

CE 307 Numerical Methods in Engineering and Linear Algebra (4-0)4

Instructor

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Teaching Assistant

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Course Hours

15:30-17:15 Wednesday, Classroom: B212

13:30-15:15 Friday, Classroom: B212

Reference Books

- Numerical methods for engineers by Chapra, S. C. 2006.
- Applied Numerical Analysis' by Gerald, C.F. and Wheatley, P.O., 2004
- Introduction to Numerical Computations' by Yakowitz, S. and Szidarovsky, F. 1990.

Course Content

- I. Interpolation
- II. Numerical Differentiation
- III. Numerical Integration
- IV. Nonlinear Equations
- V. Matrices& Linear Systems
- VI. Determinants, Eigenvalues & Eigenvectors
- VII. Ordinary Differential Equations (Initial value problems)
- VIII. Ordinary Differential Equations (boundary value problems)
- IX. Partial Differential Equations

Grading

Classical assignments	12 %
Computer assignments	18 %
Midterm Exam	32 %
Final Exam	38 %