**LESSON PLAN: EEE-405-L MODELLING AND SIMULATION**

**Name of the Faculty: Er. POOJA MEHTA**

**Discipline:** Electrical and Electronics Engineering

**Semester:** 7th Semester

**Subject: : EEE-405-L MODELLING AND SIMULATION**

**Lesson Plan Duration:** 15 weeks

**Work Load (Lecture) per week (in hours):** Lectures-03

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| Week | Lecture Day | Syllabus |
| 1st | 1st | INTRODUCTION TO MODELLING AND SIMULATION |
| 2nd | SYSTEMS, MODELS AND SIMULATION |
| 3rd | CONCEPT OF MODEL, MODEL CLASSIFICATION |
| 2nd | 4th | MATHEMATICAL REPRESENTATION |
| 5th | IDENTIFICATION OF MODEL |
| 6th | CONTINUOUS AND DISCRETE MODEL |
| 3rd | 7th | STATIC AND DYNAMIC |
| 8th | DETERMINISTIC AND STOCHASTIC SYSTEMS |
| 9th | INTRODUCTION TO DISCRETE EVENT SYSTEMS |
| 4th | 10th | PROBLEMS ON PREVIOUS TOPICS |
| 11th | TEST |
| 12th | RANDOM NUMBER GENERATION |
| 5th | 13th | METHOD OF GENERATING RANDOM VARIABLES |
| 14th | DISCRETE RANDOM VARIATES |
| 15th | GENERATING CORRELATED RANDOM NUMBERS. |
| 6th | 16th | QUEUING MODELS: CHARACTERISTICS |
| 17th | QUEUING NOTATION |
| 18th | SINGLE SERVER AND MULTIPLE SERVER SYSTEMS. |
| 7th | 19th | STATE SPACE SIMULATION TECHNIQUES |
| 20th | DIGITAL SIMULATION LANGUAGES |
| 21st | ANALOG SIMULATION OF LINEAR SYSTEMS |
| 8th | 22nd | MAGNITUDE SCALING |
| 23rd | TIME SCALING |
| 24th | SIMULATION EQUATIONS |
| 9th | 25th | TRANSFER FUNCTION SIMULATOR |
| 26th | HYBRID SIMULATION |
| 27th | LOAD FLOW |
| 10th | 28th | SHORT CIRCUIT AND STEADY STATE STABILITY STUDIES |
| 29th | PROBLEMS ON PREVIOUS TOPICS |
| 30th | TEST |
| 11th | 31st | TRANSMISSION PARAMETERS |
| 32nd | INTRODUCTION TO MATLAB |
| 33rd | MATLAB ENVIRONMENT |
| 12th | 34th | MATLAB PROGRAMMING, |
| 35th | MATLAB MODELING |
| 36th | MATLAB MODELING WITH MATRICES |
| 13th | 37th | SIMULATION IN MATLAB |
| 38th | TEST |
| 39th | INTRODUCTION TO DYNAMIC SYSTEM SIMULATION USING SIMULINK |
| 14th | 40th | PACKAGING AND ENCAPSULATION |
| 41st | APPLICATIONS OF SIMULINK. |
| 42nd | ADVANTAGES |
| 15th | 43rd | PROBLREMS DISCUSSION |
| 44th | REVISION |