



Lectures of the Department of Civil Engineering

Subject Title:- Mathematics Class:- First Class

	Lecture sequences	First lecture	Instructor Name:mohammed
	The major content 1- matrices, matrices eigenvalues and vect	s and determinants an	d their applications /
Lecture Contents			
	The detailed conte		
	1- matrices, matrices eigenvalues and vect	s and determinants an tors of self-	d their applications /
	2- a review of calcul straight line equation	lus, coordinates, drawns, functions and drawns trigonometric functions	n, circles, parabolas,

	Lecture sequences	Second lecture	Instruct Name:moha	
	The major content 1- matrices, matrice eigenvalues and vec	s and determinants an	nd their applica	tions /
Lecture Contents				
	eigenvalues and vec 2- a review of calcustraight line equation	s and determinants an	level, slope and level,	nd abolas,

	Lecture sequences	Third lecture	Instruct Name:moha	_
Lecture Contents	The major content 1- goals, goals that h			
	and rates of change,	ave indefinitely angent line, the laws of derivatives of trigono derivation, Wallace fra	metric function	

	Lecture sequences	Fourth lecture	Instructor Name:moham	
	The major conten	ts:		
	1- applications of th	1- applications of the derivative		
Lecture				
Contents	The detailed conte	ents:		
	1 • applications of the derivative, rates of change, endings,			
	٠	large and small, the theory of the average value, draw a curved Palmstqh the first and second drawing functions fractional		
	-	ives, the initial value		
	· ·	rentiation, integration	•	
	<u> </u>	al theorem of integral		cific
		on by substitution, nu	-	
	introduction to expo	nential and logarithm	ic function	·

	Lecture sequences	Fifth lecture	Instruct Name:moha	_
	The major content	ts:		
	1- applications of th	e derivative		
Lecture				
Contents	The detailed conte	ents:		
	1 • applications of the derivative, rates of change, endings,			
	,	large and small, the theory of the average value, draw a curved		
		d second drawing fur ves, the initial value		al
	· ·	rentiation, integration	•	9
	integral, fundamenta	l theorem of integral	calculus, non-s	specific
	_	on by substitution, nu	_	ation,
	introduction to expo	nential and logarithm	ic function	

	Lecture sequences	Seventh lecture	Instructor Name:mohamm	ned
Lecture	The major contents: 1- Applications of definite integral			
Contents	volumes of objects revolumes, the length of revolution 2- integration, differ integral, fundamenta integration, integration	ents: lefinite integral, area lefinite integral, area leftenting, disk and Allo of the curve in the planetiation, integration, and theorem of integral on by substitution, numerical and logarithm.	wacher, cylindrical ine, the surface area space, definite calculus, non-speci imerical integration	a ific

	Lecture sequences eighth lecture				
		The major contents:			
Lecture	1- Applications of definite integral				
Contents	The detailed contents:				
	1 - Applications of definite integral, area between curves, volumes of objects rotating, disk and Allowacher, cylindrical volumes, the length of the curve in the plane, the surface area of revolution 2- integration, differentiation, integration, space, definite integral, fundamental theorem of integral calculus, non-specific integration, integration by substitution, numerical integration, introduction to exponential and logarithmic function				
				pecific	

	Lecture sequences	ninth lecture	Instruct Name:moha	
	The major content 1- Applications of de			
	1 Applications of a	erinic integral		
Lecture Contents	The detailed contents: 1 - Applications of definite integral, area between curves, volumes of objects rotating, disk and Allowacher, cylindrical volumes, the length of the curve in the plane, the surface area of revolution 2- integration, differentiation, integration, space, definite integral, fundamental theorem of integral calculus, non-specific integration, integration by substitution, numerical integration, introduction to exponential and logarithmic function			
Contents				rical
				pecific

	Lecture sequences	tenth lecture	Instructor Name:mohamme		
Lecture	The major contents: 1- vague functions (transcendental), inverse functions and the derivatives,				
Contents	The detailed contents: 1 - vague functions (transcendental), inverse functions and derivatives, logarithmic function, exponential function, the derivation logarithmic, inverse trigonometric functions and their derivatives and integrals related 2- methods of integration, the basic laws of integration, retaintegration, integration of trigonometric functions and relational		ntial function, the tric functions and of integration, retail		