Jordan University of Science and Technology

Faculty of Engineering

Electrical Engineering Department

EE204 Introduction To Linear Systems

Summer Semester 2019-2020

Course Catalog
3 Credit Hours. vectors, lengths, dot products, equations, elimination, matrix operation, factorization, transposes, permutations, spaces, rank, linear equations, homogenous and particular solutions, complete solution, independence, vector spaces and subspaces, orthogonality, Gram-Schmidt process, projections, least square approximations, determinants, diagonalization, positive definite matrices, similar matrices, singular value decomposition, complex vectors and matrices

Text Book	
Title	Introduction to Linear Algebra
Author(s)	Gilbert Strang
Edition	4th Edition
Short Name	TextBook
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref#1	Introduction to Linear Algebra	D. J.Wright	1st Edition	
Ref # 2	Linear Algebra	J.B.Fraleigh and R.A.Beauregard	3rd Edition	

Instructor	
Name	**Dr. Jehad Ababneh**
Office Location	E2L3
Office Hours	
Email	ababnehj@just.edu.jo

Class Schedule & Room

Section 2:
Lecture Time: Sun, Mon, Tue, Wed : 10:00 - 11:30
Room: منصة الكترونية

Section 3:
Lecture Time: Sun, Mon, Tue, Wed : 13:00 - 14:30
Room: منصة الكترونية

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
902010	MATH201 Intermediate Analysis	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Introduction to vectors	**Ch1** From **TextBook**
Weeks 2, 3, 4	Solving Linear Equations	**Ch2** From **TextBook**
Weeks 5, 6	Vector Spaces and Sub-spaces	**Ch3** From **TextBook**
Weeks 7, 8	Orthogonality	**Ch4** From **TextBook**
Week 9	Determinants	**Ch5** From **TextBook**
Weeks 10, 11, 12, 13	Eigenvalues and Eigenvectors	**Ch6** From **TextBook**
Weeks 14, 15	Complex Vectors and Matrices	**Ch10** From **TextBook**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Ability to understand ideas of vectors and matrices and dot products [1ABET1]	25%	
Understand and apply linear algebra theorems [1ABET1]	25%	
Ability to solve linear system of equations [1ABET1]	25%	
Ability to solve eigenvalue problem [1ABET1]	25%	

Relationship to Program Student Outcomes (Out of 100%)						
ABET1	ABET2	ABET3	ABET4	ABET5	ABET6	ABET7
100						

Evaluation	
Assessment Tool	**Weight**

Midterm Exam	30%
Quizzes	20%
Final	50%

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