

**Application requirements**  
**>> Corporate Strategy for New Markets**  
**>> Metroeconomics**



Mathematics prerequisites	A strong and comprehensive understanding is required	Some basic knowledge is sufficient
<b>Analysis</b>		
- Multivariable calculus	X	
- Integration		X
<b>Linear algebra</b>		
- Eigenvalues and eigenvectors		X
- Matrix diagonalization		X
<b>Differential calculus and optimization</b>		
- Differentiating a function of several variables, chain rule		X
- First order condition in optimization with several variables	X	
- Envelope Theorem	X	
- Lagrangian	X	
- Kuhn and Tucker theorems		X
<b>Sequences, series,</b>		
- convergence	X	
- usual series (e.g. geometric)	X	
<b>Probability theory</b>		
- Expectation	X	
- conditional expectation		X
- Usual laws: exponential, Poisson, and normal distributions	X	
- Convergence		X
- Central limit Theorem		X
<b>Statistics</b>		
- Statistical test		X
- Error types		X
- Ordinary least square regressions		X
- Monte Carlo simulations		X