Why do we need to learn advanced probability?

To be able to truly grasp research papers that are probabilistic in nature in various engineering topics such as digital communications, wireless communication, stochastic control, noise in semiconductor devices, signal processing, statistical/machine learning, Monte-Carlo simulation, computer networks, computing, complex systems, optimization, operation research, finance, and reliability analysis.

To build new analytical and simulation capabilities and confidence to analyze challenging engineering problems.

To have the mathematical foundation for learning further specialized and advanced topics in probability that are encountered in engineering.

Recommended preparation: EECE 6020 or equivalent, EECE 6010 or equivalent (preferred), MATLAB

Instructor: Dr. Majeed Hayat, EECE, Marquette University