



Jordan University of Science and Technology
 Faculty of Engineering
 Aeronautical Engineering Department

Course name and number:

AE303 Applied Math For Engineers

Credit, contact hours and categorization:

Credit and contact hours	Contact hours	Categorization
3 Credit Hours	Sunday-Tuesday-Thursday 1-hour lecture Or Monday-Wednesday 1.5-hours lecture	Math and basic science

Instructor's or course coordinator's name:

Name	Dr. Montasir Hader
Office location	N1-L2
Email address	hader@just.edu.jo

Textbook and other supplemental materials:

Textbook			
Title	Advanced Engineering Mathematics		
Author(s)	Kreyszig, E		
Edition	10 th Edition		
Other Information	John Wiley. New York		
References			
Book Name	Author(s)	Edition	Other Information
Advanced Engineering Mathematics	Greenberg, M.	2nd Edition	Prentice Hall New Jersey
Advanced Engineering Mathematics	Wylie, C. R. and Barrett, L. C	6 th Edition	McGraw-Hill, New York

Course information:

Course Catalogue		
Laplace transformation, applications to solutions of ordinary differential equations, Fourier series, half range expansion, Solutions of partial differential equations using separation of variables, Complex numbers and complex functions, Linear Algebra.		
Course type : This course is required to fulfill the program.		
Prerequisites or co-requisites		
Line Number	Course Name	Prerequisite Type
902010	MATH201 Intermediate Analysis	Prerequisite / Pass
902030	MATH203 Ordinary Differential Equations	Prerequisite / Pass



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Specific goals of the course :

Specific outcomes of instruction and the student outcomes (SO) mapping		
Outcomes	SO Mapping	
Use Laplace transformation technique to solve ordinary differential equations.	1SO 1	25%
Perform Fourier expansion using Fourier series	1SO 1	25%
Introduce the student to the partial differential equations.	SO 1	30%
Introduce the students to the complex numbers and complex functions.	1SO 1	20%

Brief list of topics to be covered:

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2	Introduction, Review	From Textbook
Week 3, 4, 5	Laplace Transformation	From Textbook
Weeks 6, 7, 8	Fourier Series and Transformation	From Textbook
Weeks 9, 10, 11, 12, 13	Partial Differential Equation	From Textbook
Weeks 14, 15, 16	Complex Numbers and Functions.	From Textbook