Techno India NJR Institute of Technology

Academic Administration of Techno NJR Institute

Syllabus Deployment

Name of Faculty: Mr. Chandra Prakash Jain Subject Code: 5EE4-24

Subject Name: System Prog. Lab SEM: V

Department: Department of Electrical Engineering (EE & EEE)

Total no. of Labs planned: 12

COURSE OUTCOMES HERE

At the end of this course students will be able to

1 Ability to express programming & simulation for engineering problems.
2 Ability to find importance of this software for Lab Experimentation.
3 Articulate importance of software's in research by simulation work.
4 In-depth knowledge of providing virtual instruments on LabVIEW Environment.
5 Ability to write basic mathematical ,electrical ,electronic problems in Matlab.
6 Ability to simulate basic electrical circuit in Simulink.

Lab No.	Topic
1	Basics of MATLAB matrices and vectors,
2	matrix and array operations, Saving and load-ing data,
3	plotting simple graphs, scripts and functions, Script files,
4	Function files, Global Variables, Loops, Branches, Control flow, Advanced data objects, Multi-dimensional matrices, Structures, Applications in linear algebra curve fitting and inter-polation.

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	Numerical integration, Ordinary differential equation. (All contents is to be covered with tutorial sheets)
5	Write a MATLAB program for designing Rheostat.
6	Idea about simulink, problems based on simulink. (All contents is to be covered with tutorial sheets)
7	Write a program to generate Machine Op- code table using two pass Assembler.
8	Single Phase Full Wave Diode Bridge Rectifier With LC Filter
9	Simulate Three phase Half wave diode rectifier with RL load.
10	Starting Of A 5 HP 240V DC Motor With A Three-Step Resistance Starter.
11	Simulate OC/SC test of 1-phase transformer.
12	Simulate Torque- speed characteristics of induction motor.

TEXT/REFERENCE BOOKS

1. MATLAB for Beginners: A Gentle Approach Book by Peter Issa Kattan
2. Physical Modeling in MATLAB Textbook by Allen B. Downey
3. MATLAB for Electrical Engineers and Technologists Book by Stephen P. Tubbs

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