	LESSON PLAN	Date: 20-06-2016
	Sub. Name : Object Oriented Programming Through C++ Branch: CSE, Semester & Sections:III & A	To 05-11-2016

S324 – OBJECT ORIENTED PROGRAMMING THROUGH C++

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

UNIT-I

Overview of C++:

Object Oriented paradigms, Data abstraction/control abstraction, OOPS principles, Origin of C++, Sample C++ program, dynamic initialization of variables, new and delete operators, C++ keywords, General form of C++ program, Type casting, Introducing C++ classes, Difference between class and structure.

UNIT - II

Classes and Objects: Defining Classes in C++, accessing class members, access specifiers (Public and Private), defining member functions, static data members, static member functions, friend functions, friend classes, inline functions, nested classes, passing objects to functions, returning objects, object assignment, Array of objects, Constructor and Destructors

UNIT – III

Inheritance: Base-class access control, access specifier (Protected), scope rules, Inheriting Multiple Base classes, constructors, destructors & inheritance passing parameters to base class constructors. Virtual base class. **String class**-Usage of standard library string class with example programs.

UNIT – IV

Polymorphism:

Pointers: Pointers to objects, 'this' Pointer, Pointers to derived types.

Operator Overloading: Overloading Unary Operators, and Overloading Binary Operators using friend functions, Function Overloading,

Virtual functions: Pure Virtual Functions, Abstract classes

Templates: Introduction, simple generic classes & generic function, simple example programs. STL-List, Vector, Array

UNIT – V

Files and Exception Handling:

Exception Handling: Fundamentals, exception handling options.

C++ I/O Systems Basics: C++ Streams, C++ Stream classes, Unformatted I/O Operations, Formatted I/O Operations, Formatting using Manipulators. C++

File I/O: Introduction, Classes for file stream Operations, Opening and closing a file, detecting end-of-file

TEXT BOOK

1. Herbert Schildt, The Complete Reference C++, Fourth Edition, TMH Publications.
2. Deitel&Deitel, C++ How to Program, Pearson Education, 3rd Edition.

REFERENCES

1. E. Balaguruswamy, Object Oriented Programming with C++, TMH Publications, 3rd Edition.
2. Ashok N Kamthane, Object Oriented Programming with ANSI & Turbo C++.

Prerequisite: Learning C language .

Course Educational Objectives:

This course enables the students to know about

1. Object Oriented concepts, C++ language .
2. Classes & Objects, Inheritance, Polymorphism.
3. Templates, Streams, Files

Course Outcomes(CO's):

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

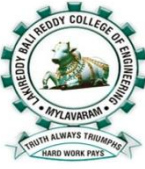
CO1: Able to Understand OOPs Concept ,C++ language features. Able to Understanding and Applying various Datatypes, Operators,Conversions in program design.

CO2: Able to Understand and Apply the concepts of Classes &Objects,friend function , constructors &destructors in program design.

CO3: Able to Design & implement various forms of inheritance, String classes,calling base class constructors .

CO4: Able to Apply & Analyze operator overloading, runtime polymorphism , Generic Programming.

CO5: Able to Analyze and explore various Stream classes, I/O operations and exception handling.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome Based Lesson Plan	
	Academic year : 2016-17	Course :OOP(C++)
	Programme : B.Tech	Unit No. : 1 to 5
	Year & Sem : II & III	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	OOP Paradigm	21/6		2	1	1, 2, 7	
2	OOPS principles	22/6		2	1		
3	OOPS principles	23/6		2	1		
4	C++ Overview	24/6		2	1		
5	C++ Characteristics	25/6		2	1		
6	Types,operators,type casting	28/6		2	1		
7	Types,operators,type casting	29/6		2	1		
8	dynamic initialization of variables	30/6		2	1		
9	<i>new</i> and <i>delete</i> operators	01/7		2	1,9		
10	<i>new</i> and <i>delete</i> operators	02/7		2	1.9		
11	Difference between class and structure, declaration of variables	05/7		2	1,9		
12	Difference between class and structure, declaration of variables	07/7		2	1		
13	Simple C++ programs	08/7		2	1		
14	TUTORIAL – 1 & TEST - 1	09/7		2	1,9		
UNIT - II							
15	Defining Classes in C++, accessing class members,	12/7		2	1,9	1, 2, 7	
16	access specifiers(Public and Private),defining member functions,	13/7		2	1,9		
17	static data members, static member functions	14/7		2	1,9		
18	static data members, static member functions	15/7		2	1,9		
19	Friend functions, friend classes,	16/7		2	1,9		
20	Friend functions	19/7		2	1,9		
21	Friend functions	20/7					3,4
22	Tutorial-2	21/7		2	1		
23	inline functions	22/7		3	1,9		
24	object assignment	23/7		3	1,9		
25	passing objects to functions	26/7		2	1,9		

26	passing objects to functions	27/7		3	1,9	
27	Returning objects	28/7		2	1,9	
28	Array of objects	29/7		2	1,9	
29	Array of objects	30/7		3	1,9	
30	Constructor and Destructor	02/8		3	1,9	
31	Constructor and Destructor	03/8		3	1,9	
32	Constructor and Destructor	04/8		3	1,9	
33	Constructor and Destructor	05/8		3	9	
34	TUTORIAL – 3 & TEST - 3	06/8				
35	MID – I Exams	09/8				5
36		10/8				
37		11/8				
UNIT - III						
38	Base class, derived class, access specifier (Protected),	13/8		2	1	1, 2, 7
39	scope rules, base class	16/8		2	1,9	
40	scope rules, base class	17/8		2	1	
41	virtual base class, single inheritance	18/8		2	1	
42	virtual base class, single inheritance	19/8		2	1	
43	multiple inheritance, multilevel inheritance,	20/8		2	1,9	
44	multiple inheritance, multilevel inheritance,	23/8		2	1,9	
45	Tutorial-4	24/8		2	1,9	
46	hierarchical inheritance and hybrid inheritance, calling base class constructors	26/8		2	1,9	
47	hierarchical inheritance and hybrid inheritance, calling base class constructors	27/8		2,3	1,9	
48	calling base class constructors	30/8		2,3	1,9	

49	String class -Usage of standard library <i>string class</i> with example programs	31/8		2,3	1,9	
50	String class	01/9		2	1	
51	String class examples	02/9		2	1,9	
52	TUTORIAL-5	03/9		2	1,9	
UNIT - IV						
53	Polymorphism:	06/9		2	1,9	
54	Pointers, Pointers to objects	07/9		2	1,9	
55	'this' Pointer, Pointers to derived Classes.	08/9		2	1,9	
56	Concept of Polymorphism, Compile time Polymorphism:	09/9				3, 4
57	Operator Overloading	10/9		2	1	
58	Overloading Unary Operators,	13/9		2	1	
59	Overloading Binary Operators,.	14/9		2	1,9	
60	Function Overloading Run time Polymorphism: Virtual functions,	15/9		2	1,9	
61	Function Overloading Run time Polymorphism: Virtual functions	16/9		2,3	1,9	
62	Function Overloading Run time Polymorphism: Virtual functions	17/9		2,3	1,9	
63	Pure Virtual Functions	20/9		2	1,9	1, 2, 7
64	GENERIC PROGRAMMING	21/9		2	1,9	
65	Templates: Introduction, Class Templates.	22/9		2,3	1,9	
66	Class Templates	23/9		2	1,9	
67	Function Templates	24/9		3	9	
68	Function Templates	27/9		2,3	1,9	
69	Lists vectors	28/9		2,3	1,9	
70	Arrays	29/9		2,3	1,9	
71	Tutorial-6	30/9		2,3	1,9	
72	TUTORIAL – 6 & TEST - 6	01/10				3, 4

UNIT - V							
73	Exception handling: Introduction	04/10		2	1	1, 2, 7	
74	Mechanism, try, throw and catch	05/10		2	1		
75	Catching all Exceptions, Multiple catches	06/10		2	1		
76	C++ Streams, Stream Classes	07/10		2	1		
77	C++ Streams, Stream Classes	08/10		2	1		
78	Unformatted I/O Operations	18/10		2	1		
79	Formatted I/O Operations	19/10		2	1,6		
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81	C++ Files: Introduction	21/10		2	1		
82	Opening and closing of a file	22/10		2	1,9		
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86	Tutorial-7	28/10		2,3	1,9		
87	Revision	29/10		2,3	1,9		
88	Revision	01/11		2,3	1,9		
89	TUTORIAL – 5 & TEST - 5	02/11					3, 4
90	MID – II Exams	03/11					5
91		04/11					
92		05/11					

ASSESSMENT SUMMARY:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments, Quiz, Tutorials etc.	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	
S324	I	x					2												
	II		x				2												
	III			x			2												
	IV				x		2												
	V					x	2												

Course Code	Unit	Course Outcomes					Programme Specific Outcomes					
		1	2	3	4	5	1	2	3	4	5	6
S324	I	x					3		1			
	II		x				3		1			
	III			x			3		1			
	IV				x		3		1			
	V					x	3		1			

Name	Instructor	Head of the Department
	A.S.R.C.MURTHY	Dr. N. Ravi Shankar
Signature		

	LESSON PLAN	Date: 20-06-2016
	Sub. Name : Object Oriented Programming Through C++ Branch: CSE, Semester & Sections:III & A	To 05-11-2016

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Inheritance: Base-class access control, access specifier (Protected), scope rules, Inheriting Multiple Base classes, constructors, destructors & inheritance passing parameters to base class constructors. Virtual base class. **String class**-Usage of standard library string class with example programs.

UNIT – IV

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	Department of CSE	
	Outcome Based Lesson Plan	
	Academic year : 2016-17	Course :OOP(C++)
	Programme : B.Tech	Unit No. : 1 to 5
	Year & Sem : II & III	Section : A

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Detailed Lesson Plan

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		Tentative	Actual			
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UNIT - II							
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21	Friend functions	20/7					3,4
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24	object assignment	23/7		3	1,9		
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31	Constructor and Destructor	03/8		3	1,9	
32	Constructor and Destructor	04/8		3	1,9	
33	Constructor and Destructor	05/8		3	9	
34	TUTORIAL – 3 & TEST - 3	06/8				
35	MID – I Exams	09/8				5
36		10/8				
37		11/8				
UNIT - III						
38	Base class, derived class, access specifier (Protected),	13/8		2	1	1, 2, 7
39	scope rules, base class	16/8		2	1,9	
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48	calling base class constructors	30/8		2,3	1,9	

49	String class -Usage of standard library <i>string class</i> with example programs	31/8		2,3	1,9	
50	String class	01/9		2	1	
51	String class examples	02/9		2	1,9	
52	TUTORIAL-5	03/9		2	1,9	
UNIT - IV						
53	Polymorphism:	06/9		2	1,9	
54	Pointers, Pointers to objects	07/9		2	1,9	
55	'this' Pointer, Pointers to derived Classes.	08/9		2	1,9	
56	Concept of Polymorphism, Compile time Polymorphism:	09/9				3, 4
57	Operator Overloading	10/9		2	1	
58	Overloading Unary Operators,	13/9		2	1	
59	Overloading Binary Operators,.	14/9		2	1,9	
60	Function Overloading Run time Polymorphism: Virtual functions,	15/9		2	1,9	
61	Function Overloading Run time Polymorphism: Virtual functions	16/9		2,3	1,9	
62	Function Overloading Run time Polymorphism: Virtual functions	17/9		2,3	1,9	
63	Pure Virtual Functions	20/9		2	1,9	1, 2, 7
64	GENERIC PROGRAMMING	21/9		2	1,9	
65	Templates: Introduction, Class Templates.	22/9		2,3	1,9	
66	Class Templates	23/9		2	1,9	
67	Function Templates	24/9		3	9	
68	Function Templates	27/9		2,3	1,9	
69	Lists vectors	28/9		2,3	1,9	
70	Arrays	29/9		2,3	1,9	
71	Tutorial-6	30/9		2,3	1,9	
72	TUTORIAL – 6 & TEST - 6	01/10				3, 4

UNIT - V							
73	Exception handling: Introduction	04/10		2	1	1, 2, 7	
74	Mechanism, try, throw and catch	05/10		2	1		
75	Catching all Exceptions, Multiple catches	06/10		2	1		
76	C++ Streams, Stream Classes	07/10		2	1		
77	C++ Streams, Stream Classes	08/10		2	1		
78	Unformatted I/O Operations	18/10		2	1		
79	Formatted I/O Operations	19/10		2	1,6		
80	Formatted using manipulators	20/10		2	1		
81	C++ Files: Introduction	21/10		2	1		
82	Opening and closing of a file	22/10		2	1,9		
83	Detecting end of file, Programs on files	25/10		2,3	1,9		
84	Programs on file operations	26/10		2,3	1,9		
85	Programs on file operations	27/10		2,3	1,9		
86	Tutorial-7	28/10		2,3	1,9		
87	Revision	29/10		2,3	1,9		
88	Revision	01/11		2,3	1,9		
89	TUTORIAL – 5 & TEST - 5	02/11					3, 4
90	MID – II Exams	03/11					5
91		04/11					
92		05/11					

ASSESSMENT SUMMARY:

Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments, Quiz, Tutorials etc.	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	
S324	I	x					2												
	II		x				2												
	III			x			2												
	IV				x		2												
	V					x	2												

Course Code	Unit	Course Outcomes					Programme Specific Outcomes					
		1	2	3	4	5	1	2	3	4	5	6
S324	I	x					3		1			
	II		x				3		1			
	III			x			3		1			
	IV				x		3		1			
	V					x	3		1			

Name	Instructor	Head of the Department
	A.S.R.C.MURTHY	Dr. N. Ravi Shankar
Signature		

	LESSON PLAN	Date: 20-06-16 To 05-11-16
	Sub Code:L167 Sub Name: OBJECT ORIENTED PROGRAMMING THROUGH C++ LAB Branch: CSE Year:II B.Tech Semester : III	

L167 – OBJECT ORIENTED PROGRAMMING THROUGH C++ LAB.

