



SIMON
SCHOOL OF BUSINESS
UNIVERSITY of ROCHESTER

Syllabus for MSM 400
August 2018

Instructor: Jagan Jacob
Email: Jagan.Jacob@Simon.Rochester.edu

Classroom: Room 118, Gleason Hall

<u>Class Time:</u>	Thursday, August 23	5:30pm-8:30pm
	Monday, August 27	5:30pm-8:30pm
	Tuesday, August 28	5:30pm-8:30pm
	Wednesday, August 29	5:30pm-8:30pm
	Thursday, August 30	5:30pm-8:30pm

Office Hours: After class or by appointment

Course Objectives:

Analysis and concepts in modern business analysis rely heavily on quantitative methods. The objective of this course is to bring incoming MBA/MS students “up-to-speed” with respect to the mathematical and statistical knowledge expected of them. We will cover basic topics from freshman year calculus, algebra and introduction to probability and statistics. Necessary theories and intuition behind them will be covered. The concentration, however, will be *on applications in business, economics, and related field*.

For those who are familiar with the material, this course serves as a warm-up for the coming courses; for those who are less familiar with it, this course helps you getting started at grasping the most important principles.

Textbook

There is no required textbook for the course. All course presentation slides will be uploaded on blackboard (learn.rochester.edu), and the lectures are self-contained. However, if you feel you would like a good reference to use as we go through the course, there are two good choices: *Cliffs Quick Review* series and *Schaum's Outlines*. Both cover “Algebra”, “Calculus”, “Probability and Statistics”. *Schaum's Outlines* also covers “Mathematics of Finance”. If you are comfortable or used to be comfortable with the topics I outline below, you do not have to go through these. To have some basic ideas of statistics while having fun, you may also find *The Cartoon Guide to Statistics* helpful.

Course Outline

The four major components in the course are: algebra, differential calculus, a brief introduction to probability and statistics, and mathematics of finance.

Algebra – Thursday, August 23 and Monday, August 27

Linear Equations and Inequalities, Graphs of Functions, System of Linear Equations, Quadratic Equations, Exponential Functions and Applications.

Differential Calculus – Tuesday, August 28

Basic Concepts of Differentiation, Techniques of Differentiation, Higher Order Derivatives, Partial Derivatives and Applications.

A Brief Introduction to Probability and Statistics – Wednesday, August 29

Descriptive Statistics (Mean, Median, Mode, Variance and Standard Deviation), Basic Probability and Distribution of Outcomes, Random Variables, Normal and Standard Normal Distributions.

Mathematics of Finance – Thursday, August 30

Sequences and Series, Simple Interest, Compound Interest, Ordinary Annuities.

Grading

There will be no exams or graded assignments. The short duration of this course requires a large amount of self-study. Students are expected to participate actively throughout the class. Questions are strongly encouraged.