

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Republic of Iraq

The Ministry Of Higher Education  
& Scientific Research



University: Baghdad University  
College: College of Science for women  
Department: Computer Dept.  
Stage: First Stage/ Second Semester  
Lecturer name: Dr. Auras Khalid

Qualification: Ph.D in Mathematics & Computer Applications

Place of work: College of Science for women/ Computer Dept.

## Syllabus Form

Instructor Name	Dr. Auras Khalid				
E-mail	oras_hameed@yahoo.com				
Course Title	Mathematics 2				
Course Coordinator	Mathematics 2/111CS110				
Course Objectives	It studies the important mathematical rules of integration and vector analysis and many other applications in completion of the first course				
Course Description	1-study the different ways of solution for the mathematical equations 2-solve the integral equations using different methods 3-study the vector analysis and its rules and its applications 4-study the matrices and many other mathematical subjects				
Textbook	Calculus, Anton, Bivens and Davis, 7 <sup>th</sup> edition, 2002 Any other edition of calculus is necessary to understand the subjects of this stage of study.				
References					
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%		10%	-	60%
General Notes					

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## Course Weekly Outline

Week	Date	Topes Covered	Lab. Experiment Assignments	Notes
1		Matrices and its properties		
2		Solution of the system of linear equations by matrices		
3		The inverse of square matrices		
4		Determinants		
5		Integrations		
6		Integral rules for solving trigonometric functions		
7		Integral rules for solving exponential and logarithmic functions		
8		Integrals of the inverse of trigonometric functions		
9		Applications of Integrals of the inverse of trigonometric functions		
10		Multiple integrals		
11		Application of multiple integrals		
12		Vectors analysis		

13		Complex numbers		
14		Polar coordinates		
15		Applications of Polar coordinates		
16		Exam		

**Instructor Signature:**

**Dean Signature:**