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

Week – 1:

1. Write a C++ program to find the sum of individual digits of a positive integer.
2. Write a C++ program to generate the first 'n' terms of the sequence. A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1. Subsequent terms are formed by adding the preceding two terms in the sequence.
3. Write a C++ program to generate all the **prime numbers** between 1 and n. Where 'n' is a value supplied by the user.

Week – 2:

4. Write a C++ programs that use both **recursive** and **non-recursive** functions
 - a) To find the factorial of a given integer.
 - b) To find the GCD of two given integers.
 - c) To find the nth Fibonacci number.

Week – 3:

5. Write a C++ program to perform addition, subtraction and multiplication operations on two complex numbers using **classes and objects**.
6. Write a C++ program to find out the total and average marks of 10 students using **Classes and objects?**

Week – 4:

7. Write a C++ program to implement **static data members** and **static member functions**
8. Write a C++ program to implement the **matrix ADT using** a class. The operations Supported by this ADT are:
 - a) Reading a matrix.
 - b) Displaying a matrix
 - c) Addition of matrices.
 - d) Multiplication of matrices.

Week –5:

9. Write a C++ program to illustrate the usage of following:
Default Constructor, Parameterized Constructor, Copy Constructor and Destructor
10. Write a C++ program that illustrates the following:
 - a) **Friend** Function
 - b) **inline** function

Week –6 :

11. Write C++ programs that illustrates the usage of following forms of **inheritance**. (Exercise the access specified *protected* also)
 - a) Single Inheritance
 - b) Multiple Inheritance
 - c) Multi level Inheritance
 - d) Hierarchical Inheritance

Week –7 :

12. Write a C++ program to call base class constructors in the following forms of inheritance.
 - a) Single Inheritance
 - b) Multiple Inheritance
 - c) Multi level Inheritance
 - d) Hierarchical Inheritance

Week –8 :

13. Write a C++ program that illustrates the concept of **Function over loading?**
14. Write a C++ program that overloads the **binary + operator** to concatenate two strings and to add two complex numbers.

Week -9 :

15. Write a C++ program that overloads the **unary ++ operator** to increment each element of the given one dimensional array by '1'?
16. Write a C++ program that illustrates **run time polymorphism** by using virtual functions.

Week -10 :

17. Write a **template** based C++ program to check whether the given item is existed in the array or not.
18. Write an example C++ program to illustrate the procedure of exceptions **handling**.

Week-11:

19. Write a C++ program to display the contents **of a text file**.
20. Write a C++ program which **copies the contents of one file to another**.

Pre requisite: C Language.

CEOs:

This course enables the students to execute programs in

7. Object oriented concepts++ language.
8. Classes & Objects, Inheritance, Polymorphism.
9. Templates ,Streams, Files

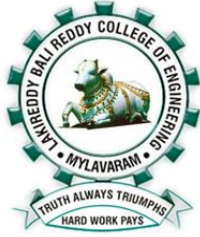
Course Outcomes (CO's)

After undergoing this laboratory module, the student will be able to:

CO1: Implement and test the concepts of Classes & Objects, friend functions, constructors & destructors in program design of a few example exercises.

CO2: Design & implement a few forms of inheritance through a few exercises.

CO3: Test the performance of Polymorphism and Generic Programming through a few exercises.



LESSON PLAN

Date:

20-06-16

To

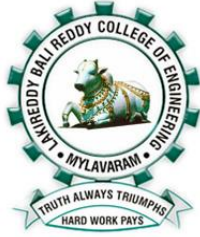
05-11-16

Sub. Name : OOP LAB (L167)

Faculty Name: A.S.R.C.Murthy Branch: CSE

Class: II B.Tech. III SEM Section: A

No. of Periods	Tentative Date	Actual Date	Lab Cycles	Signature
1.	24/06/2016		Basics using C language	
2.	01/07/2016		Introduction to C++	
3.	08/07/2016		WEEK – 1	
4.	15/07/2016		WEEK – 2	
5.	22/07/2016		WEEK – 3	
6.	29/07/2016		WEEK – 4	
7.	05/08/2016		WEEK – 5	
8.	12/08/2016		MID – 1 EXAMS	
9.	19/08/2016		WEEK – 6	
10.	26/08/2016		WEEK – 7	
11.	02/09/2016		WEEK – 7	
12.	09/09/2016		WEEK – 8	
13.	16/09/2016		WEEK – 9	
14.	07/10/2016		WEEK – 10	
15.	14/10/2016		WEEK – 11	
16.	21/10/2016		WEEK – 11	
17.	28/10/2016		INTERNAL EXAM	



LESSON PLAN

Date:

20-06-16

To

05-11-16

Sub. Name : OOP LAB (L167)

Faculty Name: A.S.R.C.Murthy Branch: CSE

Class: II B.Tech III SEM Section: B

No. of Periods	Tentative Date	Actual Date	Lab Cycles	Signature
1.	22/06/2016		Basics using C language	
2.	29/06/2016		Introduction to C++	
3.	06/07/2016		WEEK – 1	
4.	13/07/2016		WEEK – 2	
5.	20/07/2016		WEEK – 3	
6.	27/07/2016		WEEK – 4	
7.	03/08/2016		WEEK – 5	
8.	10/08/2016		MID – 1 EXAMS	
9.	17/08/2016		WEEK – 5	
10.	24/08/2016		WEEK – 6	
11.	31/08/2016		WEEK – 7	
12.	07/09/2016		WEEK – 7	
13.	14/09/2016		WEEK – 8	
14.	21/09/2016		WEEK – 9	
15.	22/09/2016		WEEK – 10	
16.	05/10/2016		WEEK – 10	
17.	12/10/2016		WEEK – 11	
18.	19/10/2016		WEEK – 11	
19.	26/10/2016		INTERNAL EXAM	
20.	02/11/2016		MID – 2 EXAMS	

	Prepared by	Approved by
Signature		
Name	Mr. A.S.R.C.Murthy	Dr. N. Ravi Shankar
Designation	Sr.Asst. Professor, CSE Department	Professor, H.O.D of CSE.
Date		

SYLLABUS

UNIT – I :Solution of Algebraic and Transcendental Equations and Numerical Integration

Solutions of Algebraic and Transcendental Equations – Regula False Position method and Newtons Raphson Method in one variable.

Numerical Integration – Trapezoidal rule – Simpson’s 1/3 Rule –Simpson’s 3/8 Rule.

UNIT – II : Interpolation and Finite Differences

Interpolation: Introduction – Finite differences- Forward Differences- Backward Differences- Backward differences –Central differences – Symbolic relations and separation of symbols- Differences of a polynomial- Newton’s formulae for interpolation – Lagrange’s Interpolation formula.

UNIT – III : Numerical solution of Ordinary Differential Equations

Numerical solution of Ordinary Differential equations, Solution by Taylor’s series - Picard’s Method of successive Approximations - Euler’s Method - Runge- Kutta Methods.

UNIT – IV : Vector Differentiation

Vector Differentiation: Gradient- Directional Derivatives -Divergence – Solenoidal fields- Curl – Irrotation fields-potential surfaces - Laplacian and second order operators and related properties of sums and products

UNIT – V: Vector Integration

Vector Integration - Line integral – work done –area - surface and volume integrals Vector integral theorems: Greens, Stokes and Gauss Divergence Theorems (Without proof) and related problems.

TEXT BOOKS

1. S. S. Sastry, “Introductory Methods of Numerical Analysis”. Prentice Hall of India,5th Edition,2005.
2. Dr. B. V. Ramana, “Higher Engineering Mathematics”, The McGraw Hill Companies, 1st Edition,2010.

REFERNCES

1. Dr. B.S. Grewal , “Higher Engineering Mathematics”, Khanna Publishers, 42ndEdition,2012.
2. Steven .C. Chopra and Ra. P. Canale, “Numerical Methods for Engineers with programming and software application”, The McGraw Hill Companies, 4th Edition,2002.
3. M. K. Jain, S. R. K. Iyengar, R.K. Jain, “Numerical Methods for Scientific and Engineering Computation”, New Age International Publishers., 5th Edition,2007.

Course Educational Objectives:

In this course student will learn about

- The methodology of interpolation and extrapolation to common problems using different formulae
- The application of Numerical Techniques in Integration; solving the algebraic and transcendental equations.
- Solving Differential equations by using Numerical Methods..
- The concepts of Vector Calculus Vector Differentiation and Conservative Fields.
- The concepts of line integrals, surface and volume integrals , vector integral theorems and their applications

Course outcomes:

At the end of this course student will be able to

- Apply the techniques of numerical interpolation and approximation of functions with ease.
- Perform integration of functions when the actual function is not given and solve algebraic and transcendental equations.
- Solve Ordinary Differential Equations with given initial conditions.
- Apply Integration to find length, area and volume of any given surface.
- Understand the analogy of the Fundamental Theorem of Calculus to Vector Calculus.

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 software000	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 class	20-06-16		2	1	1,3, 5,7
2.	Course Objectives and applications	21-06-16		2	1	
3.	Introduction to solution of algebraic and transcendental equations	22-06-16		2	1	
4.	Bisection Method	23-06-16		3	1	
5.	Problems on bisection method	25-06-16		3	1,9	
6.	Method of False Position	27-06-16		3	1,9	
7.	Problems on False Position method.	29-06-16		3	1,9	
8.	Newton-Raphson Method	30-06-16		3	1,9	
9.	Problems on Newton-Raphson Method	02-07-16		2	1,9	
10.	TUTORIAL -1	04-07-16		3	9	
11.	Numerical Integration	05-07-16		3	1,9	
12.	Trapezoidal Rule-Problems	07-07-16		2,3	1,9	
13.	Trapezoidal Rule-Problems	11-07-16		,3	1,9	
14.	Simpson's 1/3 Rule -problems	12-07-16		2,3	1,9	
15.	Simpson's 1/3 Rule -problems	13-07-16		3	1,9	
16.	Simpson's 3/8 Rule -problems	14-07-16		2,3	1,9	
17.	Simpson's 3/8 Rule -problems	16-07-16		3	1,9	
18.	TUTORIAL-2	18-07-16		3	9	

19.	Assignment & Quiz	19-07-16		9	9	1,3, 5,7
UNIT II						
20.	Introduction to Interpolation	20-07-16		3	1	
21.	Finite Differences	21-07-16		3	1	
22.	Forward, & Backward Differences	23-07-16		3	1	
23.	Symbolic Relations and separation of symbols	25-07-16		3	1	
24.	TUTORIAL-3	26-07-16		3	9	
25.	Newton's forward formulae for interpolation	27-07-16		3	1,9	
26.	Newton's backward formulae for interpolation	28-07-16		3	1,9	
27.	Lagrange's interpolation formula	30-07-16		3	1,9	
28.	Lagrange's interpolation formula-problems	01-08-16		3	1,9	
29.	Gauss Interpolation formula	02-08-16		2,3	1,9	
30.	Gauss Interpolation formula-problems	03-08-16		3	1,9	
31.	TUTORIAL-4	04-08-16		2,3	9	
32.	Assignment & Quiz	06-08-16		9	9	
33.	MID- 1	08-08-16				
34.	MID- 1	09-08-16				
35.	MID -1	10-08-16				
36.	MID- 1	11-08-16				
UNIT-III						
37.	Numerical Solution of ODE	16-08-16		2	1,9	
38.	Solution of ODE by Taylor's series	17-08-16		2,3	1	
39.	Solution of ODE by Taylor's series	18-08-16		3	9	
40.	Problems on Taylor's series	20-08-16		2,3	1	
41.	Picard's Method of successive Approximation	22-08-16		2,3	1	
42.	Picard's Method of successive Approximation	23-08-16		3	1,9	

43.	Euler's Method	24-08-16		3	1,9		
44.	Modified Euler's Method	27-08-16		3	1,9		
45.	Problems on Euler's methods	29-08-16		2,3	1,9		
46.	TUTORIAL-5	30-08-16		3	1,9		
47.	Runge-Kutta Method	31-08-16		2	1		
48.	Problems on Runge-Kutta Method	01-09-16		2	1,9		
49.	TUTORIAL-6	03-09-16		3	9		
50.	Assignment & Quiz	06-09-16		9	9		
UNIT-IV							
51.	Vector Differentiation	07-09-16		2	1		1,3, 5,7
52.	Gradient of a scalar point function	08-09-16		3	1,9		
53.	Gradient of a scalar point function	13-09-16		3	1,9		
54.	Directional Derivatives	14-09-16		2,3	1	1,3, 5,7	
55.	Directional Derivatives	15-09-16		3	1,9		
56.	Problems on Directional Derivatives	17-09-16		2,3	9		
57.	TUTORIAL-7	19-09-16		3	9		
58.	Divergence	20-09-16		2,3	1,9		
59.	Problems on Divergence	21-09-16		2,3	1,9		
60.	Curl of a vector	22-09-16		3	9		
61.	Curl of a vector, problems	24-09-16		2,3	1,9		
62.	Laplacian and second order operators	26-09-16		2,3	1,9		
63.	Laplacian and second order operators	27-09-16		2,3	1,9		
64.	Properties	28-09-16		2	1,9		
65.	Vector Identities	29-09-16		2,3	9		
66.	Vector Identities	01-10-16		2,3	1,9		
67.	TUTORIAL-8	03-10-16		3	9		
68.	Assignment & Quiz	04-10-16		2	9		
UNIT- V							
69.	Vector Integration	05-10-16		2	1		
70.	Line Integral	06-10-16		2	1		

71.	Line Integral	17-10-16		3	9	1,3, 5,7
72.	Work done Area	18-10-16		2,3	1,9	
73.	Surface Integral	19-10-16		2,3	1	
74.	Volume Integral	20-10-16		3	1,9	
75.	TUTORIAL-9	22-10-16		3	9	
76.	Applications on Gauss divergence Theorem	24-10-16		3	1,9	
77.	Applications on Gauss divergence Theorem	25-10-16		2,3	9	
78.	Applications on Green's Theorem	26-10-16		2,3	1,9	
79.	Applications on Green's Theorem	27-10-16		3	1,9	
80.	Applications on Stokes' Theorem	29-10-16		3	1,9	
81.	TUTORIAL-10	31-10-16		3	9	
82.	Assignment & Quiz	01-11-16		9	9	
83.	Revision	02-11-16		2,3	1,9	
84.	MID- 2	03-11-16				
85.	MID -2	05-11-16				
Total number of classes required to complete the syllabus :75						
Total number of classes available as per Schedule				:79		

Assessment Summary:

Assessment Task	Weight age (Marks)	CO1	CO2	CO3	CO4	CO5	CO6
		Assignments	05				
Quizzes							
Tutorials							
Surprise Tests	--						
Mid Exams	20						
Model Exams	--						

End Exam	75						
Attendance							
Total	100						

CO-PO Mapping:

Pos	→	a	b	c	d	e	f	g	h	i	j	k	
	↙												
	COs	↓											
CO1													
CO2													
CO3													
CO4													
CO5													
		1 = Slightly (low)			2 = Moderate (medium)			3-Substantially(High)					

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes						Programme Outcomes											
		1	2	3	4	5	6	a	b	c	d	e	f	g	h	i	j	k	
S-134	I																		
	II																		
	III																		
	IV																		
	V																		

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

UNIT – I :Solution of Algebraic and Transcendental Equations and Numerical Integration

Solutions of Algebraic and Transcendental Equations – Regula False Position method and Newtons Raphson Method in one variable.

