



**SIMON**  
**SCHOOL OF BUSINESS**  
**UNIVERSITY of ROCHESTER**

**Syllabus for MSM 400**  
August 2017

**Instructors:** Anisha Nyatee/ Jagan Jacob  
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**Classroom:** TBD

<b><u>Class Time:</u></b> Thursday, August 24 <sup>th</sup> (Jacob)	5:30pm-9:00pm
Monday, August 28 <sup>th</sup> (Nyatee)	5:30pm-9:00pm
Tuesday, August 29 <sup>th</sup> (Nyatee)	5:30pm-9:00pm
Wednesday, August 30 <sup>th</sup> (Nyatee)	5:30pm-9:00pm
Thursday, August 31 <sup>st</sup> (Nyatee)	5:30pm-9:00pm

**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 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. Notes will be distributed in class, 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”. These books are under \$20 and can be found in most bookstores. 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. The book is available online for under \$15.00.

## **Course Outline**

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

### ***Algebra – Thursday, August 24<sup>th</sup> and Monday, August 28<sup>th</sup>***

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

### ***Differential Calculus – Tuesday, August 29<sup>th</sup>***

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

### ***A Brief Introduction to Probability and Statistics – Wednesday, August 30<sup>th</sup>***

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 31<sup>st</sup>***

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

## **Course Requirement**

The short duration of this course requires a large amount of self-study. You are encouraged to form small groups to work together, both in and after class. Exercises would be assigned in each class. Students are encouraged to contribute to class discussions.

## **Grading**

There will be no exams or graded assignments. A Pass/Fail grade will be awarded at the end of the course, based solely on class participation. You are expected to participate actively throughout the class. Questions are always welcome.