MATH 5P88 – Advanced Statistics
Course Outline

- Generating random numbers from various distributions
- Monte Carlo techniques; Metropolis sampling
- Multiplicative and linear congruential generators of uniform random numbers
- Estimating distribution and probability density functions
- Large-sample theory applied to random independent samples
- Edgeworth-series expansion of a probability density function
- Computing cumulants of maximum-likelihood estimators
- Constructing $1/n$ -accurate approximation to a sampling distributions

Marking Scheme: Assignments 60%, Final Exam 40%