Numerical Integration – Trapezoidal rule – Simpson’s 1/3 Rule –Simpson’s 3/8 Rule.

UNIT – II : Interpolation and Finite Differences

Interpolation: Introduction – Finite differences- Forward Differences- Backward Differences- Backward differences –Central differences – Symbolic relations and separation of symbols- Differences of a polynomial- Newton’s formulae for interpolation – Lagrange’s Interpolation formula.

UNIT – III : Numerical solution of Ordinary Differential Equations

Numerical solution of Ordinary Differential equations, Solution by Taylor’s series - Picard’s Method of successive Approximations - Euler’s Method - Runge- Kutta Methods.

UNIT – IV : Vector Differentiation

Vector Differentiation: Gradient- Directional Derivatives -Divergence – Solenoidal fields- Curl – Irrotation fields-potential surfaces - Laplacian and second order operators and related properties of sums and products

UNIT – V: Vector Integration

Vector Integration - Line integral – work done –area - surface and volume integrals Vector integral theorems: Greens, Stokes and Gauss Divergence Theorems (Without proof) and related problems.

TEXT BOOKS

1. S. S. Sastry, “Introductory Methods of Numerical Analysis”. Prentice Hall of India,5th Edition,2005.
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Course Educational Objectives:

In this course student will learn about

- The methodology of interpolation and extrapolation to common problems using different formulae

- The application of Numerical Techniques in Integration; solving the algebraic and transcendental equations.
- Solving Differential equations by using Numerical Methods..
- The concepts of Vector Calculus Vector Differentiation and Conservative Fields.
- The concepts of line integrals, surface and volume integrals , vector integral theorems and their applications

Course outcomes:

At the end of this course student will be able to

- Apply the techniques of numerical interpolation and approximation of functions with ease.
- Perform integration of functions when the actual function is not given and solve algebraic and transcendental equations.
- Solve Ordinary Differential Equations with given initial conditions.
- Apply Integration to find length, area and volume of any given surface.
- Understand the analogy of the Fundamental Theorem of Calculus to Vector Calculus.

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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:						

86.	Introduction class	20-06-16		2	1	1,3, 5,7
87.	Course Objectives and applications	21-06-16		2	1	
88.	Introduction to solution of algebraic and transcendental equations	22-06-16		2	1	
89.	Bisection Method	23-06-16		3	1	
90.	Problems on bisection method	25-06-16		3	1,9	
91.	Method of False Position	27-06-16		3	1,9	
92.	Problems on False Position method.	29-06-16		3	1,9	
93.	Newton-Raphson Method	30-06-16		3	1,9	
94.	Problems on Newton-Raphson Method	02-07-16		2	1,9	
95.	TUTORIAL -1	04-07-16		3	9	
96.	Numerical Integration	05-07-16		3	1,9	
97.	Trapezoidal Rule-Problems	07-07-16		2,3	1,9	
98.	Trapezoidal Rule-Problems	11-07-16		,3	1,9	
99.	Simpson's 1/3 Rule -problems	12-07-16		2,3	1,9	
100	Simpson's 1/3 Rule -problems	13-07-16		3	1,9	
101	Simpson's 3/8 Rule -problems	14-07-16		2,3	1,9	
102	Simpson's 3/8 Rule -problems	16-07-16		3	1,9	
103	TUTORIAL-2	18-07-16		3	9	
104	Assignment & Quiz	19-07-16		9	9	
UNIT II						
105	Introduction to Interpolation	20-07-16		3	1	
106	Finite Differences	21-07-16		3	1	
107	Forward, & Backward Differences	23-07-16		3	1	
108	Symbolic Relations and separation of symbols	25-07-16		3	1	
109	TUTORIAL-3	26-07-16		3	9	
110	Newton's forward formulae for interpolation	27-07-16		3	1,9	
111	Newton's backward formulae for interpolation	28-07-16		3	1,9	
112	Lagrange's interpolation formula	30-07-16		3	1,9	

113	Lagrange's interpolation formula-problems	01-08-16		3	1,9	1,3, 5,7
114	Gauss Interpolation formula	02-08-16		2,3	1,9	
115	Gauss Interpolation formula-problems	03-08-16		3	1,9	
116	TUTORIAL-4	04-08-16		2,3	9	
117	Assignment & Quiz	06-08-16		9	9	
118	MID- 1	08-08-16				
119	MID- 1	09-08-16				
120	MID -1	10-08-16				
121	MID- 1	11-08-16				
UNIT-III						
122	Numerical Solution of ODE	16-08-16		2	1,9	1,3, 5,7
123	Solution of ODE by Taylor's series	17-08-16		2,3	1	
124	Solution of ODE by Taylor's series	18-08-16		3	9	
125	Problems on Taylor's series	20-08-16		2,3	1	
126	Picard's Method of successive Approximation	22-08-16		2,3	1	
127	Picard's Method of successive Approximation	23-08-16		3	1,9	
128	Euler's Method	24-08-16		3	1,9	
129	Modified Euler's Method	27-08-16		3	1,9	
130	Problems on Euler's methods	29-08-16		2,3	1,9	
131	TUTORIAL-5	30-08-16		3	1,9	
132	Runge-Kutta Method	31-08-16		2	1	
133	Problems on Runge-Kutta Method	01-09-16		2	1,9	
134	TUTORIAL-6	03-09-16		3	9	
135	Assignment & Quiz	06-09-16		9	9	
UNIT-IV						
136	Vector Differentiation	07-09-16		2	1	
137	Gradient of a scalar point function	08-09-16		3	1,9	
138	Gradient of a scalar point function	13-09-16		3	1,9	


139	Directional Derivatives	14-09-16		2,3	1	1,3, 5,7
140	Directional Derivatives	15-09-16		3	1,9	
141	Problems on Directional Derivatives	17-09-16		2,3	9	
142	TUTORIAL-7	19-09-16		3	9	
143	Divergence	20-09-16		2,3	1,9	
144	Problems on Divergence	21-09-16		2,3	1,9	
145	Curl of a vector	22-09-16		3	9	
146	Curl of a vector, problems	24-09-16		2,3	1,9	
147	Laplacian and second order operators	26-09-16		2,3	1,9	
148	Laplacian and second order operators	27-09-16		2,3	1,9	
149	Properties	28-09-16		2	1,9	
150	Vector Identities	29-09-16		2,3	9	
151	Vector Identities	01-10-16		2,3	1,9	
152	TUTORIAL-8	03-10-16		3	9	
153	Assignment & Quiz	04-10-16		2	9	
UNIT- V						
154	Vector Integration	05-10-16		2	1	1,3, 5,7
155	Line Integral	06-10-16		2	1	
156	Line Integral	17-10-16		3	9	
157	Work done Area	18-10-16		2,3	1,9	
158	Surface Integral	19-10-16		2,3	1	
159	Volume Integral	20-10-16		3	1,9	
160	TUTORIAL-9	22-10-16		3	9	
161	Applications on Gauss divergence Theorem	24-10-16		3	1,9	
162	Applications on Gauss divergence Theorem	25-10-16		2,3	9	
163	Applications on Green's Theorem	26-10-16		2,3	1,9	
164	Applications on Green's Theorem	27-10-16		3	1,9	
165	Applications on Stokes' Theorem	29-10-16		3	1,9	
166	TUTORIAL-10	31-10-16		3	9	

COs												
CO1												
CO2												
CO3												
CO4												
CO5												
	1 = Slightly (low) 2 = Moderate (medium) 3-Substantially(High)											

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes						Programme Outcomes											
		1	2	3	4	5	6	a	b	c	d	e	f	g	h	i	j	k	
S-134	I																		
	II																		
	III																		
	IV																		
	V																		

	Instructor	Course Coordinator	Module Coordinator	HOD
Name				
Sign with Date				

	LESSON PLAN	Date: 20/06/2016
	Sub.Name: COMPUTER ORGANIZATION Branch: CSE, Semester& Sections:III&A&B	To 02/11/2016

S169 – COMPUTER ORGANIZATION

Lecture	:4 Periods/week	Internal Marks	: 25
Tutorial	:1	External Marks	: 75
Credits	:43	External Examination	: 3 Hrs

UNIT – I

Register Transfer and Micro Operations: Register Transfer language, Register Transfer Bus and Memory Transfers, Arithmetic Micro Operations, Logic Micro Operations, Shift Micro Operations, Arithmetic Logic Shift Unit.

Basic Computer Organization and Design: Instruction Codes, Computer Registers, Computer Instructions– Instruction cycle, Memory – Reference Instructions, Input – Output and Interrupt.

UNIT – II

Micro Programmed Control: Control Memory, Address Sequencing, Micro program example, Design of Control unit, hard wired control, Micro programmed control.

Central Processing Unit: STACK organization, Instruction formats, Addressing modes, DATA Transfer and Manipulation, Program control, Reduced Instruction Set computer.

UNIT – III

Pipelining and Vector Processing: Parallel Processing, Pipelining, Arithmetic Pipeline, Instruction Pipeline, RISC pipeline, Vector Processing.

Computer Arithmetic: Data Representation, Fixed Point Representation, Floating Point Representation, Addition and Subtraction, Multiplication Algorithms, Division Algorithms, Floating Point Arithmetic operations, Decimal Arithmetic unit, Decimal Arithmetic operations.

UNIT – IV

Memory Organization: Memory Hierarchy, Main Memory, Auxiliary Memory. Associative Memory, Cache Memory, Virtual Memory.

UNIT – V

Input-Output Organization: Peripheral Devices, Input-Output Interface, Asynchronous Data Transfer, Modes of Transfer, Priority Interrupt, Direct Memory Access, Input –Output Processor, Serial communication.

TEXT BOOK

1. M.Morris Mano, “Computer Systems Architecture”, Pearson Education publishers.

Pre requisite: Digital Logic Design

Course Educational Objectives:

- Students will be able to make use of the binary number system to translate values between the binary and decimal number systems, to perform basic arithmetic operations (i.e. addition, subtraction, multiplication, and division) and to construct machine code instructions.
- Students will be able to design logical expressions and corresponding integrated logic circuits for a variety of problems including the basic components of a CPU such as adders, multiplexers, the ALU, a register file, and memory cells.
- Students will be able to explain the fetch-execute cycle performed by the CPU and how the various components of the data path are used in this process.

Course outcomes:


CO1:Able to understand register transfer, micro operations such as arithmetic logic and shift.

CO2:Able to analyze the basic concepts and elements of a computer system.

CO3:Able to learn how to design a CPU.

CO4:Able to perform arithmetic operations.

