moral autonomy		1	DM1
60	27-02	Kohlberg's theory		1	DM1
61	29-02	Gilligan theory		1	DM1
62	04-03	Comparison of Kohlberg's theory and Gilligan theory		1	DM1
63	05-03	Consensus and controversy		1	DM1
64	11-03	Models of professional roles about right action self interest		1	DM1
65	12-03	Customs and religion uses of ethical theories		1	DM1
66	14-03	Customs and religion uses of ethical theories		1	DM1
67	15-03	Engineering as experimentation introduction		1	DM1
68	19-03	Professional roles		1	DM1
69	21-03	Customs and religion uses of ethical theories		1	DM1
70	28-03	Ethical theories		1	DM1
71	01-04	Code of ethics- sample		1	DM1
72	02-04	Engineering as experimentation introduction		1	DM1
73	04-04	Engineering Projects VS. Standard Experiments		1	DM1
74	11-04	Engineers as responsible experimenters		1	DM1
75	16-04	Codes of ethics - Industrial Standards		1	DM1
76	18-04	Introduction about Safety, and rights		1	DM1
77	20-04	Safety and risk		1	DM1
78	21-04	UNIT- V- Multinational companies		1	DM1
79	22-04	Environmental ethics		1	DM1
80	25-04	sample code of Ethics		1	DM1
81	07-05	advisors Moral leadership		1	DM1
82	03-06	Engineers as managers consulting engineers		1	DM1

83	04-06	engineers as expert witnesses		1	DM1
84	06-06	engineers as expert witnesses		1	DM1
85	10-06	Internals		1	DM1
86	13-06	Internals		1	DM1
Total number of classes available as per Schedule			**41**		

Faculty Signature **Head of the dept.**
signature

Faculty Name	:	**M.SRI BALA,sr.**ASSIST. PROFESSOOR			
Subject Name	:	**PRINCIPLES OF PROGRAMMING LANGUAGES**	**Code**	:	**S350**
Year	:	II	**Semester**	:	**IV SEM**
Degree	:	B. Tech IV SEM	**Programme**	:	**C.S.E**

COURSE OUTCOMES:

After the completion of the course, students should be able to,

1. To identify the factors that influence any programming language design based on specific evaluation criteria and distinguish among different language paradigms and implementation methods.

2. To understand the different syntax describing methods and their notations for common language features along with the specified rules and solutions for the identified basic problems of parsing.

3. To study the principles regarding variables and data types, along with all issues of implementations for primitive types, structured types, user defined types and abstract types supported in different programming languages.

4. To distinguish among different statement level features offered in different languages for providing control abstraction from the implementation view point.

5. To understand the principles of unit level abstraction facility in different programming languages in terms of sub programs and their synchronization and communication aspects.

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
UNIT-I: Preliminary Concepts					
1.	25-1-2016	Introduction		1	DM1,DM1
2.	28-1-2016	Reasons for studying concepts of programming languages		1	DM1
3.	29-1-2016	Programming domains		1	DM1
4.	30-1-2016	Language Evaluation Criteria		1	DM1
5.	1-2-2016	Language Evaluation Criteria		1	DM1
6.	2-2-2016	TUTORIAL		1	DM1
7.	4-2-2016	influences on Language design		1	DM1
8.	5-2-2016	Language categories		1	DM2
9.	6-2-2016	Programming Paradigms		1	DM1,DM1
10.	8-2-2016	ProgrammingLanguage Implementation		1	DM1
11.	9-2-2016	ProgrammingLanguage Implementation		1	DM1
12.	11-2-2016	influences on Language design		1	DM1
13.	12-2-2016	Compilation and Virtual Machines		1	DM2
14.	13-2-2016	Compilation and Virtual Machines		1	DM1
15.	15-2-2016	programming Environments		1	DM1
16.	17-2-2016	TUTORIAL		1	DM1
17.		**Unit end Test-1**		1	DM4
UNIT-II: Syntax and Semantics					
18	18-2-2016	general Problem of describing Syntax and Semantics		1	DM1
19	19-2-2016	general Problem of describing Syntax and Semantics		1	DM1
20	20-2-2016	formal methods of describing syntax		1	DM1
21	22-2-2016	formal methods of describing syntax		1	DM2
22	23-2-2016	BNF, EBNF for common programming languages features		1	DM1
23	25-2-2016	parse trees, ambiguous grammars,		1	DM1
24	26-2-2016	attribute grammars		1	DM1
25	27-2-2016	TUTORIAL		1	DM1
26	1-3-2016	**Names, Bindings, and Scopes** Introduction		1	DM1
27	2-3-2016	Names		1	DM1
28	4-3-2016	Variables		1	DM1
29	5-3-2016	The Concept of Binding		1	DM2
30	7-3-2016	The Concept of Binding		1	DM1
31	8-3-2016	Scope		1	DM1
32	10-3-2016	Life time		1	DM1
33	11-3-2016	TUTORIAL		1	DM3

