(Effective	e from the acad	G AND SIMULATION lemic year 2018 -2019)		
Course Code	SEMEST	ER – VI		
Number of Contact Hours/Week	18CS645	CIE Marks	40	
Total Number of Contact Hours	3:0:0	SEE Marks	60	
Town remoter of contact flours	40	Exam Hours	03	
Course Learning Objectives: This cour	CREDI'	IS -3		
Explain the basic system concep Discuss to being a six and a six a	1 and def	ill enable students to:		
Discuss techniques to model and Analyze a quetern and to the content of	t and definitions	of system;		
Analyze a system and to make we	to simulate vari	ous systems;		
Analyze a system and to make us Module 1	se of the informa	tion to improve the perfor	mance.	
				Contact
ntroduction: When simulation is the	appropriate to	1		Hours
Advantages and disadvantages of Simunifornment; Components of a system:	lation: Areas	of and when it is not ap	propriate,	08
nvironment; Components of a system; E Types of Models, Discrete-Event System	Discrete 1	application, Systems and	d system	
vnes of Models Disperse France	discrete and cont	inuous systems, Model of	a system.	
ypes of Models, Discrete-Event System, Lucuing systems. General Principles.	m Simulation Si	mulation examples: Sim	lation of	
ueuing systems. General Principles.		manples. Silli	nation of	
extbook 1: Ch. 1, 2, 3.1.1, 3.1.3				
BT: L1, L2, L3				
lodule 2				
tatistical Models in Simulation : Review odels, Discrete distributions. Continuous Conti	ew of terminals			
odels,Discrete distributions. Contin	ew of terminolog	gy and concepts, Useful s	tatistical	08
stributions.	uous distribution		impirical	
au idual (OHS)		Freeds, L	mpilital	
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Textbook 1: Ch. 11.4, 11.5, 10

RBT: L1, L2, L3

Course Outcomes: The student will be able to:

- Explain the system concept and apply functional modeling method to model the activities of a static
- Describe the behavior of a dynamic system and create an analogous model for a dynamic system;
- Simulate the operation of a dynamic system and make improvement according to the simulation

Question Paper Pattern:

- The question paper will have ten questions.
- Each full Question consisting of 20 marks
- There will be 2 full questions (with a maximum of four sub questions) from each module.
- Each full question will have sub questions covering all the topics under a module. The students will have to answer 5 full questions, selecting one full question from each module.

Textbooks:

1. Jerry Banks, John S. Carson II, Barry L. Nelson, David M. Nicol: Discrete-Event System Simulation, 5 th Edition, Pearson Education, 2010.

Reference Books:

- 1. Lawrence M. Leemis, Stephen K. Park: Discrete Event Simulation: A First Course, Pearson
- Averill M. Law: Simulation Modeling and Analysis, 4th Edition, Tata McGraw-Hill, 2007

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