CO5: Able to study memory and I/O management.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome based lesson plan	
	Academic year: 2016-17	Course: Computer Organization
	Programme: B.Tech	Unit No: 1 to 5
	Year & Sem: II & I (III sem)	Section: A&B

Detailed Lesson Plan

S No.	Tentative Date	Topics to be covered	Actual Date	Num. of classes	Content Delivery Methods
UNIT-I:REGISTER TRANSFER & MICRO-OPERATIONS					
17	20-06-16	Unit - I Introduction to Digital components		1	DM1
17	21-06-16	Register Transfer Language, Register Transfer		1	DM1
17	22-06-16	Bus & memory transfers :using multiplexers		1	DM1
17	23-06-16 24-06-16	Bus & memory transfers :using three state buffers		2	DM1
17	25-06-16	TUTORIAL – 1		1	DM2
17	27-06-16	Arithmetic Micro-operations		1	DM1
17	28-06-16	Arithmetic circuit		1	DM1
17	29-06-16	QUIZ / TEST – 1		1	
17	30-06-16	Logic Micro-operations		1	DM1
18	01-07-16	Shift Micro-operations		1	DM1
18	02-07-16	Arithmetic Logic Shift Unit		1	DM1
18	04-07-16	Basic Computer Organization and Design: Instruction codes		1	DM1
18	05-07-16 07-07-16	Computer registers		2	DM1
18	08-07-16	Computer Instructions		1	DM1
18	09-07-16	Instruction Cycle , Register reference instructions		1	DM1

18	11-07-16	QUIZ / TEST – 2		1	DM4
18	12-07-16 13-07-16	Memory-Reference Instructions		2	DM1
18	14-07-16	Input-Output instructions		1	DM1
18	15-07-16	Interrupts		1	DM1
19	16-07-16	TUTORIAL – 2		1	DM2
UNIT – IIMICRO PROGRAMMED CONTROL					
19	18-07-16 19-07-16	Control Memory		2	DM1
19	20-07-16	Address Sequencing		1	DM1
19	21-07-16 22-07-16	Micro-Program example		2	DM1
19	23-07-16 25-07-16	Design of Control Unit, Hardwired control , Microprogram control		2	DM1
19	26-07-16	QUIZ / TEST – 3		1	DM4
19	27-07-16 28-07-16	CENTRALPROCESSING UNIT:Stack organization		2	DM1
19	29-07-16	Instruction formats		1	DM1
19	30-07-16 01-08-16	Addressing modes		2	DM1
19	02-08-16	Data transfer and manipulation instructions		1	DM1
20	03-08-16	QUIZ / TEST – 4		1	
20	05-08-16	Program control, RISC		1	DM1
20	06-08-16	TUTORIAL –3		1	
I – MID EXAMINATIONS					
UNIT- III PIPELINING AND VECTOR PROCESSING					
20	08-08-16 09-08-16	Parallel Processing, Pipelining		2	DM1
20	10-08-16	Arithmetic Pipeline		1	DM1
20	11-08-16 12-08-16	Instruction Pipeline		2	DM1
20	13-08-16	Instruction Pipeline		1	
20	16-08-16	QUIZ / TEST – 5		1	
20	17-08-16 18-08-16	Risc Pipeline, Vector Processing		2	DM1
20	19-08-16	TUTORIAL –4		1	DM2
21	20-08-16	Floating Point Representation		1	DM1
21	22-08-16 23-08-16	Floating Point Representation		2	
21	24-08-16 26-08-16	Addition and Subtraction		2	DM1
21	27-08-16 29-08-16	Multiplication algorithm		2	DM1
21	30-08-16 31-08-16	Booth's Multiplication algorithm		2	DM1
21	01-09-16	QUIZ / TEST – 6		1	DM4
21	02-09-16 03-09-16	Division Algorithms		2	DM1
21	06-09-16 07-09-16	Floating-point Arithmetic operations		2	DM1
21	08-09-16	Decimal Arithmetic unit		1	DM1

21	09-09-16 10-09-16	Decimal Arithmetic operations		2	DM1
22	13-09-16	Decimal Arithmetic operations		1	
22	14-09-16 15-09-16	EXAMPLE PROBLEMS		2	DM1
22	16-09-16	TUTORIAL –5		1	DM2
UNIT IV MEMORY ORGANIZATION					
22	17-09-16	Memory Hierarchy		1	DM1
22	19-09-16 20-09-16	Main Memory		2	DM1
22	21-09-16 22-09-16	Auxiliary memory		2	DM1
22	23-09-16 24-09-16	Associative memory		2	DM1
22	26-09-16	Associative memory		1	
22	27-09-16	QUIZ / TEST – 7		1	DM4
22	28-09-16 29-09-16	Cache Memory		2	DM1
23	30-09-16 01-10-16	Virtual memory		2	DM1
23	03-10-16	TUTORIAL –6		1	DM2
UNIT- V INPUT-OUTPUT ORGANIZATION					
23	05-10-16	Peripheral Devices		1	DM1
23	06-10-16 07-10-16	Input-Output Interface,		2	DM1
23	08-10-16 17-10-16	Asynchronous Data Transfer		2	DM1
23	18-10-16 19-10-16	Priority Interrupt		2	DM1
23	20-10-16	QUIZ / TEST – 8		1	DM4
23	21-10-16 22-10-16	Daisy chain interrupt		2	DM1
23	24-10-16	Daisy chain interrupt		1	
23	25-10-16 26-10-16	Direct Memory Access		2	DM1
24	27-10-16	Input-Output Processor,		1	DM1
24	28-10-16	Input-Output Processor,		1	DM1
24	29-10-16 31-10-16	Serial Communication		2	DM1
24	02-11-16	TUTORIAL –7		1	DM2
II – MID Examinations					
Total Classes					69
Total number of classes required to complete the syllabus					69
Total number of classes available as per Schedule					69

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.

Resources Used:

TEXT BOOK

“Computer Systems Architecture”, M.Morris Mano, Pearson Education Publishe

Assessment Summary:

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

Mapping Course Outcomes with Programme Outcomes:

Course Code	Unit	Course Outcomes					Programme Outcomes										
		1	2	3	4	5	a	b	c	d	e	f	g	h	i	j	k
T214	I	×						×	×		×				×		×
	II		×					×	×		×				×		×
	III			×				×	×		×				×		×
	IV				×			×	×		×				×		×
	V					×		×	×		×				×		×

	Instructor	Course Coordinator	Module Coordinator	HOD
Name	Dr.E.V Prasad	Dr.E.V Prasad		Dr. N. Ravi Shankar
Sign with Date				

Detailed Lesson Plan

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT I: NATURAL RESOURCES						
1	Course Objective, introduction, their applications	22/6/16		2	1	1,2,3,5,7
2	Introduction to syllabus, Def of Environmental studies, Scope & Importance of environmental studies. Need for public awareness.	23/6/16		2,3	1	
3	Renewable and non-renewable resources Forest resources	25/6/16		2,3	1	
4	Water resources	29/6/16		2,3	1	
5	Mineral resources	30/06/16		2,3	1	
6	Mineral resources and intro to Food resources	7/7/16		2,3	1	
7	Food resources	13/7/16		2,3	1	
8	Energy resources	14/7/16		2,3	1	

9	Tutorial -1	16/7/16		3	1,9	
10	Assignment in UNIT I	20/7/16		2,3	1	
UNIT II: ECOSYSTEMS AND BIODIVERSITY AND CONSERVATION						
11	Structure and functions of ecosystems	21/7/16		2,3	1	
12	Ecological succession	23/7/16		3	1,9	
13	Food chains and Food web	27/7/16		2,3	1	
14	Ecological pyramids	28/7/16		2,3	1	
15	Bio-Geo chemical cycles	30/7/16		3		
16	Tutorial-2	03/8/16		3		
17	Biodiversity definition and levels of measuring biodiversity	4/8/16		3	1,9	
18	Bio-geographical classification of India	6/08/16		2,3	1	
19	India as mega diversity nation, Values, Hot-spots	17/8/16		2,3	1	
20	Threats and conservation of biodiversity	18/8/16		2,3	1	
21	Tutorial-3	20/8/16		2,3	1	1,2,3,5,7
22	I MID EXAMINATIONS	24/8/16		3	1,9	
23	I MID EXAMINATIONS	27/8/16		2,3	1	
UNIT-III: ENVIRONMENTAL POLLUTION						
24	Air pollution	31/8/16		2,3	1	
27	Water pollution	1/9/16		3	1,9	
29	Soil pollution	3/9/16		2,3	1	
30	Noise pollution	7/9/16		2,3	1	
31	Radioactive pollution	8/9/16		3		
32	Solid waste management	14/9/16		3		
33	Disaster management	15/9/16		3	1,9	
34	Tutorial-4	17/9/16				1,2,3,5,7
35	Assignment in UNIT III	21/9/16				
UNIT-IV: SOCIAL ISSUES AND ENVIRONMENT						
36	From unsustainable to sustainable development	22/9/16				
37	Environmental and human health	24/9/16		2,3	1	
38	Resettlement and rehabilitation	26/9/16		2,3	1	
39	Tutorial-5	28/9/16		2,3	1	
40	Climate change: Global warming & Acid rains	29/10/16		2,3	1	
41	Ozone depletion & Nuclear accidents and holocaust	05/10/16		2,3	1	
42	Consumerism and waste products	06/10/16		2,3	1	

43	Tutorial -6	07/10/16		3	1,9	1,2,3,5,7	
UNIT-V: HUMAN POPULATION AND ENVIRONMENT							
44	Population growth and variations among nations, population explosion	19/10/16		2,3	1		
45	Family welfare programs	20/10/16		2,3	1		
46	Tutorial-7	22/10/16		2,3	1		
47	Human rights and value education	26/10/16		2,3	1		
48	HIV/AIDS	27/10/16		3	1,9		
49	Women and child welfare programs	29/10/16		2,3	1		
50	Role of IT in Environmental management and human health	2/11/16		2,3	1		1,2,3,5,7
51	Tutorial-8	3/11/16					
53	II MID EXAMINATIONS	5/11/16					

Signature of faculty

Signature of Course Coordinator

Signature of HOD

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	END Exams
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: NATURAL RESOURCES						
1	Course Objective, introduction, their applications	20/6/16		2	1	1,2,3,5,7
2	Introduction to syllabus, Def of Environmental studies, Scope & Importance of environmental studies. Need for public awareness.	24/6/16		2,3	1	
3	Renewable and non-renewable resources			2,3		
4	Forest resources	25/6/16		2,3	1	
5	Water resources	27/6/16		2,3	1	
6	Mineral resources	01/07/16		2,3	1	
7	Mineral resources and intro to Food resources	2/7/16		2,3	1	
8	Food resources	4/7/16		2,3	1	
9	Energy resources	8/7/16		2,3	1	
10	Tutorial -1	11/7/16		3	1,9	
	Assignment in UNIT I	15/7/16		2,3	1	
UNIT II: ECOSYSTEMS AND BIODIVERSITY AND CONSERVATION						
11	Structure and functions of ecosystems	16/7/16		2,3	1	1,2,3,5,7
12	Ecological succession	18/7/16		3	1,9	
13	Food chains and Food web	22/7/16		2,3	1	
14	Ecological pyramids	23/7/16		2,3	1	
15	Bio-Geo chemical cycles	25/7/16		3		
16	Tutorial-2	29/7/16		3		
17	Biodiversity definition and levels of measuring biodiversity	30/7/16		3	1,9	
18	Bio-geographical classification of India	01/08/16		2,3	1	
19	India as mega diversity nation, Values, Hot-spots	5/8/16		2,3	1	
20	Threats and conservation of biodiversity	6/8/16		2,3	1	
21	Tutorial-3	8/8/16		2,3	1	1,2,3,5,7
22	I MID EXAMINATIONS	12/8/16		3	1,9	
23	I MID EXAMINATIONS	19/8/16		2,3	1	
UNIT-III: ENVIRONMENTAL POLLUTION						
24	Air pollution	20/8/16		2,3	1	
26	Air pollution	22/8/16		2,3	1	
27	Water pollution	26/8/16		3	1,9	
28	Water pollution	27/8/16		2,3	1	
29	Soil pollution	29/8/16		2,3	1	
30	Noise pollution	2/9/16		2,3	1	
31	Radioactive pollution	3/9/16		3		

32	Solid waste management	9/9/16		3		1,2,3,5,7	
33	Disaster management	16/9/16		3	1,9		
34	Tutorial-4	17/9/16					
35	Assignment in UNIT III	19/9/16					
UNIT-IV: SOCIAL ISSUES AND ENVIRONMENT							
36	From unsustainable to sustainable development	23/9/16				1,2,3,5,7	
37	Environmental and human health	24/9/16		2,3	1		
38	Resettlement and rehabilitation	26/9/16		2,3	1		
39	Tutorial-5	30/9/16		2,3	1		
40	Climate change: Global warming & Acid rains	01/10/16		2,3	1		
41	Ozone depletion & Nuclear accidents and holocaust	03/10/16		2,3	1		
42	Consumerism and waste products	07/10/16		2,3	1		
43	Tutorial -6	08/10/16		3	1,9		
UNIT-V: HUMAN POPULATION AND ENVIRONMENT							
44	Population growth and variations among nations, population explosion	17/10/16		2,3	1		1,2,3,5,7
45	Family welfare programs	21/10/16		2,3	1		
46	Tutorial-7	22/10/16		2,3	1		
47	Human rights and value education	24/10/16		2,3	1		
48	HIV/AIDS	28/10/16		3	1,9		
49	Women and child welfare programs	29/10/16		2,3	1		
50	Role of IT in Environmental management and human health	31/10/16		2,3	1		
51	Tutorial-8	31/10/16					
53	II MID EXAMINATIONS	1/11/16					

Signature of faculty

Signature of Course Coordinator

Signature of HOD

	Sub Name : DISCRETE MATHEMATICAL STRUCTURES Faculty Name: B.SHYAMALA Branch: CSE Class: II B.Tech Semester: I	Date: 20.06.2016 To 05.11.2016
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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	END Exams
8	Problems using software	Numerical treatment	
9	Self study	Design / Exercises	

Course Description:

The Discrete Mathematical Structures subject gives the ability to solve the large logical problems which applicable in research area. In this subject each unit gives different types of problems which applied in different areas. This subject covers mathematical logic for statement calculus and predicate calculus, normal forms, predicate logic, inference theory for statement calculus and predicate calculus, set theory on relations and function, algebraic structures, permutations, combinations, binomial, multinomial theorems, directed & undirected graphs, trees, spanning trees, its algorithms, minimum spanning trees, its algorithms, and solving recurrence relations with different procedures.

Course Key Points:


First unit covers Mathematical logic for Statement calculus and Predicate calculus, inference theory for Statement calculus and Predicate calculus, Normal forms equivalences and logical implications.

- Second unit deals about set theory in all relations and functions.
- Third unit covers the graph theory about its types, properties, algorithms, and coloring.
- Fourth unit covers algebraic structures and Combinatorics.
- Fifth unit deals with recurrence relations using generating functions and characteristic roots.

Outcomes:

All undergraduates will have

- ✓ An ability to apply knowledge of mathematical logic for computer science and engineering.
- ✓ An ability to identify, formulates, and solves engineering problems.
- ✓ By using the graph theory the person can easily understands the network topologies in real time applications.
- ✓ By using this subject the person get knowledge about the applications of discrete structures and computing, combinatorics, and graph theory.

