

Date:	Examination No.:	Version:10/10/2020	Start: 1/2/2021
Module Name - Code	Fluid mechanics-		
Module Language:	English		
Responsible:	Evan O. Slaiwa		
Lecture (s):	Mr. Evan O. Slaiwa / MSc		
College:	College of Engineering – Salahaddin University		
Duration:	15 week – Second Semester		
Course outcomes:	<p>At the end of the semester, students would be able to</p> <ol style="list-style-type: none"> 1. Interpret a function from an algebraic, numerical, graphical and verbal perspective and extract information relevant to the phenomenon modeled by the function. 2. Ability to evaluate the integrals of complex functions. 3. Ability to find the integral value of complex function by approximate method. 4. Ability to evaluate the integral of function with infinite domain and find the values of integrals. 5. Interpret a new coordinate system to represent the data, Polar coordinate. 6. Ability to express function in both coordinates Cartesian and Polar Coordinates. 7. Ability to find the area under the curves in polar coordinates. 8. Interpret the 3-D dimensions and related to the given coordinates. 9. Interpret points, lines, and planes in space. <p>Interpret some things that must express with both direction and magnitude like Force, Velocity, etc.</p>		
Course Content:	<p>Transcendental Functions: Logarithmic, exponential, trigonometric, & hyperbolic functions; Techniques of Integration: Integration by Part, Integration of Rational Function by Partial Fraction, Trigonometric Substitution, Numerical Integration, and Improper Integrals.</p>		
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:	1102		
Frequency:	Yearly in spring semester		
Requirements for credit points:	<p>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:</p>		

		Mid-term exam	25%
		Activities and Quizzes	15%
		Final exam	60%
		Total	100%
	Student's attendance is required in all classes.		
Credit point:	5		
Grade Distribution:	The Grade is generated from the examination result(s) with the following Annual Effort (w): 40% Final Exam (w): 60%		
Work load:	The workload is 120h. It is the result of 60h attendance and 60h self-studies.		