Data Science
For Business Leaders

COURSES INCLUDE:

- A Crash Course in Data Science
- Introduction to Data Analysis Using Excel
- Basic Data Descriptors, Statistical Distributions, and Applications to Business Decisions
- Data Science in Real Life
- Data Science Math Skills

This Course Collection features courses from Duke, John Hopkins, and Rice University.

This Course Collection is designed to help business leaders build a strong and sustainable data and analytics organization, and allow them to be conversant in the fast-growing field of data science.

Who this is for
Senior level employees who need a foundation in statistical and data science techniques in order to hire, interpret and work with data scientists or business analysts.
A Crash Course in Data Science

DESCRIPTION

By now you have definitely heard about data science and big data. In this one-week class, we will provide a crash course in what these terms mean and how they play a role in successful organizations. This class is for anyone who wants to learn what all the data science action is about, including those who will eventually need to manage data scientists.

SKILLS ACQUIRED

- Data Science
- Machine Learning
- Data Analysis
- Project Management
- Statistics

TOPICS

- A Crash Course in Data Science

PRACTICE

- 9 Quizzes
- 0 Peer-Reviewed Assignments
- 0 Programming Assignments

TIME

- ~13.3 hours total
- ~1.3 hours of video
- ~12 assignment hours

SPECIALIZATION

Executive Data Science

RATING

4.4 out of 5 stars

TAUGHT BY

Roger D. Peng
Department of Biostatistics

Brian Caffo
Department of Biostatistics

Link to course
Introduction to Data Analysis Using Excel

DESCRIPTION

The use of Excel is widespread in the industry. It is a very powerful data analysis tool and almost all big and small businesses use Excel in their day to day functioning. This is an introductory course in the use of Excel and is designed to give you a working knowledge of Excel with the aim of getting to use it for more advanced topics in Business Statistics later.

SKILLS ACQUIRED

- Microsoft Excel
- Data Analysis
- Pivot Tables
- Lookup Tables
- Histograms

TOPICS

- Introduction to Spreadsheets
- Spreadsheet Functions to Organize Data
- Introduction to Filtering, Pivot Tables, and Charts
- Advanced Graphic and Charting

PRACTICE

- 4 Quizzes
- 0 Peer-Reviewed Assignments
- 0 Programming Assignments

SPECIALIZATION: Business Statistics and Analysis

RATING: 4.7 out of 5 stars

TIME

- ~9.3 total hours
- ~2.3 hours per week
- ~2.8 hours of video
- ~6.5 assignment hours

TAUGHT BY

Sharad Borle
Associate Professor of Management
SKILLS ACQUIRED

- Statistical Analysis
- Statistics
- Microsoft Excel
- Binomial Distributions
- Normal Distributions

Basic Data Descriptors, Statistical Distributions, and Application to Business Decisions

DESCRIPTION

The ability to understand and apply Business Statistics is becoming increasingly important in the industry. A good understanding of Business Statistics is a requirement to make correct and relevant interpretations of data. Lack of knowledge could lead to erroneous decisions which could potentially have negative consequences for a firm.

TOPICS

★ Basic Data Descriptors
★ Descriptive Measures of Association, Probability, and Statistical Distributions
★ The Normal Distribution
★ Working with Distributions (Normal, Binomial, Poisson), Population and Sample Data

PRACTICE

- 4 Quizzes
- 0 Peer-Reviewed Assignments
- 0 Programming Assignments

TALTED BY

Sharad Borle
Associate Professor of Management

SPECIALIZATION

Business Statistics and Analysis

RATING

4.7 out of 5 stars ★★★★★

TIME

~9.2 hours total
2.3 hours per week
~2.7 hours of video
~6.5 assignment hours
Data Science in Real Life

DESCRIPTION
Have you ever had the perfect data science experience? The data pull went perfectly. Hypotheses were clearly defined prior to analyses. The conclusions were clear and actionable decisions were obvious... in this course, you'll learn about how data science works in the real world, and how to design experiments that will lead to real-world success.

SKILLS ACQUIRED
- Data Science
- Data Analysis
- Statistics
- Data Management
- Reporting

TOPICS
- Introduction, the perfect data science experience

PRACTICE
- 6 Quizzes
- 0 Peer-Reviewed Assignments
- 0 Programming Assignments

SPECIALIZATION
Executive Data Science

RATING
4.4 out of 5 stars

TIME
- ~11.6 hours total
- ~2.7 hours of video
- ~8.9 assignment hours

TAUGHT BY
- Roger D. Peng
  Department of Biostatistics
- Brian Caffo
  Department of Biostatistics

Link to course
Data Science for Non-Practitioners

**SKILLS ACQUIRED**
- Probability
- Probability Theory
- Bayes' Theorem
- Bayesian Probability
- Conditional Probability

**DESCRIPTION**
Data science courses contain math—no avoiding that! This course is designed to teach learners the basic math you will need in order to be successful in almost any data science math course and was created for learners who have basic math skills but may not have taken algebra or pre-calculus. Data Science Math Skills introduces the core math that data science is built upon, with no extra complexity, introducing unfamiliar i...

**TOPICS**
- ★ Welcome to Data Science Math Skills
- ★ Building Blocks for Problem Solving
- ★ Functions and Graphs
- ★ Measuring Rates of Change

**PRACTICE**
- 4 Quizzes
- 0 Peer-Reviewed Assignments
- 0 Programming Assignments

**TIME**
- ~11.2 hours total
- 2.9 hours per week
- ~5 hours of video
- ~6.2 assignment hours

**TAUGHT BY**
Daniel Egger
Executive in Residence and Director,

Paul Bendich
Assistant research professor of Mathematics

**RATING**
4.4 out of 5 stars

Link to course