	SYLLABUS	Date:
	Sub Name : DISCRETE MATHEMATICAL STRUCTURES Faculty Name: B.SHYAMALA Branch: CSE Class: II B.Tech Semester: I	20.06.2016 To 05.11.2016

UNIT I:

Mathematical Logic: Propositional Calculus: Statements and Notations, Connectives, Truth Tables, Tautologies, Equivalence of Formulas, Duality law, Tautological Implications, Normal Forms, Theory of Inference for Statement Calculus, **Consistency of Premises, Indirect Method of Proof. Predicate calculus:** Predicative Logic, Statement Functions, Variables and Quantifiers, Free & Bound Variables, Inference theory for predicate calculus.

UNIT II:

Set Theory: Introduction, Operations on Binary Sets, Principle of Inclusion and Exclusion

Relations: Properties of Binary Relations, Relation Matrix and Digraph, Operations on Relations, Partition and Covering, Transitive Closure, Equivalence, Compatibility and Partial Ordering Relations, Hasse Diagrams.

Functions: Bijective Functions, Composition of Functions, Inverse Functions, Permutation Functions, Recursive Functions

UNIT III:

Graph Theory: Basic Concepts of Graphs, Sub graphs, Matrix Representation of Graphs: Adjacency Matrices, Incidence Matrices, Isomorphic Graphs, Paths and Circuits, Eulerian and Hamiltonian Graphs, Multigraphs, (Problems and Theorems without proofs), Graph Theory II: Planar Graphs, Euler's Formula, Graph Colouring and Covering, Chromatic Number, (Problems and Theorems without proofs), Trees, Directed trees, Binary Trees, Decision Trees, Spanning Trees: Properties, Algorithms for Spanning trees and Minimum Spanning Tree.

UNIT IV:

Algebraic Structures: Algebraic Systems with one Binary Operation, Properties of Binary operations, Semi groups and Monoids: Homomorphism of Semi groups and Monoids, Groups: Abelian Group, Cosets, Subgroups (Definitions and Examples of all Structures), **Lattice:** Properties. Algebraic Systems with two Binary Operations: Rings. **Combinatorics:** Basic of Counting, Permutations, Derangements, Permutations with Repetition of Objects, Circular Permutations, Restricted Permutations, Combinations, Restricted Combinations, Pigeonhole Principle and its Application, Binomial Theorem, Binomial and Multinomial Coefficients.

UNIT V: Recurrence Relation: Generating Function of Sequences, Partial Fractions, Calculating Coefficient of Generating Functions, Recurrence Relations, Formulation as Recurrence Relations, Solving linear homogeneous recurrence Relations by substitution, generating functions and The Method of Characteristic Roots. Solving Inhomogeneous Recurrence Relations

TEXT BOOKS:

1. Discrete Mathematical Structures with Applications to Computer Science, Tremblay, Manohar, TMH
2. Discrete Mathematics for Computer Scientists & Mathematicians, 2/e, Mott, Kandel, Baker, PHI

REFERENCE BOOKS:

1. Discrete Mathematics, S.Santha, Cengage
2. Discrete Mathematics with Applications, Thomas Koshy, Elsevier
3. Discrete Mathematics, 2/e, JK Sharma, Macmillan
4. Discrete Mathematics, Chandrasekaran, Umaparvathi, 2010, PHI
5. Discrete and Combinational Mathematics, 5/e, Ralph. P. Grimaldi, Ramana, Pearson
6. Elements of Discrete Mathematics, CL Liu, Mahapatra, TMH

No. of Periods	Date	Unit	Topic to be Covered	Teaching Aid
1.	20-06-2016	UNIT-I	Introduction	
2.	21-06-2016		Mathematical logic: Propositional Calculus, Statements and Notations	Black Board
3.	22-06-2015		Connectives, Truth Tables	Black Board
4.	24-06-2016		Tautologies, Equivalence of Formulas Duality law	Black Board
5.	25-06-2016		Tautological Implications	Black Board
6.	27-06-2016		Normal Forms	Black Board
7.	28-06-2016		Normal Forms	Black Board
8.	29-06-2016		Tutorial-I	
9.	30-06-2016		Theory of Inference for Statement Calculus	Black Board
10.	02-07-2016		Theory of Inference for Statement Calculus	Black Board
11.	04-07-2016		Theory of Inference for Statement Calculus	Black Board
12.	05-07-2016		Consistency of Premises Indirect Method of Proof	Black Board
13.	06-07-2016		Predicate calculus: Predicative Logic	Black Board
14.	08-07-2016		Statement Functions, Variables and Quantifiers Free & Bound Variables	Black Board
15.	11-07-2016		Inference theory for predicate calculus	Black Board
16.	12-07-2016		Tutorial-II	
17.	13-07-2016	UNIT-II	Set Theory: Introduction, Operations on Binary Sets	Black Board

18.	15-07-2016		Principle of Inclusion and Exclusion	Black Board
19.	16-07-2016		Relations: Properties of Binary Relations	Black Board
20.	18-07-2016		Relation Matrix and Digraph Operations on Relations	Black Board
21.	19-07-2016		Relation Matrix and Digraph Operations on Relations	Black Board
22.	20-07-2016		Partition and Covering, Transitive Closure	Black Board
23.	22-07-2016		Tutorial-III	
24.	23-07-2016		Equivalence Relation	Black Board
25.	25-07-2016		Compatibility Relation	Black Board
26.	26-07-2016		Partial Ordering Relation & Hasse Diagrams	Black Board
27.	27-07-2016		Partial Ordering Relation & Hasse Diagrams	Black Board
28.	29-08-2016		Functions: Bijective Functions	Black Board
29.	30-08-2016		Composition of Functions, Inverse Functions	Black Board
30.	01-08-2016		Permutation Functions, Recursive Functions	Black Board
31.	02-08-2016		Tutorial-IV	
32.	03-08-2016	UNIT-III	Basic Concepts of Graphs, Sub graphs	Black Board
33.	05-08-2016		Matrix Representation of Graphs	Black Board
34.	12-08-2016		Adjacency Matrices, Incidence Matrices	Black Board
35.	15-08-2016		Isomorphic Graphs, Paths and Circuits	Black Board
36.	17-08-2016		Eulerian Graphs, Hamiltonian Graphs	Black Board
37.	19-08-2016		Multigraphs, Planar Graphs, Euler's Formula	Black Board
38.	20-08-2016		Graph Colouring and Covering, Chromatic Number	Black Board
39.	22-08-2016		Trees, Directed trees	Black Board
40.	23-08-2016		Binary Trees, Decision Trees	Black Board
41.	24-08-2016		Spanning Trees: Properties	Black Board

42.	26-08-2016		Algorithms for Spanning trees and Minimum Spanning Trees	Black Board
43.	27-08-2016		Algorithms for Spanning trees and Minimum Spanning Trees	Black Board
44.	29-08-2016	UNIT-IV	Algebraic Systems with one Binary Operation	Black Board
45.	30-08-2016		Properties of Binary operations, Semi groups and Monoids	Black Board
46.	31-08-2016		Homomorphism of Semi groups and Monoids, Groups	Black Board
47.	02-09-2016		Abelian Group, Cosets, Subgroups	Black Board
48.	03-09-2016		Lattice: Properties, Algebraic Systems with two Binary Operations: Rings	Black Board
49.	05-09-2016		Basic of Counting, Permutations, Derangements	Black Board
50.	06-09-2016		Permutations with Repetition of Objects	Black Board
51.	07-09-2016		Circular Permutations, Restricted Permutations	Black Board
52.	09-09-2016		Combinations, Restricted Combinations	Black Board
53.	10-09-2016		Pigeonhole Principle and its Application	Black Board
54.	12-09-2016	UNIT-V	Binomial Theorem, Binomial and Multinomial Coefficients	Black Board
55.	15-09-2016		Generating Functions of Permutations and Combinations	Black Board
56.	13-09-2016		The Principles of Inclusion – Exclusion	Black Board
57.	14-09-2016		Generating Function of Sequences, Partial Fractions	Black Board
58.	17-09-2016		Generating Function of Sequences, Partial Fractions	Black Board
59.	20-09-2016		Calculating Coefficient of Generating Functions	Black Board
60.	01-10-2016		Calculating Coefficient of Generating Functions	Black Board
61.	03-10-2016		Recurrence Relations, Formulation as Recurrence Relations	Black Board

62.	04-10-2016		Solving linear homogeneous recurrence Relations by substitution	Black Board
63.	05-10-2016		Generating functions and The Method of Characteristic Roots	Black Board
64.	07-10-2016		Solving Inhomogeneous Recurrence Relations	Black Board
65.	17-10-2016		Solving Inhomogeneous Recurrence Relations	Black Board
66.	18-10-2016	Content Beyond syllabus	Rules of Inference and Automatic Theorem Proving for Statement calculus	Black Board
67.	19-10-2016	Content Beyond syllabus	DFS, BFS algorithms	Black Board
68.	20-10-2016	Content Beyond syllabus	Polish theorem	Black Board
69.	25-10-2016	Content Beyond syllabus	Content Beyond syllabus	Black Board
70.	26-10-2016	Revision	UNIT-I	Black Board
71.	27-10-2016	Revision	UNIT-II	Black Board
72.	29-10-2016	Revision	UNIT-III	Black Board
73.	31-10-2016	Revision	UNIT-IV	Black Board
74.	01-11-2016	Revision	UNIT-V	Black Board
75.	02-11-2016	Revision	UNIT-V	Black Board

	Prepared by	Approved by
Signature		
Name	Mr. M.Naveen	HOD/CSE
Designation	Asst.Professor/CSE	Professor
Date		



LESSON PLAN

Sub Name : DISCRETE MATHEMATICAL STRUCTURES

Faculty Name: M.Naveen

Branch: CSE-B

Class: II B.Tech

Semester: I

Date:

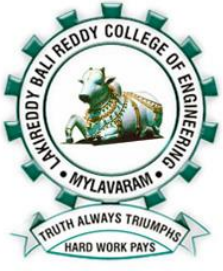
20.06.2016

To 05.11.2016

No. of Periods	Date	Unit	Topic to be Covered	Teaching Aid
1.	20-06-2016	UNIT-I	Introduction	
2.	21-06-2016		Mathematical logic: Propositional Calculus, Statements and Notations	Black Board
3.	22-06-2015		Connectives, Truth Tables	Black Board
4.	24-06-2016		Tautologies, Equivalence of Formulas Duality law	Black Board
5.	25-06-2016		Tautological Implications	Black Board
6.	27-06-2016		Normal Forms	Black Board
7.	28-06-2016		Normal Forms	Black Board
8.	29-06-2016		Tutorial-I	
9.	30-06-2016		Theory of Inference for Statement Calculus	Black Board
10.	02-07-2016		Theory of Inference for Statement Calculus	Black Board
11.	04-07-2016		Theory of Inference for Statement Calculus	Black Board
12.	05-07-2016		Consistency of Premises Indirect Method of Proof	Black Board
13.	06-07-2016		Predicate calculus: Predicative Logic	Black Board
14.	08-07-2016		Statement Functions, Variables and Quantifiers Free & Bound Variables	Black Board

15.	11-07-2016		Inference theory for predicate calculus	Black Board
16.	12-07-2016		Tutorial-II	
17.	13-07-2016	UNIT-II	Set Theory: Introduction, Operations on Binary Sets	Black Board
18.	15-07-2016		Principle of Inclusion and Exclusion	Black Board
19.	16-07-2016		Relations: Properties of Binary Relations	Black Board
20.	18-07-2016		Relation Matrix and Digraph Operations on Relations	Black Board
21.	19-07-2016		Relation Matrix and Digraph Operations on Relations	Black Board
22.	20-07-2016		Partition and Covering, Transitive Closure	Black Board
23.	22-07-2016		Equivalence Relation	Black Board
24.	23-07-2016		Compatibility Relation	Black Board
25.	25-07-2016		Partial Ordering Relation & Hasse Diagrams	Black Board
26.	26-07-2016		Functions: Bijective Functions	Black Board
27.	27-07-2016		Composition of Functions, Inverse Functions	Black Board
28.	29-08-2016		Permutation Functions, Recursive Functions	Black Board
29.	30-08-2016		Tutorial-III ,Tutorial-IV	
30.	01-08-2016	UNIT-III	Basic Concepts of Graphs, Sub graphs	Black Board
31.	02-08-2016		Matrix Representation of Graphs	Black Board
32.	03-08-2016		Adjacency Matrices, Incidence Matrices	Black Board
33.	05-08-2016		Isomorphic Graphs, Paths and Circuits	Black Board
34.	12-08-2016		Eulerian Graphs, Hamiltonian Graphs	Black Board
35.	15-08-2016		Multigraphs, Planar Graphs, Euler's Formula	Black Board
36.	17-08-2016		Graph Colouring and Covering, Chromatic Number	Black Board
37.	19-08-2016		Trees, Directed trees	Black Board
38.	20-08-2016		Binary Trees, Decision Trees	Black Board
39.	22-08-2016		Spanning Trees: Properties	Black Board

