

Date:	Examination No.:	Version:21/11/2021	Start: 21/11/2021
Module Name - Code	Mathematics I- 1102		
Module Language:	English		
Responsible:	Barzan OMAR		
Lecture (s):	Mr. Barzan OMAR/ MSc		
College:	College of Engineering – Salahaddin University		
Duration:	6 week – Fall Semester		
Course outcomes:	<p>At the end of the semester, students would be able to</p> <ol style="list-style-type: none"> 1. Find the anti-derivative of elementary polynomials, exponential, logarithmic and trigonometric functions. 2. Interpret the definite integral geometrically as the area under a curve. 3. Construct a definite integral as the limit of a Riemann sum. 4. Approximate a definite integral using left sum, right sum, midpoint and trapezoidal rules. 5. Interpret the indefinite integral as a definite integral with variable limit(s). 6. Interpret differentiation and anti-differentiation as inverse operations. 7. Interpret the anti-derivative as a definite integral with variable limit and implement this expression on graphing platforms. 8. Evaluate a definite integral using an anti-derivative. 9. Use substitution to find the anti-derivative of a composite function. 		
Course Content:	Integral, Application of Definite Integrals		
Literature:	<ol style="list-style-type: none"> 1- George B. Thomas, Jr, Maurice D. Weir, Joel Hass, Christopher Heil <<THOMAS' CALCULUS 13/E>> Pub, Pearson, 2010. 2- George B. Thomas, Jr, Maurice D. Weir, Joel Hass, Frank R. Gird <<THOMAS' CALCULUS 11/E>> Pub, Pearson, 2005. 3- Salas Hile <<CALCULUS ONE VARIABLE 9th edition>> pub, John Wiley and sons, 2003. 4- Howard Anton <<CALCULUS WITH ANALYTIC GEOMETRY; 3ed edition>> pub, John Wiley, 1983. 5- James Swart <<CALCULUS 5th edition>> pub, Thomson, 2003. 6- R. Finney and G. Thomas <<CALCULUS AND ANALYTIC GEOMETRY 10th edition>> pub, Addison Wesley, 2003. 		
Type of Teaching:	3 hrs. theory per week 1 hr. tutorial per week		
Pre-requisites:	A Strong background in mathematics and required to study about ten to fifth hours a week outside the class.		
Frequency:	Yearly in fall semester		
Requirements for credit points:	For the award of credit points, it is necessary to pass the final module exam if: <ol style="list-style-type: none"> 1. The minimum annual effort is 15 %. 2. Student's attendance is required in all classes. 		
Credit point:	5		
Grade Distribution:	For the award of credit points, it is necessary to pass the module exam. The module exam contains: A mid-term exam, class room activities, quizzes, home works and final exam on June. So, the final grade will be based upon the following criteria:		

		Semester exam	35%	
		Activities and Quizzes	5%	
		Final exam	60%	
		Total	100%	
Work load:	The workload is 120h. It is the result of 60h attendance and 60h self-studies.			