34	12-3-2016	Unit end test 2		1	DM4
	14-03-2016 TO 19-03-2016 IST MID EXAMINATIONS				
	UNIT-III: Data types				
35	21-3-2016	Introduction to data types		1	DM1
36	22-3-2016	primitive, character, user defined		1	DM1
37	24-3-2016	primitive, character, user defined		1	DM1
38	25-3-2016	array, associative, record, union		1	DM1
39	26-3-2016			1	DM1
40	28-3-2016	Names, Variable, concept of binding		1	DM2
41	29-3-2016	type checking, strong typing, type compatibility, named constants, variable initialization		1	DM1
42	31-3-2016	type checking, strong typing, type compatibility, named constants, variable initialization TUTORIAL		1	DM1
43	1-4-2016	Abstractions and encapsulation,		1	DM1
44	2-4-2016	introductions to data abstraction, design issues, language examples		1	DM1
45	4-4-2016	C++ parameterized ADT,		1	DM2
46	5-4-2016	object oriented programming in small talk, C++, Java TUTORIAL		1	DM1
47	7-4-2016	Unit end test 3		1	DM4
		UNIT-IV: Expressions and Statements			
48	8-4-2016	Arithmetic relational and Boolean expressions		1	DM1
49	11-4-2016	Short circuit evaluation mixed mode assignment		1	DM1
50	12-4-2016	Assignment Statements		1	DM1
51	14-4-2016	Control Structures – Statement Level TUTORIAL		1	DM1
52	15-4-2016	Compound Statements, Selection, Iteration		1	DM1
53	16-4-2016	Compound Statements, Selection, Iteration		1	DM1
54	18-4-2016	Unconditional Statements		1	DM2
55	19-4-2016	Unconditional Statements		1	DM1
56	21-4-2016	guarded commands		1	DM1
57	22-4-2016	TUTORIAL		1	DM1
58	23-4-2016	Unit end test 4		1	DM1

		UNIT-V: Subprograms and Blocks			
59	25-4-2016	Fundamentals of sub-programs		1	DM1
60	26-4-2016	Scope and lifetime of variable		1	DM1
61	28-4-2016	static and dynamic scope		1	DM1
62	29-4-2016	Design issues of subprograms and operations		1	DM1
63	30-4-2016	local referencing environments		1	DM2
64	2-5-2016	TUTORIAL		1	DM1
65	3-5-2016	parameter passing methods		1	DM1
66	5-5-2016	parameters that are sub-program names		1	DM1
67	6-5-2016	parameters that are sub-program names			
68	7-5-2016	issues for functions user defined overloaded operators			
69	9-5-2016	Synchronization		1	DM4
70	10-5-2016	Synchronization		1	DM1
71	12-5-2016	Concurrency concepts.		1	DM1
72	13-5-2016	Concurrency concepts.		1	DM1
SUMMER VACATION 16-5-2016 TO 31-5-2016					
73	2-6-2016	TUTORIAL		1	DM1
74	3-6-2016	Unit end test 5		1	DM1
75	4-6-2016	Revision		1	DM1
76	6-6-2016	Revision		1	DM1
77	7-6-2016	Revision		1	DM1
II ND MID EXAMINATIONS 08-06-2016 TO 15-06-2016					
		Total		77	
Total number of classes required to complete the syllabus					**74**
Total number of classes available as per Schedule					**77**

NOTE: DELIVERY METHODS :**DM1**: Lecture interspersed with discussions/BB, **DM2:** Tutorial, **DM3:** Lecture with a quiz, **DM4**: Assignment/Test, **DM5**: Demonstration (laboratory, field visit), **DM6:** Presentations/PPT

At the End of the course, students attained the **Course Outcomes:CO1,CO2,CO3,CO4,CO5**& sample proofs are enclosed in Course file.

