



ARSD College, University of Delhi

Model Course Handout/Lesson Plan

Course Name : B.Sc. (Hons.) Electronics						
Semester	Course Code	Course Title	Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
I	32511104	Mathematics Foundation for Electronics (Practicals)	4	0	4	2
Teacher/Instructor(s)		Mr. Arun Kumar				
Session		2022-23				

Course Learning Outcomes:

At the end of this course, students will be able to

- CO1 Perform operations with various forms of complex numbers to solve equations
- CO2 Use mathematics as a tool for solving/modelling systems in electronics
- CO3 Prepare the technical report on the experiments carried.

List of Experiments:

1. Solution of First Order Differential Equations
2. Solution of Second Order homogeneous Differential Equations
3. Solution of Second Order non-homogeneous Differential Equations
4. To test convergence of a given series.
5. To test divergence of a given series.
6. Solution of linear system of equations using Gauss Elimination method.
7. Solution of linear system of equations using Gauss – Seidel method.
8. Solution of linear system of equations using L-U decomposition method.

Details of the Lab Course		
Session	Name of Experiment	Contact Hours
Experiments in hardware form		
1	Introduction and practice on simulator	24
2	Experiment 1: Solution of First Order Differential Equations.	4
3	Experiment 2: Solution of Second Order homogeneous Differential Equations.	4
4	Experiment 3: Solution of Second Order non-homogeneous Differential Equations.	4
5	Experiment 4: To test convergence of a given series.	4
6	Experiment 5: To test divergence of a given series.	4
7	Experiment 6: Solution of linear system of equations using Gauss Elimination method.	4
8	Experiment 7: Solution of linear system of equations using Gauss – Seidel method.	8

9	Experiment 8: Solution of linear system of equations using L-U decomposition method.	4
	Total	60

Suggested Books:

Sl. No.	Name of Authors/Books/Publishers	Year of Publication/Reprint
1	M. Morris Mano Digital System Design, Pearson Education Asia,(Fourth Edition)	2002
2	Thomas L. Flyod, Digital Fundamentals, Pearson Education Asia	1994
3	W. H. Gothmann, Digital Electronics: An Introduction To Theory And Practice, Prentice Hall of India	2000
4	R. L. Tokheim, Digital Principles, Schaum's Outline Series, Tata McGraw- Hill	1994
5	A Verilog HDL Primer – J. Bhasker, BSP, II Edition	2003
6	Verilog HDL-A guide to digital design and synthesis-Samir Palnitkar, Pearson, 2nd edition.	2003

Evaluation Scheme:

No.	Component	Duration	Marks
1.	Internal Assessment		25
	• Quiz/Viva		
	• Observation & Record		
	• Attendance		
	• Model Exam		
2.	End Semester Examination	3 hr	25