بسم الله الرحمن الرحيم

Republic of Iraq

The Ministry Of Higher Education

& Scientific Research

University: Baghdad
College: Science for women
Department: computer science
Stage: third stage
Lecturer name: Ahmed Jameel
Qualification: M.Sc. in Applied Mathematics
Place of work: college of Science for women/ computer science

Syllabus Form

Instructor Name	Ahmed Jameel				
E-mail	Ahmed_jameel8@yahoo.com				
Course Title	Simulation and Modeling				
Course Coordinator					
Course Objectives	To get learned what is the simulation and what is the computer modeling and how to simulate the system of data with minimum acceptable of errors with different methods of random numbers generation.				
Course Description	First step is to illustrate the idea and the importance of simulation to the students, then enable the students to generate the random numbers, after that these random numbers will be used in latter subjects and to enable the students of formalize their own equation using some seeing data and ended with optimization				
Textbook	Elements of simulation, Byron J. T. Morgan, 2003.				
References	Simulation Modeling and Analysis, Averill M. Law, W. David Kelton.				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As(20%)	As(15%)	As(5%)	-	As(60%)
General Notes	Type here general notes regarding the course				

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Course Weekly Outline

Week	Date	Topes Covered	Lab. Experiment Assignments	Notes
1		**System, Models, Simulation**	**Collecting data**	
2		**Simulation definition**	**Manipulating data**	
3		**Simulation objectives and steps**	**Some operations on arrays**	
4		**Deterministic simulation**	**Reminder method**	
5		**Deterministic simulation**	**Practice**	
6		**How to program Simulation problems**	**Testing the random**	
7		**Random number generation**	**Basics in programming of random number generations**	
8		**Random number generation**	**Arithmetic method**	
9		**Arithmetic and geometric methods**	**Geometric method**	
10		**Random test**	**Fibonacci method**	
11		**Stochastic simulation**	**Basics of deterministic method**	
12		**Stochastic simulation**	**Water tank simulation**	
13		**Error definition**	**Shipping simulation**	
14		**Error measurement**	**Bakery simulation**	
15		**Introduction to Optimization**	**Optimization**	

Instructor Signature: **Dean Signature:**