Jordan University of Science and Technology

Faculty of Engineering

Aeronautical Engineering Department

AE303 Applied Math For Engineers - JNQF Level: 7

First Semester 2023-2024

Course Catalog
3 Credit Hours. 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.

Text Book	
Title	Advanced Engineering Mathematics
Author(s)	Kreyszig, E
Edition	10th Edition
Short Name	Textbook
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref#1	Advanced Engineering Mathematics	1) Greenberg, M. D	2nd Edition	
Ref#2	Advanced Engineering Mathematics	Wylie, C. R. and Barrett, L. C	6th Edition	

Instructor	
Name	**Dr. KHALED ALJANAIDEH**
Office Location	-
Office Hours	Sun : 10:00 - 11:30 Mon : 11:30 - 13:00 Tue : 10:00 - 11:30 Thu : 10:00 - 11:30
Email	kfaljanaideh@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon, Wed : 13:00 - 14:30 Room: CH2110

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
902010	MATH201 Intermediate Analysis	Prerequisite / Pass
902030	MATH203 Ordinary Differential Equations	Prerequisite / Pass

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

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Use Laplace transformation technique to solve ordinary differential equations. [100SO1] [100L7K1]	20%	
Perform Fourier expansion using Fourier series [100SO1] [100L7K1]	20%	
Introduce the student to the partial differential equations. [100SO1] [100L7K1]	20%	
Introduce the students to the complex numbers and complex functions. [100SO1] [100L7K1]	20%	
Apply advanced linear algebra concepts to engineering problems [100SO1] [100L7K1]	20%	

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
100						

Relationship to NQF Outcomes (Out of 100%)
L7K1
100

Evaluation	
Assessment Tool	**Weight**
First Exam	25%
Second exam	25%
Assignments	10%
Final Exam	40%

Policy	
Atendance	The student is required to attend all the registered courses. The instructor shall register student attendance or absence electronically. JUST policy requires the faculty member to assign ZERO grade (35) if a student misses 20% of the classes. If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed
Exam/Homework	Makeup exam should not be given unless there is a valid excuse according to JUST policies. Arrangements to take an exam at a time other than the one scheduled MUST be made prior to the scheduled exam time. Cheating or copying from neighbor on exam, quiz, or homework is an illegal and unethical activity. Standard JUST policy will be applied. All assignments must be your own work (your own words) Students are responsible for all information provided in lecture. Information presented in class supersedes any information posted elsewhere

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