

University : Shatt Al Arab University
College
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College
Department Name :Department of
Computer Science
Stage: First
Lecturer Name : Murtaja Ali Saree
Scientific Title : Assistant Professor
Qualification:



Republic of Iraq
The Ministry of Higher
Education and Scientific
Research
Supervision and Scientific
Evaluation Body

Weekly lesson schedule

Name	Murtaja Ali Saree				
E-mail address	murtaja.a.sari@sa-uc.edu.iq				
Title	Math				
Course Coordinator					
Course Objective	<ol style="list-style-type: none"> 1- Provide you with information to keep pace with the times of technological and scientific development. 2- Get used to making a decision by thinking logically by analyzing situations and problems. 3- Gain accuracy in expression and performance 				
Course Description	<ol style="list-style-type: none"> 1- Understands the requirements of the profession of science and ethical responsibility in addition to the need for lifelong learning and the ability to engage in it. 2- Enables the mathematical and basic sciences necessary to conduct analysis and design of systems. 3- Develops the student's ability to dialogue and discussion. 				
Course Description	<ul style="list-style-type: none"> • Thomas, Calculus by Anton, Bivens and Davis 				
References	<ul style="list-style-type: none"> • Calculus I. • Advanced Engineering Mathematics by Alan Jeffrey. • Basic Engineering Mathematics tutorials. 				
Course Assessment	Final Exam	Final Exam	Final Exam	Final Exam	Final Exam
	30%		10%	-	60%
General Notes					

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Week	Date	Topics Covered	Number of Hours	Notes
1	20/12/2022 22/12/2022	Matrices		Applies the basic principles of matrix and how to solve linear equations
2	27/12/2022 29/12/2022	Determinants		
3	3/1/2023	Cramer's rule		
4	5/1/2023	Functions and their graphs		Relationships between variables and states that if we have a function of two variables and we know the value of one of them, we can find the value of another variable.
5	10/1/2023 12/1/2023	Slopes, and equation of lines		for the user's scale of straight line slope.
6	17/1/2023 19/1/2023	Types of functions, trigonometric functions		Know the distance from where you are observing the building and the angle of elevation of that building so you can easily find the height of the building easily .
7	24/1/2023 26/1/2023	Absolute value of magnitude		The absolute value of a number is its distance from 0. We know that distance is always a non-negative quantity. Since the absolute value is a distance, the absolute value is always not negative.
8	31/1/2023 2/2/2023	Limits and continuity		Distinguishes the basic principles of a function and its objectives

9	7/2/2023 9/2/2023	Scalars, vectors, component of vector algebra, dot product		Vectors can be multiplied in two different ways, namely a standard product or a point product where the result is a numerical product, a vector product, or a cross product in which the result is vector.
10	14/2/2023 16/2/2023	Orthogonal vectors, cross product, vector calculus		The area vector of any surface is defined in a direction perpendicular to that surface
11	21/2/2023	Limit theory of derivative, chain rule		The string rule of the partial derivative is used to take the derivative of a multivariate function.
12	23/2/2023	Derivative of trigonometric, inverse trigonometric, hyperbolic, inverse hyperbolic		Determines the derivative, its applications and how to solve it
13	28/2/2023			
14	2/3/2023 23/3/2023	Derivative of logarithmic, exponential		The method used to distinguish functions using the logarithmic derivative of the function
15	28/3/2023 30/3/2023	Curve sketching by y' , y''		Techniques to produce a rough idea of the general shape of a flat curve given its equation, without calculating the large numbers of points required for an outline.
16	4/4/2023	Application of differentiation		To determine the maximum and minimum values for certain functions
17	6/4/2023	Theory of integration (area problem)		Distinguishes integration methods, applications and how to solve them
18	11/4/2023			
19	13/4/2023	Definite and indefinite integrals, integral of trigonometric, integral of inverse trigonometric, integral of exponential. logarithmic		Finding these mathematical functions that achieve the derivatives of these equations
20	18/4/2023 20/4/2023			
21	25/4/2023 27/4/2023	Integration by parts		To replace a difficult integration with one that is easy to evaluate.
22	2/5/2023	Application of definite integrals		Hint at the diversity of ways in which specific integration is possible

23	4/5/2023	Volumes		To estimate the measurement and quantities of liquids
24	9/5/2023 11/5/2023	Length of plan curve		Learn how to find a flat curve length for a particular job
25	16/5/2023	Approximation (trapezoidal rule)		Used to calculate the area below a curve by dividing the curve into a small trapezoid.
26	18/5/2023			
27	23/5/2023 25/5/2023	Simpson's rule		Approximate the integration of a function between two borders
28	30/5/2023	Application of approximation		To bring the rounding as close as possible to the actual function
29	1/6/2023			
30	6/6/2023	Review all		Review all previous topics with additional example solution

Head of Department Signature

Lecturer signature