

Textbook: Advanced Engineering Mathematics, Erwin Kreyszig, 10th Edition, Wiley

References: Foundations of Applied Mathematics, Michael D. Greenberg, Prentice-Hall.
Advanced Calculus for Applications, Francis B. Hildebrand, 2nd Edition.
Mathematical Physics ...
Applied Numerical Methods Using MATLAB, Yang, Cao, Chung and Morris,
Wiley Inter-science

Class Schedule: Lecture Tuesday 6:00 – 9:25 PM, ACN 104.

GENERAL CONDUCT OF COURSE

1. Homework will be assigned and collected weekly.
2. 100% attendance is required.
3. No makeup homework/test or exam will be given.
4. Students are required to bring their test book and calculator to every class.

COURSE DESCRIPTION

Introduction to linear algebra, including vector spaces, linear dependence and independence, linear transformations, matrices and determinants. Topics include solution of systems of linear equations and eigen-value problems; complex variables, power series, complex integration, and residue theorem; and Fourier series and transforms. Elements of numerical analysis, numerical methods of systems of linear equations, and interpolation are also covered. 3 semester hours.

COURSE OUTLINE

Week	Date	Section	Description
1	May 10	Ch 7.1 – 7.4	Matrices
2	May 17	Ch 7.5 – 7.8	Linear Systems
3	May 24	Ch 8.1 – 8.2	Eigenvalue
4	May 31	Ch 8.5	Complex Matrices
5	June 7	Ch 11.1 – 11.3, 11.7	Fourier Series
6	June 14	Test No. 1	
7	June 21	Ch 13.1 – 13.7	Complex Numbers
8	June 28	Ch 15.1 – 15.2	Power Series
9	July 5	Ch 15.3 – 15.4	Taylor Series
10	July 12	Ch 19.1 – 19.5	Numerical Methods
11	July 19	Ch 20.1 – 20.5	Numerical Linear Systems
12	July 26	Ch 20.6 – 20.9	Matrix Eigenvalues
13	August 2	Test No. 2	