Signature			
	Name of the Faculty	**Name of Course Co-ordinator**	**HOD**
	M.Sri Bala	M.Naveen,B.Sandeep saradhi	Dr.N.Ravi shankar

	LESSON PLAN	Date:
	Subject : SOFTWARE ENGINEERING **Branch : CSE** **Semester : IV** **Section : A**	**27-01-2016** **To** **15-06-2016**

S381 – SOFTWARE ENGINEERING

Lecture	**: 4 Periods/week**	**Internal Marks**	**: 25**
Marks			
Tutorial	**: 1**	**External Marks**	**: 75 Marks**
Credits	**: 4**	**External Examination**	**: 3 Hrs**

UNIT – I:

Introduction to Software Engineering: The Evolving role of Software, Software, Changing nature of Software, Legacy Software, and Software Myths.

Software Process: Layered Technology, Process Framework, CMMI, Process Patterns, Assessment, Personal and Team Process Models, Process Technology, Process and Product.

UNIT – II:

Process Models: Prescriptive Models, Waterfall Model, Incremental, Evolutionary and Specialized Process Models, Unified Process.

Software Engineering Practice: Communication Practices, Planning Practices, Modeling Practices, Construction Practice and Deployment.

UNIT – III:

Requirements Engineering: A bridge to design and construction, RE Tasks, Initiating the RE Process, Eliciting Requirements, Developing Use Cases, Building the Analysis Models, Negotiating and Validating Requirements.

Building the Analysis Model: Requirements Analysis, Analysis Modeling Approaches, Data Modeling Concepts, OOA, Scenario based Modeling, Flow Rated Modeling, Class based Modeling, Creating a Behavior Model.

UNIT – IV:

Design Engineering: Design within the Context of Software Engineering, Design Process and Software Quality, Design Concepts, Design Model, Pattern based Software Design.

Creating an Architectural Design: Software Architecture, Data Design, Architectural Styles and Patterns, Architectural Design.

UNIT – V:

Testing Strategies: A Strategic Approach to Software Testing, Strategic Issues, Test Strategies for Conventional Software, Object Oriented Software, Validation Testing, System Testing.

The Art of Testing Tactics: Software Testing Fundamentals, White Box testing, basis Path Testing, Control Structure Testing, Black Box Testing, OO testing Methods.

TEXT BOOK:

- Roger S. Pressman, Software Engineering – A Practitioner's Approach, Mc. Graw-Hill International Edition, 6th Edition, 2005.

REFERENCES:

1. Ian Sommerville, "Software Engineering", Pearson Education, 8th Edition, 2008.
2. Ali Behforooz and Frederick J. Hudson, "Software Engineering Fundamentals", Oxford University Press, New Delhi, 1996.
3. Stephan Schach," Software Engineering", Tata Mc. Graw-Hill, 2007.

4. Pfleeger and Lawrence, "Software Engineering: Theory and Practice", Pearson Education, Second Edition, 2001, 1995, PHI.

PRE-REQUISITE:

- The students should have basic knowledge in C Programming and DBMS.

COURSE EDUCATIONAL OUTCOMES:

After learning this course, Student:

- Understands different software processes and how to choose between them.
- Identifies how to understand requirements from a client and specify them.
- Design in the large, including principled choice of software architecture, the use of modules and interfaces to enable separate development, and design patterns.
- Understands good code practices, including documentation, contracts, regression tests and daily builds.
- Various quality assurance techniques, including unit testing, functional testing and automated analysis tools.

COURSE OUTCOMES:

After the completion of the course, students should be able to:

CO-1: Understand the significance of software engineering and software process concepts.

