List of Prerequisites in *Economics, Data Analytics & Corporate Finance* Graduate Degree Program

**Analysis**

- Multivariable calculus
- Integration

**Linear algebra**

- Eigenvalues and eigenvectors
- Matrix diagonalization

**Differential calculus and optimization**

- Differentiating a function of several variables, chain rule
- First order condition in optimization with several variables
- Envelope Theorem
- Lagrangian
- Kuhn and Tucker theorems

**Sequences, series.**

- Convergence
- Usual series (e.g. geometric)

**Probability theory**

- Expectation
- Conditional expectation
- Usual laws: exponential, Poisson, and normal distributions
- Convergence
- Central limit Theorem

**Statistics**

- Statistical test
- Error types
- Ordinary least square regressions
- Monte Carlo simulations