40.	23-08-2016		Algorithms for Spanning trees and Minimum Spanning Trees	Black Board
41.	24-08-2016		Algorithms for Spanning trees and Minimum Spanning Trees	Black Board
42.	26-08-2016	UNIT-IV	Algebraic Systems with one Binary Operation	Black Board
43.	27-08-2016		Properties of Binary operations, Semi groups and Monoids	Black Board
44.	29-08-2016		Homomorphism of Semi groups and Monoids, Groups	Black Board
45.	30-08-2016		Abelian Group, Cosets, Subgroups	Black Board
46.	31-08-2016		Lattice: Properties, Algebraic Systems with two Binary Operations: Rings	Black Board
47.	02-09-2016		Basic of Counting, Permutations, Derangements	Black Board
48.	03-09-2016		Permutations with Repetition of Objects	Black Board
49.	05-09-2016		Circular Permutations, Restricted Permutations	Black Board
50.	06-09-2016		Combinations, Restricted Combinations	Black Board
51.	07-09-2016		Pigeonhole Principle and its Application	Black Board
52.	09-09-2016	UNIT-V	Binomial Theorem, Binomial and Multinomial Coefficients	Black Board
53.	10-09-2016		Generating Functions of Permutations and Combinations	Black Board
54.	12-09-2016		The Principles of Inclusion – Exclusion	Black Board
55.	15-09-2016		Generating Function of Sequences, Partial Fractions	Black Board
56.	13-09-2016		Generating Function of Sequences, Partial Fractions	Black Board
57.	14-09-2016		Calculating Coefficient of Generating Functions	Black Board
58.	17-09-2016		Calculating Coefficient of Generating Functions	Black Board
59.	20-09-2016		Recurrence Relations, Formulation as Recurrence Relations	Black Board

		SYLLABUS			Date:
		Subject Name : FOSS LAB (L148) Faculty Name: SK. Johny Basha Branch: CSE Class: II B.Tech III SEM Section: A & B			20-06-16 To 02-11-16
60.	10-10-2016		Solving linear homogeneous recurrence Relations by substitution	Black Board	
61.	12-10-2016		Generating functions and The Method of Characteristic Roots	Black Board	
62.	15-10-2016		Solving Inhomogeneous Recurrence Relations	Black Board	
63.	18-10-2016		Solving Inhomogeneous Recurrence Relations	Black Board	
64.	20-10-2016	Content Beyond syllabus	Rules of Inference and Automatic Theorem Proving for Statement calculus	Black Board	
65.	24-10-2016	Content Beyond syllabus	DFS, BFS algorithms	Black Board	
66.	26-10-2016	Content Beyond syllabus	Polish theorem	Black Board	
67.	29-10-2016	Revision	UNIT-I & II	Black Board	
68.	31-10-2016	Revision	UNIT-III	Black Board	
69.	01-11-2016	Revision	UNIT-IV	Black Board	
70.	02-11-2016	Revision	UNIT-V	Black Board	
71.	29-10-2016	Revision	UNIT-V	Black Board	

Week – 1:

Session - 1

- a) Log into the system.

- b) Use vi editor to create a file called myfile.txt which contains some text.
- c) Correct typing errors during creation.
- d) Save the file.
- e) Logout of the system

Session - 2

- a) Log into the system
- b) Open the file created in session 1
- c) Add some text
- d) Change some text
- e) Delete some text
- f) Save the Changes
- g) Logout of the system.

Week – 2:

- a) Log into the system
- b) Use the cat command to create a file containing the following data. Call it mytable use tabs to separate the fields.

1425	Ravi	15.65
4320	Ramu	26.27
6830	Sita	36.15
1450	Raju	21.86

- c) Use the cat command to display the file, mytable.
- d) Use the vi command to correct any errors in the file, mytable.

- e) Use the sort command to sort the file mytable according to the first field. Call the sorted file my table (same name).
- f) Print the file mytable.
- g) Use the cut and paste commands to swap fields 2 and 3 of mytable. Call it my table (same name)
- h) Print the new file, mytable
- i) Logout of the system.

Week – 3:

Session - 1

- a) Login to the system
- b) Use the appropriate command to determine your login shell
- c) Use the /etc/passwd file to verify the result of step b.
- d) Use the who command and redirect the result to a file called myfile1. Use the more command to see the contents of myfile1.
- e) Use the date and who commands in sequence (in one line) such that the output of date will display on the screen and the output of who will be redirected to a file called myfile2. Use the more command to check the contents of myfile2.

Session - 2

- a) Write a sed command that deletes the first character in each line in a file.
- b) Write a sed command that deletes the character before the last character in each line in a file.
- c) Write a sed command that swaps the first and second words in each line in a file.

Week – 4:

- a) Pipe your /etc/passwd file to awk, and print out the home directory of each user.
- b) Develop an interactive grep script that asks for a word and a file name and then tells how many lines contain that word.

- c) Repeat
- d) Part using awk.

Week – 5:

- a) Write a shell script that takes a command –line argument and reports on whether it is directory, a file, or something else.
- b) Write a shell script that accepts one or more file name as arguments and converts all of them to uppercase, provided they exist in the current directory.
- c) Write a shell script that determines the period for which a specified user is working on the system.

Week – 6:

- a) Write a shell script that accepts a file name starting and ending line numbers as arguments and displays all the lines between the given line numbers.
- b) Write a shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it.

Week – 7:

- a) Write a shell script that computes the gross salary of a employee according to the following rules:
 - i) If basic salary is < 1500 then HRA =10% of the basic and DA =90% of the basic.
 - ii) If basic salary is ≥ 1500 then HRA =Rs500 and DA=98% of the basic

The basic salary is entered interactively through the key board.

- b) Write a shell script that accepts two integers as its arguments and computers the value of first number raised to the power of the second number.

Week – 8:

- a) Write an interactive file-handling shell program. Let it offer the user the choice of copying, removing, renaming, or linking files. Once the user has made a choice, have the program ask the user for the necessary information, such as the file name, new name and so on.
- b) Write shell script that takes a login name as command – line argument and reports when that person logs in
- c) Write a shell script which receives two file names as arguments. It should check whether the two file contents are same or not. If they are same then second file should be deleted.

Week – 9:

- a) Write a shell script that displays a list of all the files in the current directory to which the user has read, write and execute permissions.
- b) Develop an interactive script that ask for a word and a file name and then tells how many times that word occurred in the file.
- c) Write a shell script to perform the following string operations:
 - i) To extract a sub-string from a given string.
 - ii) To find the length of a given string.

Week – 10:

Write a C program that takes one or more file or directory names as command line input and reports the following information on the file:

- i) File type
- ii) Number of links
- iii) Read, write and execute permissions
- iv) Time of last access

(Note : Use stat/fstat system calls)

Week – 11:

Write C programs that simulate the following unix commands:

a) mv

b) cp


(Use system calls)

Write a C program that simulates ls Command

(Use system calls / directory API)

Week – 12:

Programs on R- Tool, Octave, SCI Lab.

LESSON PLAN				
	Sub. Name : FOSS LAB (L148) Faculty Name: SK. Johny Basha Branch: CSE Class: II B.Tech III SEM Section: A			Date: 20-06-16 To 05-11-16
	No. of Periods	Tentative Date	Actual Date	Lab Cycles
1.	20/06/2016		Basics about UNIX	
2.	27/06/2016		UNIX Simple Commands	
3.	04/07/2016		WEEK – 1	
4.	11/07/2016		WEEK – 2	
5.	18/07/2016		WEEK – 3	
6.	25/07/2016		WEEK – 4	
7.	01/08/2016		WEEK – 5	
8.	08/08/2016		MID – 1 EXAMS	
9.	22/08/2016		WEEK – 6	
10.	29/08/2016		WEEK – 7	
11.	12/09/2016		WEEK – 8	
12.	19/09/2016		WEEK – 9	

13.	26/09/2016		WEEK – 10	
14.	03/10/2016		WEEK – 11	
15.	17/10/2016		WEEK – 12 (R – Tool and Octave)	
16.	24/10/2016		WEEK – 12 (PHP as WEEK - 13)	
17.	31/10/2016		INTERNAL EXAM	

LESSON PLAN				
		Date:		
		20-06-16 To 05-11-16		
		Sub. Name : FOSS LAB (L148) Faculty Name: SK. Johnny Basha Branch: CSE Class: II B.Tech III SEM Section: B		
No. of Periods	Tentative Date	Actual Date	Lab Cycles	Signature
1.	23/06/2016		Basics about UNIX	
2.	30/06/2016		UNIX Simple Commands	
3.	07/07/2016		Basic Commands for LAB	
4.	14/07/2016		WEEK – 1	
5.	21/07/2016		WEEK – 2	
6.	28/07/2016		WEEK – 3	
7.	04/08/2016		WEEK – 4	
8.	11/08/2016		MID – 1 EXAMS	
9.	18/08/2016		WEEK – 5	
10.	25/08/2016		WEEK – 6	
11.	01/09/2016		WEEK – 7	
12.	08/09/2016		WEEK – 8	
13.	15/09/2016		WEEK – 9	
14.	22/09/2016		WEEK – 10	
15.	29/09/2016		WEEK – 11	
16.	06/10/2016		WEEK – 12 (R – Tool)	


17.	13/10/2016		WEEK – 12 (Octave)	
18.	20/10/2016		WEEK – 12 (PHP)	
19.	27/10/2016		INTERNAL EXAM	
20.	04/11/2016		MID – 2 EXAMS	

RESOURCES USED:

TEXT BOOK:

- Sumitabha Das, Your UNIX - The Ultimate Guide, TMH Publications, 2001.
- M.G. Venkatesh Murthy, Introduction to UNIX & SHELL programming, Pearson Education.
- Sumitabha Das, UNIX Concepts and Applications, TMH Publications, 4th Edition.
- Gaham Glass& K. Ables, UNIX for Programmers and Users, Pearson Education, 3rd Edition.
- B.A. Forouzan & R.F. Giberg, Thomson, UNIX and Shell Programming.
- E. Foster – Johnson & Other, Beginning Shell Scripting, Wiley - India.
- N. B. Venkateswarlu, Advanced UNIX Programming, BS PUBLISHERS.

	Prepared by	Approved by
Signature		
Name	Mr. SK. Johnny Basha	Dr. N. Ravi Shankar
Designation	Asst. Professor, CSE Department	Professor, H.O.D of CSE.
Date		

	LESSON PLAN	Date:
	Subject : FREE OPEN SOURCE SOFTWARE Branch : CSE Semester : III Section : A	20-06-2016 To 05-11-2016

S253 – FREE OPEN SOURCE SOFTWARE

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

UNIT – I:

Introduction to UNIX:

The Unix Operating System, Architecture of Unix, Features of Unix, Unix Commands – PATH, man, echo, printf, script, passwd, uname, who, date, tty, stty, telnet, ftp.

Introduction to UNIX file system:

The File System Hierarchy, The Unix file system, Unix file system commands: pwd, cd, mkdir, ls, cp, mv, rm, cat, more, wc, lp, od, tar, zip, gzip. File attributes and ls, File Permissions: chmod, umask, file system and inode in file ownership.

UNIT- II:

Introduction to Shell:

The shell as process command, pattern matching, Escaping, Quoting, Redirection, Pipes, Tee, Command Substitution.

Shell Programming:

vi editor, Shell variables, Shell scripts: read , exit Conditional Statements : if, test, case, expr, sleep & wait Looping Statements : While and until looping-Examples

UNIT – III:

The Process: Process basics- init, ps, process creation mechanism, Process attributes, signals Running jobs control, at, batch, cron and crontab.

Filters: Simple Filters - pr, cmp, comm, diff, head, tail, cut, paste, sort, uniq, tr.

Filters using Regular Expressions:

Sample Database, grep, egrep, fgrep, Sed -line addressing, context addressing, text editing, and substitution.

UNIT – IV:

Programming with awk:

awk Preliminaries, print &printf statements, numbering processing, Variables and Expressions, Comparisons and logical operators, Begin and End Sections, Positional Parameters, Arrays, Built-in Variables, Decision and Looping statements, Functions.

UNIT-V:

Introduction to R-tool, Octava and SCI LAB, Introduction to PHP.

TEXT BOOK:

- Sumitabha Das, Your UNIX - The Ultimate Guide, TMH Publications, 2001.
- M.G. Venkatesh Murthy, Introduction to UNIX & SHELL programming, Pearson Education.
- Sumitabha Das, UNIX Concepts and Applications, TMH Publications, 4th Edition.
- Gaham Glass& K. Ables, UNIX for Programmers and Users, Pearson Education, 3rd Edition.
- B.A. Forouzan & R.F. Giberg, Thomson, UNIX and Shell Programming.
- E. Foster – Johnson & Other, Beginning Shell Scripting, Wiley - India.
- N. B. Venkateswarlu, Advanced UNIX Programming, BS PUBLISHERS.

PRE-REQUISITE:

- Knowledge of Operating Systems.

COURSE EDUCATIONAL OUTCOMES:

- Study the Open Source Application in the field of Pedagogy.
- To learn the efficiency of Open Source Software in the orientation of Information Literacy.
- To know about the usage of model in information literacy orient.

COURSE OUTCOMES:

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


CO-1: Describe and get used to the UNIX Operating System, understand the UNIX File System and its commands.

CO-2: Describe and write shell scripts in order to obtain basic shell programming skills.

CO-3: Describe and use the fundamental UNIX System Tools and Utilities.

CO-4: Describe and Develop awk scripts to obtain knowledge in regular expressions.

CO-5: Understands the usage of Open Source Technologies like R – Tool, SCI LAB, PHP etc.