CO-2: Gain knowledge about different software development process models and software engineering practices.

CO-3: Acquire knowledge about requirements gathering and analysis models.

CO-4: Learn about software development cycle with emphasis on design engineering that includes architectural styles, patterns and architectural design.

CO-5: Understand various software testing approaches for testing the software.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year : 2015-16	Course : Software Engineering
	Programme : B.Tech	Unit No. : 1 to 5
	Year & Sem : II & IV	Section : A

S.No	Teaching Learning Process (TLP)	Delivery Methods (DM)	Assessment Methods (AM)
1	Solving Real World Problem	Chalk & Talk	Assignments
2	Explaining Application before Theory	ICT tools	Quiz
3	Solving Problems	Group discussions	Tutorials
4	Designing of Experiments	Industrial visit	Surprise Tests
5	Problems on Environmental, Economics, Health & Safety	Field work	Mid Exams
6	Problems on Professional & Ethics	Case studies	Model Exam
7	Seminar	Mini Projects	QAs
8	Problems using software	Numerical treatment	
9	Self-study	Design / Exercises	

Detailed Lesson Plan:

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT – I						
1	Introduction to Software Engineering	27/1/16		2	1	1, 3, 5, 7
2	Evolving role of Software	28/1/16		2	1	
3	Software Definition and Characteristics	29/1/16		2	1	
4	Changing nature of Software	30/1/16		2	1	
5	Legacy Software and Its Quality	2/2/16		2	1	
6	Software Evolution and its Laws	3/2/16		2	1,9	
7	Software Myths : Manager & Customer	4/2/16		2	1,9	

8	Software Myths: Customer & Developer	5/2/16		2	1,9	
9	Software Process: Definition and Differences	6/2/16		2	1	
10	Software Engineering – A layered technology	9/2/16		2	1	
11	Process Framework – Generic Framework Activities	10/2/16		2	1	
12	Umbrella Activities	11/2/16		2	1,9	
13	CMMI Model – Capability Levels	12/2/16		2	1,9	
14	CMMI Model – Maturity Levels	13/2/16		2	1	
15	Process Patterns	16/2/16		2	1,9	
16	Process Assessment and Approaches	17/2/16		2	1,9	
17	Software Process Models	18/2/16		2	1,9	
18	Process Technology & Product and Process	19/2/16		2	1	
19	**TUTORIAL & TEST - 1**	20/2/16				3
UNIT – II						
20	Process Models: Prescriptive Models	23/2/16		2	1	1, 3, 5, 7
21	Waterfall Model	24/2/16		2	1,9	
22	Incremental Model	25/2/16		2	1,9	
23	RAD Model	26/2/16		2	1	
24	Evolutionary Process Models – Part 1	27/2/16		2	1,6,9	
25	Evolutionary Process Models – Part 2	1/3/16		2	1,6,9	
26	Specialized Process Models	2/3/16		2	1,6,9	
27	Unified Process	3/3/16		2	1,6,9	
28	Software Engineering Practices	4/3/16		2	1,9	
29	Communication Practices	5/3/16		2	1,9	
30	Planning Practices	8/3/16		2	1,6	
31	Modeling Practice	9/3/16		2	1,6	
32	Construction Practice	10/3/16		2	1,6	
33	Deployment	11/3/16		2	1,6	

