

Module Title:	Simulation -1
Module ID:	OPER 241
Prerequisite:	STAT 111
Level:	7
Credit Hours:	3 (3+0+1)

Module Description:

This course provides fundamental and practical concepts of computer simulation and modelling techniques and its role in engineering management problem solving. It covers such topics as models, model building and applications of simulation in many fields.

Module Aims:

This course provides fundamental and practical concepts of computer simulation and modelling techniques

Learning Outcomes:

At the end of this course, a student will be able to:

- Understand fundamental concepts of computer simulation and its role in engineering problem solving.
- Understand model-engineering problems.
- Appreciate the advantages of using simulation and modelling for taking decision in engineering problems.
- Understand fundamental concepts of discrete-event simulation
- List many software simulations.

List of Topics	No. of Weeks	Contact Hours
Chapter 1 : Introduction to simulation	3	9
Chapter 2 : History of simulation	2	6
Chapter 3 : Basic simulation modeling	3	9
Chapter 4 : Discrete-event simulation	3	9
Chapter 5 : Software Simulation	3	3

Textbook:

Simulation, Sheldon M.Ross, 5th Edition, Hardcover,2012 .