



## Business Analytics

### COURSE DESCRIPTION

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This course will provide students with an introduction to business analytics. This course will change the way you think about data and its role in business. We will examine how data analysis technologies can be used to improve decision-making. We will study the fundamental principles and techniques of business analytics, and will examine real-world examples and cases to place data-mining techniques in context and to develop business analytic thinking.

### READING MATERIALS

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The following readings are required for classroom activities and homework assignments. Students are required to register with Harvard Business Online: (URL provided here: <https://hbsp.harvard.edu/import/XXXXXXX>).

### REQUIRED SOFTWARE: Excel, R, Tableau

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**R:** R is a free software environment for statistical computing and graphics, and is widely used by both academia and industry. The advantage of the R software is that it can work on both Windows and Mac-OS.

<https://www.r-project.org/index.html>

**RStudio** is a user friendly environment for R that has become popular. Each student should download these two programs: Please note: even if you already have them, please check for updates.

<https://www.rstudio.com/products/RStudio/#Desk>

**Tableau** is a commercial database visualization tool that supports many different ways to interact with the data. Tableau has given students free academic licenses so that you can install the software on your own computer.

<https://www.tableau.com/academic/students>

### COURSE REQUIREMENTS AND GRADING

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Students are responsible for all reading assignments, handouts, and lecture materials. Students who miss class are expected to make arrangements with fellow students for lecture material.

Exam	30%
Participation	20%
Group Case Analysis	30%
Group Project	20%

\* A grade of 60 or above is considered as a passing grade.

## COURSE SCHEDULE

\* This schedule may be revised, if needed. Changes to the schedule will be announced in class.

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### WEEK I

6/27 Mon	Fundamental Concepts & Definitions
6/28 Tue	R: Getting Started (Basic Statistic Review)
6/29 Wed	Simple Regression
6/30 Thu	Multiple Regression

### WEEK II

7/04 Mon	Predictive Models
7/05 Tue	HBR Case #1: Amazon
7/06 Wed	HBR Case #2: A-Rod: Signing the Best Player in Baseball
7/07 Thu	Exam

### WEEK III

7/11 Mon	Web Analytics (Google Analytics)
7/12 Tue	Search Engine Optimization
7/13 Wed	HBR Case #3: Web Analytics at QA, Inc.
7/14 Thu	Visual Analytics for Data-Driven Decision Making I
7/15 Fri	Visual Analytics for Data-Driven Decision Making II

### WEEK IV

7/18 Mon	Group Project Presentation I
7/19 Tue	Group Project Presentation II