34	**TUTORIAL & TEST - 2**	12/3/16				3,4
35		15/3/16				
36		16/3/16				
37	**MID – I EXAMS**	17/3/16				
38		18/3/16				
39		19/3/16				
	UNIT - III					
40	Requirements Engineering: Description	22/3/16		2	1	
41	RE Tasks	24/3/16		2	1	
42	Initiating the RE Process	26/3/16		2	1,9	
43	Eliciting Requirements – Part 1	29/3/16		2	1,6	
44	Eliciting Requirements – Part 2	30/3/16		2	1,6	
45	Developing Use-Cases	31/3/16		2	1,6,9	
46	Building the Analysis Models – Part 1	1/4/16		2	1,6,9	
47	Building the Analysis Models – Part 2	2/4/16		2	1,6,9	
48	Negotiating and Validating Requirements	5/4/16		2	1	1, 3, 5, 7
49	Building the Analysis Model: Requirements Analysis	6/4/16		2	1,6,9	
50	Analysis Modeling Approaches	7/4/16		2	1	
51	Data Modeling Approaches	8/4/16		2	1	
52	Object Oriented Analysis	9/4/16		2	1,6	
53	Scenario Based Modeling	12/4/16		2	1,6	
54	Flow Oriented Modeling	13/4/16		2	1,6	
55	Class Based Modeling	16/4/16		2	1,6	
56	Creating a Behavioral Model	19/4/16		2	1,6,9	
57	**TUTORIAL & TEST - 3**	20/4/16				3,4
	UNIT – IV					
58	Design Engineering: Design within context of Software Engineering	21/4/16		2	1,9	1, 3, 5, 7
59	Design Process and Design Quality	22/4/16		2	1,9	
60	Design Concepts	23/4/16		2	1	

61	Design Model	26/4/16		2	1,9	
62	Pattern Based Software Design	27/4/16		2	1,9	
63	Software Architecture and Data Design	28/4/16		2	1,9	
64	Architectural Styles and Patterns – 1	29/4/16		2	1,6,9	
65	Architectural Styles and Patterns – 2	30/4/16		2	1,6,9	
66	Architectural Design	3/5/16		2	1,9	
67	**TUTORIAL & TEST - 4**	4/5/16				3,4
	UNIT – V					
68	A Strategic Approach to Software Testing	5/5/16		2	1	1, 3, 5, 7
69	Strategic Issues	6/5/16		2	1	
70	Test Strategies for Conventional Software - 1	7/5/16		2	1,6	
71	Test Strategies for Conventional Software – 2	10/5/16		2	1,6	
72	Test Strategies for Object Oriented Software	11/5/16		2	1,6	
73	Validation Testing	12/5/16		2	1	
74	System Testing	13/5/16		2	1	
75	The art of Debugging	14/5/16		2	1	
76	Software Testing Fundamentals	1/6/16		2	1	
77	White Box Testing & Basis Path Testing	2/6/16		2	1,9	
78	Control Structure and Black Box Testing	3/6/16		2	1,9	
79	Black Box Testing and OO Testing	4/6/16		2	1,9	
80	**TUTORIAL & TEST - 5**	7/6/16				3,4
81	**MID - II EXAMS**	8/6/16				
82		9/6/16				
83		10/6/16				
84		14/6/16				
85		15/6/16				

RESOURCES USED:

TEXT BOOK:

- Roger S. Pressman, Software Engineering – A Practitioner's Approach, Mc. Graw-Hill International Edition, 6th Edition, 2005.

REFERENCES:

- Ian Sommerville, "Software Engineering", Pearson Education, 8th Edition, 2008.
- Ali Behforooz and Frederick J. Hudson, "Software Engineering Fundamentals", Oxford University Press, New Delhi, 1996.
- Stephan Schach," Software Engineering", Tata Mc. Graw-Hill, 2007.
- Pfleeger and Lawrence, "Software Engineering: Theory and Practice", Pearson Education, Second Edition, 2001, 1995, PHI.

ASSESSMENT SUMMARY:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments/ Quiz/ Tutorials/ Surprise Tests	05					
Mid Exams	20					
Model Exams	--					
End Exam	75					
Attendance	--					
Total	100					

MAPPING COURSE OUTCOMES WITH PROGRAMME OUTCOMES:

Course Code	Unit	Course Outcomes					Programme Outcomes											
		1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11	12
S381	I	×														L	M	
	II		×													L	M	
	III			×												L	M	
	IV				×					M			L			L		
	V					×				M								

Course Code	CO	Programme Specific Outcomes					
		1	2	3	4	5	6
S381	I				S		
	II				S		
	III				S		
	IV				S		M
	V				S		

Name	Instructor	Course Coordinator	Head of the Department
	SK. Johny Basha	Dr. Ch. V. Narayana Reddy	Dr. N. Ravi Shankar
Signature			