

Math 226 / CS 255: tentative outline

- Jan 10: preliminaries
- Jan 12: programming suggestions
- Jan 15: non-decimal bases
- Jan 17: floating points representation
- Jan 19: loss of significance
- Jan 22: matrix review
- Jan 24: Gaussian elimination
- Jan 26: LU -factorization
- Jan 29: LU -factorization
- Jan 31: iterative methods
- Feb 2: steepest descent and conjugate gradient methods
- Feb 5: QR -factorization
- Feb 7: QR -factorization
- Feb 9: linear least-squares problems
- Feb 12: TEST 1
- Feb 14: bisection method
- Feb 16: Newton's method
- Feb 19: secant method
- Feb 21: polynomial interpolation
- Feb 23: interpolation error

- Feb 26: orthogonal polynomials
- Feb 28: least-squares theory of best approximations; take-home tests are due
- Mar 2: Chebyshev theory of best approximations
- Mar 12: trigonometric interpolation
- Mar 14: FFT
- Mar 16: Richardson extrapolation
- Mar 19: Newton-Cotes formulae
- Mar 21: Romberg integration
- Mar 23: adaptative quadrature
- Mar 26: Gaussian quadrature
- Mar 28: difference equations
- Mar 30: TEST 2
- Apr 2: initial value problems
- Apr 4: Taylor series method
- Apr 6: Runge–Kutta methods
- Apr 9: multistep methods
- Apr 11: systems of ordinary diferential equations
- Apr 13: boundary value problems
- Apr 16: boundary value problems
- Apr 18: additional material
- Apr 20: additional material/review
- Apr 23: review
- May 1, 3:00-5:00: final exam