	Lakireddy Bali Reddy College of Engineering	
	Department of CSE	
	Outcome Based Lesson Plan	
	Academic year : 2016-17	Course : Free Open Source Software
	Programme : B.Tech	Unit No. : 1 to 5
	Year & Sem : II & III	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 UNIX	21/6		2	1	1, 2, 7
2	Operating System Services	22/6		2	1	
3	Architecture of Unix	23/6		2	1	
4	Features of Unix	24/6		2	1	
5	Features of Unix	25/6		2	1	
6	Unix Commands	28/6		2	1	

7	PATH Variable and man Command	29/6		2	1	
8	echo command with examples	30/6		2	1	
9	printf, script, passwd commands	01/7		2	1,9	
10	uname, who, date commands	02/7		2	1.9	
11	tty, stty, telnet, ftp	05/7		2	1,9	
12	The File System Hierarchy	07/7		2	1	
13	The Unix file system	08/7		2	1	
14	pwd, cd, mkdir and rmdir commands	09/7		2	1,9	
15	ls, cp, mv, rm	12/7		2	1,9	
16	cut and paste commands	13/7		2	1,9	
17	cat, more, wc commands	14/7		2	1,9	
18	lp, od, tar, zip, gzip	15/7		2	1,9	
19	File attributes and its permissions	16/7		2	1,9	
20	chmod and umask with examples	19/7		2	1,9	
21	TUTORIAL – 1 & TEST - 1	20/7				3,4
UNIT - II						
22	Shell as Process Command	21/7		2	1	
23	Pattern Matching	22/7		3	1,9	
24	Escaping	23/7		3	1,9	
25	Quoting	26/7		2	1,9	
26	Redirection, Pipes	27/7		3	1,9	
27	Tee, Command Substitution	28/7		2	1,9	
28	vi editor	29/7		2	1,9	1, 2, 7
29	Shell variables, Shell Scripts: read, exit	30/7		3	1,9	
30	Conditional Statements : if, test, case	02/8		3	1,9	
31	expr ,sleep & wait	03/8		3	1,9	
32	Looping Statements : While and until looping - Examples	04/8		3	1,9	
33	Examples	05/8		3	9	
34	TUTORIAL – 2 & TEST - 2	06/8				3,4

35	MID – I Exams	09/8				5
36		10/8				
37		11/8				
UNIT - III						
38	The Process: Process basics	13/8		2	1	1, 2, 7
39	init, ps commands with examples	16/8		2	1,9	
40	The Process creation mechanism	17/8		2	1	
41	Process attributes	18/8		2	1	
42	Signals Running jobs control	19/8		2	1	
43	at, batch	20/8		2	1,9	
44	cron and crontab	23/8		2	1,9	
45	Filters: Simple Filters	24/8		2	1,9	
46	pr, cmp, comm, diff	26/8		2	1,9	
47	head, tail commands with examples	27/8		2,3	1,9	
48	cut, paste commands with examples	30/8		2,3	1,9	
49	sort, uniq, tr commands with examples	31/8		2,3	1,9	
	Filters using Regular Expressions:					
50	Sample Database	01/9		2	1	
51	grep	02/9		2	1,9	
52	egrep, fgrep	03/9		2	1,9	
53	Sed -line addressing	06/9		2	1,9	
54	Context addressing, Text editing	07/9		2	1,9	
55	Substitution	08/9		2	1,9	
56	TUTORIAL – 3 & TEST - 3	09/9				3, 4
UNIT - IV						
57	Programming with awk	10/9		2	1	1, 2, 7
58	awk Preliminaries	13/9		2	1	
59	print &printf statements	14/9		2	1,9	
60	Expressions	15/9		2	1,9	
61	Comparison Operators	16/9		2,3	1,9	

62	Logical Operators	17/9		2,3	1,9	
63	Positional Parameters	20/9		2	1,9	
64	Arrays – Declarations	21/9		2	1,9	
65	Arrays – Examples	22/9		2,3	1,9	
66	Built-in Variables	23/9		2	1,9	
67	Examples on Built-in variables	24/9		3	9	
68	Decision statements	27/9		2,3	1,9	
69	Looping statements	28/9		2,3	1,9	
70	Looping statements	29/9		2,3	1,9	
71	Functions	30/9		2,3	1,9	
72	TUTORIAL – 4 & TEST - 4	01/10				3, 4
UNIT - V						
73	Introduction to R-tool	04/10		2	1	
74	Applications of R-tool	05/10		2	1	
75	Octave – History & Development	06/10		2	1	
76	Octave – Technical Details	07/10		2	1	
77	Features of Octave	08/10		2	1	
78	SCI LAB	18/10		2	1	
79	Installation Process on Different OS	19/10		2	1,6	
80	Basic Elements of SCI LAB	20/10		2	1	
81	Introduction to PHP	21/10		2	1	1, 2, 7
82	PHP Features	22/10		2	1,9	
83	PHP Data Types	25/10		2,3	1,9	
84	PHP Operators	26/10		2,3	1,9	
85	PHP Basic Examples	27/10		2,3	1,9	
86	PHP Decision Statements	28/10		2,3	1,9	
87	PHP Looping Statements	29/10		2,3	1,9	
88	Arrays in PHP	01/11		2,3	1,9	
89	TUTORIAL – 5 & TEST - 5	02/11				3, 4
90		03/11				

91	MID – II Exams	04/11				5
92		05/11				

RESOURCES USED:

TEXT BOOK:

- Sumitabha Das, Your UNIX - The Ultimate Guide, TMH Publications, 2001.
- M.G. Venkatesh Murthy, Introduction to UNIX & SHELL programming, Pearson Education.
- Sumitabha Das, UNIX Concepts and Applications, TMH Publications, 4th Edition.
- Gaham Glass& K. Ables, UNIX for Programmers and Users, Pearson Education, 3rd Edition.
- B.A. Forouzan & R.F. Giberg, Thomson, UNIX and Shell Programming.
- E. Foster – Johnson & Other, Beginning Shell Scripting, Wiley - India.
- N. B. Venkateswarlu, Advanced UNIX Programming, BS PUBLISHERS.

ASSESSMENT SUMMARY:


Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments, Quiz, Tutorials etc.	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	x							L									
	II		x						L									
	III			x					L		M							
	IV				x				L									
	V					x			L		M							

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

Name	Instructor	Head of the Department
	SK. Johnny Basha	Dr. N. Ravi Shankar
Signature		

	LESSON PLAN	Date:
	Subject : FREE OPEN SOURCE SOFTWARE Branch : CSE Semester : III Section : B	20-06-2016 To 05-11-2016

S253 – FREE OPEN SOURCE SOFTWARE

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

UNIT – I:

Introduction to UNIX:

The Unix Operating System, Architecture of Unix, Features of Unix, Unix Commands – PATH, man, echo, printf, script, passwd, uname, who, date, tty, stty, telnet, ftp.

Introduction to UNIX file system:

The File System Hierarchy, The Unix file system, Unix file system commands: pwd, cd, mkdir, ls, cp, mv, rm, cat, more, wc, lp, od, tar, zip, gzip. File attributes and ls, File Permissions: chmod, umask, file system and inode in file ownership.

UNIT- II:

Introduction to Shell:

The shell as process command, pattern matching, Escaping, Quoting, Redirection, Pipes, Tee, Command Substitution.

Shell Programming:

vi editor, Shell variables, Shell scripts: read , exit Conditional Statements : if, test, case, expr, sleep & wait Looping Statements : While and until looping-Examples

UNIT – III:

The Process: Process basics- init, ps, process creation mechanism, Process attributes, signals Running jobs control, at, batch, cron and crontab.

Filters: Simple Filters - pr, cmp, comm, diff, head, tail, cut, paste, sort, uniq, tr.

Filters using Regular Expressions:

Sample Database, grep, egrep, fgrep, Sed -line addressing, context addressing, text editing, and substitution.

UNIT – IV:

Programming with awk:

awk Preliminaries, print &printf statements, numbering processing, Variables and Expressions, Comparisons and logical operators, Begin and End Sections, Positional Parameters, Arrays, Built-in Variables, Decision and Looping statements, Functions.

UNIT-V:

Introduction to R-tool, Octava and SCI LAB, Introduction to PHP.

TEXT BOOK:

- Sumitabha Das, Your UNIX - The Ultimate Guide, TMH Publications, 2001.
- M.G. Venkatesh Murthy, Introduction to UNIX & SHELL programming, Pearson Education.
- Sumitabha Das, UNIX Concepts and Applications, TMH Publications, 4th Edition.
- Gaham Glass& K. Ables, UNIX for Programmers and Users, Pearson Education, 3rd Edition.
- B.A. Forouzan & R.F. Giberg, Thomson, UNIX and Shell Programming.
- E. Foster – Johnson & Other, Beginning Shell Scripting, Wiley - India.
- N. B. Venkateswarlu, Advanced UNIX Programming, BS PUBLISHERS.

PRE-REQUISITE:

- Knowledge of Operating Systems.

COURSE EDUCATIONAL OUTCOMES:

- Study the Open Source Application in the field of Pedagogy.
- To learn the efficiency of Open Source Software in the orientation of Information Literacy.
- To know about the usage of model in information literacy orient.

COURSE OUTCOMES:

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

CO-1: Describe and get used to the UNIX Operating System, understand the UNIX File System and its commands.

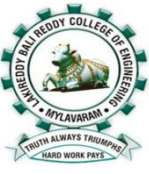
CO-2: Describe and write shell scripts in order to obtain basic shell programming skills.

CO-3: Describe and use the fundamental UNIX System Tools and Utilities.

CO-4: Describe and Develop awk scripts to obtain knowledge in regular expressions.

CO-5: Understands the usage of Open Source Technologies like R – Tool, SCI LAB, PHP etc.

	Lakireddy Bali Reddy College of Engineering
	Department of CSE
	Outcome Based Lesson Plan

	Academic year : 2016-17	Course : Free Open Source Software
	Programme : B.Tech	Unit No. : 1 to 5
	Year & Sem : II & III	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						
1	Introduction to UNIX	20/6/16		2	1	1, 2, 7
2	Operating System Services	21/6/16		2	1	
3	Architecture of Unix	23/6/16		2	1	
4	Features of Unix	24/6/16		2	1	
5	Features of Unix	25/6/16		2	1	
6	Unix Commands	27/6/16		2	1	
7	PATH Variable and man Command	28/6/16		2	1	
8	echo command with examples	30/6/16		2	1	

9	printf, script, passwd commands	01/7/16		2	1,9	
10	uname, who, date commands	02/7/16		2	1,9	
11	tty, stty, telnet, ftp	04/7/16		2	1,9	
12	The File System Hierarchy	05/7/16		2	1	
13		07/7/16		2	1,9	
14	The Unix file system	08/7/16		2	1	
15	pwd, cd, mkdir and rmdir commands	09/7/16		2	1,9	
16	ls, cp, mv, rm	11/7/16		2	1,9	
17	cut and paste commands	12/7/16		2	1,9	
18	cat, more, wc commands	14/7/16		2	1,9	
19	lp, od, tar, zip, gzip	15/7/16		2	1,9	
20	File attributes and its permissions	16/7/16		2	1,9	
21	chmod and umask with examples	18/7/16		2	1,9	
22	TUTORIAL – 1 & TEST - 1	19/7/16				3,4
UNIT – II						
23	Shell as Process Command	21/7/16		2	1	
24	Pattern Matching	22/7/16		3	1,9	
25	Escaping	23/7/16		3	1,9	
26	Quoting	25/7/16		2	1,9	
27	Redirection, Pipes	26/7/16		3	1,9	
28	Tee, Command Substitution	28/7/16		2	1,9	
29	vi editor	29/7/16		2	1,9	1, 2, 7
30	Shell variables, Shell Scripts: read, exit	30/7/16		3	1,9	
31	Conditional Statements : if, test, case	01/8/16		3	1,9	
32	expr ,sleep & wait	02/8/16		3	1,9	
33	Looping Statements : While and until looping - Examples	04/8/16		3	1,9	
34	Examples	05/8/16		3	9	
35	TUTORIAL – 2 & TEST - 2	06/8/16				3,4
36	MID – I Exams	08/8/16				5

37		9/8/16				
38		11/8/16				
UNIT – III						
39	The Process: Process basics	13/8/16		2	1	1, 2, 7
40	init, ps commands with examples	16/8/16		2	1,9	
41	The Process creation mechanism	18/8/16		2	1	
42	Process attributes	19/8/16		2	1	
43	Signals Running jobs control	20/8/16		2	1	
44	at, batch	22/8/16		2	1,9	
45	cron and crontab	23/8/16		2	1,9	
46	Filters: Simple Filters	26/8/16		2	1,9	
47	pr, cmp, comm, diff	27/8/16		2	1,9	
48	head, tail commands with examples	29/8/16		2,3	1,9	
49	cut, paste commands with examples	30/8/16		2,3	1,9	
50	sort, uniq, tr commands with examples	01/9/16		2,3	1,9	
	Filters using Regular Expressions:					
51	Sample Database	02/9/16		2	1	
52	grep	03/9/16		2	1,9	
53	egrep, fgrep	06/9/16		2	1,9	
54	Sed -line addressing	08/9/16		2	1,9	
55	Context addressing, Text editing	09/9/16		2	1,9	
56	Substitution	10/9/16		2	1,9	
57	TUTORIAL – 3 & TEST - 3	13/9/16				
UNIT – IV						
58	Programming with awk	15/9/16		2	1	1, 2, 7
59	awk Preliminaries	16/9/16		2	1	
60	print &printf statements	17/9/16		2	1,9	
61	Expressions	19/9/16		2	1,9	
62	Comparison Operators	20/9/16		2,3	1,9	
63	Logical Operators	22/9/16		2,3	1,9	

64	Positional Parameters	23/9/16		2	1,9		
65	Arrays – Declarations	24/9/16		2	1,9		
66	Arrays – Examples	26/9/16		2,3	1,9		
67	Built-in Variables	27/9/16		2	1,9		
68	Examples on Built-in variables	29/9/16		3	9		
69	Decision statements	30/9/16		2,3	1,9		
70	Looping statements	01/10/16		2,3	1,9		
71	Looping statements	03/10/16		2,3	1,9		
72	Functions	04/10/16		2,3	1,9		1,2,7
73	TUTORIAL – 4 & TEST - 4	06/10/16					3, 4
UNIT – V							
74	Introduction to R-tool	07/10/16		2	1	1, 2, 7	
75	Applications of R-tool	08/10/16		2	1		
76	Octave – History & Development	17/10/16		2	1		
77	Octave – Technical Details	18/10/16		2	1		
78	Features of Octave	20/10/16		2	1		
79	SCI LAB	21/10/16		2	1		
80	Installation Process on Different OS	22/10/16		2	1,6		
81	Basic Elements of SCI LAB	24/10/16		2	1		
82	Introduction to PHP	25/10/16		2	1		
83	PHP Features, Data Types, Operators	27/10/16		2	1,9		
84	PHP Decision Statements	28/10/16					
85	PHP Looping Statements	29/10/16		2,3	1,9		
86	Arrays in PHP	01/11/16		2,3	1,9		
87	TUTORIAL – 5 & TEST - 5	02/11/16				3, 4	
88	MID – II Exams	03/11/16				5	
89		04/11/16					
90		05/11/16					

RESOURCES USED:

TEXT BOOK:

- Sumitabha Das, Your UNIX - The Ultimate Guide, TMH Publications, 2001.
- M.G. Venkatesh Murthy, Introduction to UNIX & SHELL programming, Pearson Education.
- Sumitabha Das, UNIX Concepts and Applications, TMH Publications, 4th Edition.
- Gaham Glass& K. Ables, UNIX for Programmers and Users, Pearson Education, 3rd Edition.
- B.A. Forouzan & R.F. Giberg, Thomson, UNIX and Shell Programming.
- E. Foster – Johnson & Other, Beginning Shell Scripting, Wiley - India.
- N. B. Venkateswarlu, Advanced UNIX Programming, BS PUBLISHERS.

