

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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	Advanced Mathematics				
Course Coordinator					
Course Objectives	Enable students to comprehend applied numerical analysis by using Matlab and study differential equations.				
Course Description	It consists of two parts, the first part about the solutions of nonlinear differential equations and solving sets of equations by numerical solution and use Matlab ,second part about (first & second) order differential equations.				
Textbook	-Numerical Methods using Matlab ,4 th Edition ,John H. Mathews ,2004 -Differential Equations with Boundary Value Problems ,5 th Edition, Michael R. Cullen,2001				
References	Essential Matlab, by A.K. Barachandran, 2002. -Differential Equations with Boundary Value Problems ,5 th Edition, Michael R. Cullen,2001				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As(30%)	As(0%)	As(10%)	-	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		Introduction to differential equations		
2		Classification of differential equations		
3		Solution of differential equations of first order		
4		Solution of differential equations of first order		
5		Solution of differential equations of second order		
6		Solution of differential equations of second order		
7		Solution of initial value problems		
8		Solutions of boundary problems		
9		Solutions of boundary problems		
10		Applications of differential equations		
11		Non-homogenous differential equations		
12		Solution of non-homogenous differential equations		
13		Laplace transformation		
14		Inverse of Laplace transformation		
15		Solving differential equations using Laplace transforms		

Instructor Signature:

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