Intelligent Systems Analysis (3 semester credit hours) This course covers mathematics essential for the mathematical analysis and design of unsupervised, supervised, and reinforcement machine learning algorithms including Neural Network learning machines within a statistical empirical risk minimization framework. Course topics include: advanced vector and matrix calculus, stochastic sequences of mixed random vectors, and the Markov random field factorization theorem with explicit machine learning applications and examples. Prerequisite: CGS 4313 or instructor consent required. (Same as CS 4314) (3-0) T