ASSESSMENT SUMMARY:

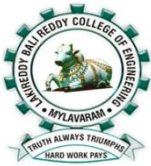
Assessment Task	Weightage (Marks)	Course Outcomes				
		CO1	CO2	CO3	CO4	CO5
Assignments, Quiz, Tutorials etc.	05					
Mid Exams	20					
Model Exams	--					
End Exam	75					
Attendance	--					
Total	100					

MAPPING COURSE OUTCOMES WITH PROGRAMME OUTCOMES:

Course Code	CO	Programme Outcomes											
		1	2	3	4	5	6	7	8	9	10	11	12
S253	I			L									
	II			L									
	III			L		M							
	IV			L									
	V			L		M							

Course Code	CO	Programme Specific Outcomes					
		1	2	3	4	5	6
S253	I	S					M
	II	S					M
	III	S					
	IV	S		L			M
	V	S	L				S

Name	Instructor	Head of the Department
	SK. Johny Basha	Dr. N. Ravi Shankar
Signature		



Lakireddy Balireddy College of Engineering College

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

LESSON PLAN

Subject : **Managerial Economics & Financial Analysis**

Academic Year : **2016-17**

Semester : **III**

Date: **20.06.2016**

Year : **II**

Section : **CSE-A**

To **05.11.2016**

S295 – MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS

Lecture: 5 Periods/week

Internal Marks

: 25

Tutorial : 1

External Marks

: 75

Credits: 3

External Examination

: 3 Hrs

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT –I:						
1	Introduction to Subject	20-06-2016		2	1	1,3,5
2	Unit 1: Introduction to managerial economics	21-06-2016		2	1	
3	Introduction to economics	22-06-2015		2	1	
4	Definitions of economics	23-06-2016		2	1	
5	Kinds of economics: micro and macro economics	25-06-2016		2	1	
6	Welfare economics	27-06-2016		2	1	
7	Definitions of managerial economics	28-06-2016		2	1	
8	Nature of managerial economics	29-06-2016		2	1	
9	Scope of managerial economics	30-06-2016		2	1	

10	Tutorial	02-07-2016		2	1,3	
11	Limitations of managerial economics	04-07-2016		2	1	
12	Demand analysis and demand determinants	05-07-2016		2	1	
13	Law demand and exceptions	06-07-2016		2	1	
14	Types of demand, Elasticity of demand and types : Price elasticity of demand	11-07-2016		2	1	
15	Income elasticity of demand	12-07-2016		2	1	
16	Cross elasticity of demand	13-07-2016		2	1	
17	Measurement of elasticity of demand	14-07-2016		2	1	
18	Significance of elasticity of demand	16-07-2016		2	1	
19	Tutorial	18-07-2016		2	1	
20	Demand forecasting and explain it's factors	19-07-2016		2	1	
21	Methods of demand forecasting (survey ,statistical ,expert opinion method, test marketing, judgment approach)	20-07-2016		2	1	
UNIT –II:						
22	UNIT – II Theory of Production and Cost Analysis	21-02-2016		2	1	
23	MRTS,	23-07-2016		2	1	1,3,5,7
24	Least Cost Combination of Inputs	25-07-2016		2	1	

25	Laws of Returns,	26-07-2016		2	1	
26	Internal and External Economies of Scale.	28-07-2016		2	1	
27	Tutorial	30-07-2016		2	1,3	
28	Cost Analysis: Cost concepts	01-08-2016		2	1	
29	Cost & output relationship in short run & long run,	02-08-2016		2	1	
30	Break-even Analysis (BEA)- Determination of Break-Even Point	03-08-2016		2	1	
31	Managerial Significance and limitations of BEA.	4-08-2016		2	1	
32	Simple problems	06-08-2016		2	1	
35	I MID EXAM	08-08-2016			5	
36	I MID EXAM	09-08-2016			5	
37	I MID EXAM	10-08-2016			5	
38	I MID EXAM	11-08-2016			5	
UNIT –III:						
39	UNIT - III Introduction to Markets & Pricing Policies:	16-08-2016		2	1	
40	Market structures: Types of competition	17-08-2016		2	1	1,3,5,7
41	Features of Perfect competition	18-08-2016		2	1	
42	Features of Monopoly	20-08-2016		2	1	

43	and Monopolistic Competition	22-08-2016		2	1
44	TUTORIAL	23-08-2016			
45	Price-Output Determination in case of Perfect Competition	24-08-2016		2	1
46	Price-Output Determination in case of Perfect Competition	25-08-2016			
47	Price-Output Determination in case of and Monopoly	27-08-2016		2	1
48	Price-Output Determination in case of and Monopoly	29-08-2016			
49	Objectives and Policies of Pricing- Methods of Pricing	30-08-2016		2	1
50	Method s pricing (cost plus pricing, marginal cost pricing Sealed bid pricing, going rate pricing, limit pricing,	31-08-2016		2	1
51	Method s pricing (cost plus pricing, marginal cost pricing Sealed bid pricing, going rate pricing, limit pricing,	01-09-2016			
52	Market skimming pricing, penetration pricing two part pricing, block pricing	03-09-2016		2	1
53	Tutorial	05-09-2016		2	1
UNIT –IV:					
54	Capital and Capital Budgeting: Capital and its significance,	07-09-2016		2	1
55	Types of Capital,	08-09-2016		2	1
56	Estimation of Fixed and Working capital requirements,	10-09-2016		2	1
57	Components of working capital &	12-09-2016		2	1
58	Factors determining the need of working capital.	13-09-2016		2	1

59	Methods and sources of raising finance.	14-09-2016		2	1	
60	Nature and scope of capital budgeting,	15-09-2016		2	1	
61	features of capital budgeting proposals,	17-09-2016		2	1	
62	Methods of Capital Budgeting: Payback Method,	13-09-2016		2	1	1,3,5,7
63	Accounting Rate of Return (ARR)	14-09-2016		2	1	
64	and Net Present Value Method	15-09-2016		2	1	
65	Profitability index	22-09-2016		2	1	
66	Internal rate of return	24-09-2016		2	1	
67	Problems payback period	26-09-2016		2	1	1,3,5,7
68	Problems of ARR ,Problems of NPV	27-09-2016		2	1	
69	Problems of ARR ,Problems of NPV	28-09-2016		2	1	
70	Problems of ARR ,Problems of NPV	29-09-2016		2	1	
71	Problem Profitability index, Problems of IRR	01-10-2016		2	1	
72	Tutorial	03-10-2016		2	1	

73	UNIT – V Introduction to Financial Accounting:	04-10-2016		2	1	1,3,5,7
74	Double entry system	05-10-2016		2	1	
75	Book keeping	06-10-2016		2	1	
76	Journal, Ledger, Problems	07-10-2016		2	1	
77	Journal, Ledger, Problems	17-10-2016				
78	Trial Balance- Final Accounts with simple adjustments.	18-10-2016		2	1	
79	Problems	19-10-2016		2	1	
80	Problems	20-10-2016		2	1	
81	Problems	22-10-2016				
82	Problems	24-10-2016				
83	TUTORAIL	25-10-2016		2	1	
84	Financial Analysis through ratios: Importance, types	26-10-2016		2	1	
85	Financial Analysis through ratios: Importance, types	27-10-2016				
86	Liquidity Ratios, Activity Ratios, Capital structure Ratios and Profitability ratios	29-10-2016		2	1	
88	Problems for liquidity ratios	30-10-2016		2	1	
89	Financial Analysis through ratios: Importance, types	31-10-2016		2	1	
90	Problems for activity ratios	01-11-2016		2	1	

91	Problems for capital structure ratios, Problems for profitability ratios	02-11- 2016		2	1	
92	II-MID EXAMS	03-11- 2016			5	
93	II-MID EXAMS	04-11- 2016			5	
94	II-MID EXAMS	05-11- 2016			5	

Signature of the faculty

D Kalyani

Head of the Department

Dr.A.ADISESHA REDDY



Lakireddy Balireddy College of Engineering College

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

LESSON PLAN

Subject : **Managerial Economics & Financial Analysis**

Academic Year : **2016-17**

Semester : **III**

Date: **20.06.2016**

Year : **II**

Section : **CSE-B**

To **05.11.2016**

S295 – MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS

Lecture: 5 Periods/week

Internal Marks

: 25

Tutorial : 1

External Marks

: 75

Credits: 3

External Examination

: 3 Hrs

S.NO	TOPIC TO BE COVERED	Date		TLP	DM	AM
		Tentative	Actual			
UNIT –I:						
1	Introduction to Subject	20-06-2016		2	1	1,3,5
2	Unit 1: Introduction to managerial economics	21-06-2016		2	1	
3	Introduction to economics	22-06-2015		2	1	
4	Definitions of economics	24-06-2016		2	1	
5	Kinds of economics: micro and macro economics	25-06-2016		2	1	
6	Welfare economics	27-06-2016		2	1	
7	Definitions of managerial economics	28-06-2016		2	1	
8	Nature of managerial economics	29-06-2016		2	1	
9	Scope of managerial economics	30-06-2016		2	1	

10	Tutorial	02-07-2016		2	1,3	
11	Limitations of managerial economics	04-07-2016		2	1	
12	Demand analysis and demand determinants	05-07-2016		2	1	
13	Law demand and exceptions	06-07-2016		2	1	
14	Types of demand, Elasticity of demand and types : Price elasticity of demand	08-07-2016		2	1	
15	Income elasticity of demand	11-07-2016		2	1	
16	Cross elasticity of demand	12-07-2016		2	1	
17	Measurement of elasticity of demand	13-07-2016		2	1	
18	Significance of elasticity of demand	15-07-2016		2	1	
19	Tutorial	16-07-2016		2	1	
20	Demand forecasting and explain it's factors	18-07-2016		2	1	
21	Methods of demand forecasting (survey ,statistical ,expert opinion method, test marketing, judgment approach)	19-07-2016		2	1	
UNIT –II:						
22	UNIT – II Theory of Production and Cost Analysis	20-02-2016		2	1	
23	MRTS,	22-07-2016		2	1	1,3,5,7
24	Least Cost Combination of Inputs	23-07-2016		2	1	

25	Laws of Returns,	25-07-2016		2	1	
26	Internal and External Economies of Scale.	26-07-2016		2	1	
27	Tutorial	27-07-2016		2	1,3	
28	Cost Analysis: Cost concepts	29-08-2016		2	1	
29	Cost & output relationship in short run & long run,	30-08-2016		2	1	
30	Break-even Analysis (BEA)- Determination of Break-Even Point	01-08-2016		2	1	
31	Managerial Significance and limitations of BEA.	02-08-2016		2	1	
32	Simple problems	03-08-2016		2	1	
33	Managerial Significance and limitations of BEA.	05-08-2016				
34	Simple problems	06-08-2016				
35	I MID EXAM	08-08-2016			5	
36	I MID EXAM	09-08-2016			5	
37	I MID EXAM	10-08-2016			5	
38	I MID EXAM	11-08-2016			5	
UNIT –III:						
39	UNIT - III Introduction to Markets & Pricing Policies:	12-08-2016		2	1	1,3,5,7
40	Market structures: Types of competition	15-08-2016		2	1	

41	Features of Perfect competition	17-08-2016		2	1
42	Features of Monopoly	19-08-2016		2	1
43	and Monopolistic Competition	20-08-2016		2	1
44	TUTORIAL	22-08-2016			
45	Price-Output Determination in case of Perfect Competition	23-08-2016		2	1
46	Price-Output Determination in case of Perfect Competition	24-08-2016			
47	Price-Output Determination in case of and Monopoly	26-08-2016		2	1
48	Price-Output Determination in case of and Monopoly	27-08-2016			
49	Objectives and Policies of Pricing- Methods of Pricing	29-08-2016		2	1
50	Method s pricing (cost plus pricing, marginal cost pricing Sealed bid pricing, going rate pricing, limit pricing,	30-08-2016		2	1
51	Method s pricing (cost plus pricing, marginal cost pricing Sealed bid pricing, going rate pricing, limit pricing,	31-08-2016			
52	Market skimming pricing, penetration pricing two part pricing, block pricing	02-09-2016		2	1
53	Tutorial	03-09-2016		2	1
UNIT –IV:					
54	Capital and Capital Budgeting: Capital and its significance,	05-09-2016		2	1
55	Types of Capital,	06-09-2016		2	1
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Signature of the faculty

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