

ME 616 MATRIX METHOD in ME

Textbook:

Advanced Engineering Mathematics with MATLAB

By T Harman, J Dabney and N Richert 2nd ed. 2000

Published by Brooks/Cole Thomson Learning ISBN 0-534-37164-7

Week	Subject	Chapter	Pages	Problems
1	MATLAB	1	1-43	1-1,2,7
2,3	ODE	5	203-238	5-1, 4b, 5, 6, 7, 24, 25, 27
4	Vectors, Quiz 1	2	46-77	2-6, 20
5	Matrices	3	101-119	3-1, 3, 5, 9, 11
6	Eigenvalues	4	157-167	4-4, 22
7	Numerical I C	6	297-313	6-6, 7, 8, 9, 17
8	Numerical B C	6	313-321+note	6-7, sp1***
9	MATLAB, Quiz 2		note	sp2, proj.
10	Matrices	3	124-137	3-13, 15
11	Sep. Variables	15	715-733	15-4, 9
12	Num. P D 2-D		note	sp3
13	Num. P D Trans.		note	sp4, sp5+
14	Laplace Transform		417-462	9-4, 7, sp6
15	Review & final exam			

*** sp1: $A^2y'' + Ay' + y = Bx$ (a) $A=1, B=1, y(0)=1, y(1)=0$ (b) $A=1+x, B=0, y(0)=1, y'(1)=0$. Bessel's eqs.

+ Transient Heat Transfer of 1D Cylindrical System.

Q1 20%, Q2 20%, Final 40%, HW + Proj=10% Class performance =10%

The NJIT Honor Code will be upheld and violations will be brought to the immediate attention of the Dean of Students.

Instructor: Prof. Rong Chen

Room: MEC325A 973-596-5220

Office Hrs: W 4:00-5:00 R 1:00-2:30

chenr@njit.edu