STAT 4354 - Numerical and Statistical Computing

Stat 4354 Numerical and Statistical Computing (3 semester credit hours) Solving linear and nonlinear equations; numerical differentiation and integration; optimization; Newton-Raphson and EM algorithms; QR, Cholesky, eigenvalue, and singular value decompositions; random number generation; Monte Carlo methods; Markov chain Monte Carlo methods; bootstrap and jackknife; power analysis and sample size determination; and use of a statistical software package such as R. Prerequisites: Math 2451 and Stat 4351, or instructor consent required. (3-0) Y