

**LESSON PLAN**

NAME OF FACULTY : RINKU DHIMAN  
 DISCIPLINE : EEE  
 SEMESTER : 8th  
 SUBJECT : MODELLING AND SIMULATION  
 LESSON PLAN DURATION : 15 WEEKS (FROM JANUARY , 2018 TO APRIL, 2018)  
 WORK LOAD (LECTURE/PRACTICAL)PER WEEK (IN HOURS) :

5 LECTURE, 3 PRACTICAL

WEEK	THEORY		PRACTICAL	
	Lecture Day	Topic (Including Assignment/Test)	Practical Day	Topic
1st	I	Introduction: Systems Models and simulation, concept of model	1st	To develop a Program for Matrix n*n.
	II			
	III			
	IV			
	V			
2nd	I	Model classification	2nd	Add two Matrix.
	II	Model classification		
	III	Mathematical representation		
	IV	Mathematical representation		
	V	Mathematical representation		
3rd	I	Identification of systems	3rd	Multiplication of two Matrix.
	II	Identification of systems		
	III	Continuous and discrete		
	IV	Continuous and discrete		
	V	Static and Dynamic		
4th	I	Deterministic and stochastic systems.	4th	Find Inverse of Matrix.
	II	<b>Unit 1st test</b>		
	III	Discrete event systems: Introduction,		
	IV	Discrete event systems: Introduction,		
	V	Statistical model in simulation		
5th	I	Random number generation,	5th	Check stability by Routh Hurwitz Criteria.
	II	Method of generating random variables,		
	III	Method of generating random variables,		
	IV	Method of generating random variables,		
	V	Generating correlated random numbers.		
6th	I	Discrete random variates,	6th	Check stability by Jury Test.
	II	Discrete random variates,		
	III	Discrete random variates,		
	IV	Discrete random variates,		
	V	Single server systems.		
7th	I	Multiple server systems.	7th	Find Eigen value for given Matrix.
	II	Multiple server systems.		
	III	Queuing notation,		
	IV	Queuing notation,		
	V	<b>Unit 2nd test</b>		
8th	I	State space simulation techniques,	8th	Draw a circle for given radius use graphics.
	II	State space simulation techniques,		
	III	State space simulation techniques,		
	IV	Digital simulation languages,		
	V	Digital simulation languages,		
9th	I	Analog Simulation of linear systems,	9th	Draw a straight-line use graphics.
	II	Analog Simulation of linear systems,		
	III	Transfer function simulator		
	IV	Transfer function simulator		
	V	Time scaling		
10th	I	Simulation equations	10th	Find Eigen value for given Matrix.
	II	Simulation equations		
	III	Hybrid simulation.		
	IV	Short circuit and steady state		
	V	Stability studies.		
11th	I	Transmission parameters.	11th	To develop a program for Cramer's Rule
	II	Transmission parameters.		
	III	<b>Unit 3rd test</b>		
	IV	Matlab: Matlab environment,		
	V	Matlab: Matlab environment,		
12th	I	Matlab programming,	12th	To develop a program for Cramer's Rule
	II	Matlab programming,		
	III	Matlab programming,		
	IV	Matlab programming,		
	V	Matlab programming,		
13th	I	Simulation in Matlab,	13th	To develop a program for Cramer's Rule
	II	Simulation in Matlab,		
	III	Simulation in Matlab,		
	IV	Simulation in Matlab,		
	V	Simulation in Matlab,		
14th	I	Introduction to dynamic system simulation using SIMULINK,	14th	To develop a program for Cramer's Rule
	II	Introduction to dynamic system simulation using SIMULINK,		
	III	Dynamic system simulation using SIMULINK,.		
	IV	Dynamic system simulation using SIMULINK,.		
	V	Dynamic system simulation using SIMULINK,.		
15th	I	Modeling with matrices,	15th	To develop a program for Cramer's Rule
	II	Applications of simulink.		
	III	Applications of simulink.		
	IV	Applications of simulink.		
	V	<b>Unit-4 test</b>		