



B7676 Leading in a Data-driven World

Time: July 25th – July 29th
(9:00am-5:30pm)

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Office Hours: By appointment

Course Description

In this workshop-style course, professors Frank, Magnone, and Netzer build on their rich experience from Amazon, American Express, Deloitte, Google, IBM, and Microsoft as well as academia to share a framework called Quantitative Intuition (QI)TM. QI is a set of rapid response tools designed to enable you to build the skills to make confident decisions in a data-driven world, without needing to be a math whiz.

The challenge in today's world is not the lack of information but the judgment to use it. What distinguishes the person who consistently makes smart decisions? Successful decision-makers quickly sort through information by asking essential questions to be fierce interrogators of data not from a statistical perspective but from a validity perspective, putting the data in the context of the problem, and synthesizing the information leading to an effective decision. Bringing these parts together is at the heart of the Quantitative Intuition framework—the key is learning to strike the right balance between data intelligence and human judgment so you can move forward with confidence.

We will *not* teach data analysis software tools. Rather, students will learn to formulate critical business questions to effectively frame issues and change the dialogue with their stakeholders. The course is aimed at managers and aspiring managers in all facets of business (e.g., consulting, marketing, strategy, product management, and finance) who seek to equip themselves with pragmatic skills to be successful in our data-driven world to make faster, smarter decisions.

An important aspect of this course is that it bridges theory and practice. Oded Netzer is the Arthur J. Samberg Professor of Business at Columbia Business School; he also works at Amazon as an Amazon Scholar. Christopher Frank is a VP of Amex Insights at American Express and formerly at Microsoft and Paul Magnone is the Head of Global Strategic Alliances at Google and previously at IBM and Deloitte Consulting. Together they have developed and passed the knowledge of Quantitative Intuition to thousands of students and executives.

Course Format

This block week class will be taught in a workshop style using a combination of lectures, guest speakers, simulation via an immersion experience tool, and in class exercises. The instructors will teach the class jointly providing a bridge between theory and practice. An important aspect of the course involves getting hands-on experience with data-driven decision making through multiple practical exercises. Throughout the course the students will also work on a group project that will provide an opportunity to integrate the steps in developing quantitative intuition discussed in class. Class sessions will be devoted to exploring the material through analysis of cases and applying the concepts to real world situations. Finally, the group project and final individual assignment will allow you to get first hand experience in the quantitative intuition framework.

Required Material

Required reading on Canvas

Student Evaluation

Class Participation - 25% (individual)

In class project - 35% (groups of 2-4) – Type A

Project - 40% (Individual) – Type C

Class Participation and Attendance

1. To a large extent, learning in this class is related to your willingness to expose your insights and viewpoints to the critical judgment of your classmates. Thus, to make the learning process much more beneficial and enjoyable for both you and us, each one of you is expected to contribute to class discussions. This includes preparation for class by reading the text and cases, and presenting your opinions or summaries of material covered in class. The basis for class participation is quality, not quantity.
2. Attendance is a necessary but not sufficient condition for participation. If you do not actively participate, you will receive a low participation grade even if you attend every class.

Classroom Etiquette:

Out of respect for the other students in your class, it is important for you to focus your full attention on the class, for the entire class period. Most students observe proper decorum, but it takes only one person's behavior to distract the entire class. Columbia Business School students have complained to the school about students who use class time for other purposes or act in a distracting manner. Class will be conducted using the same rules of decorum that would apply in a business meeting. These rules include the following:

- Arrive to class on time.
- Once you have arrived, you should leave the classroom only if absolutely necessary. Leaving to make or take phone calls, to meet with classmates, or to go to an interview, is not considered appropriate behavior.
- If for some reason you must be late for class or leave early, please let one of us know.
- If you know in advance that you will miss a class, please let one of us know.
- Many people find that it is convenient to take notes on laptops. However, laptops can also act as a powerful distraction. Use of laptops for non-class purposes during class time has been a particular source of student complaints at Columbia. *We ask that you do not use laptops during class (apart from the class activities for which we will need to use laptops) if this is a problem for you let's discuss.*
- Turn off your cell phone, Smartphone and any other communications device during class.

Feedback

Your feedback is important for the success of this course. Please feel free to talk to any of us, drop us a note or send us an email to share your views with us.

Written Assignments

There is one course assignment to be completed individually as a project write-up. The purpose of the assignment is to illustrate the material covered in class. The assignment will be due on July 28th. Details of the individual assignment will be provided in class.

Group Project

The objective of the group project is to provide students with experience in applying the concepts and methods learned in class over the course of the class. We will provide you with a real-world business problem. During the week we will give each group time to work on your project, applying the material covered in class that day to your project. At the end of the week, each group will present their analysis and findings from their group project, highlighting how they applied responsive decision making to the data-driven problem provided. Each group will also submit a short deck of the final presentation and a PRFAQ document (details will be provided in class).

Summer 2022 – Tentative Class Schedule

Session	Topics
Day 1 – Why QI Monday, July 15th	• Introduction to QI • Understanding your biases • Effectively framing the issue • Effectively brainstorming ideas • Group project work time • Reception
Day 2 – Precision Questioning Tuesday, July 16th	• How to ask data-driven questions • A model of yourself is better than yourself • Chasing the decision • Group project work time
Day 3 – Pattern Recognition Wednesday, July 17 th	• Interrogating the data • The art of guesstimating - the Fermi method • Group project work time
Day 4 – Parallel Processing Thursday, July 17 th	• Synthesis vs. Summary • Data visualization • 3D storytelling • Group project work time
Day 5 - Practicum Friday, July 18 th	• Group presentations • Conclusions • Course finale
Friday, July 28 th	Individual assignment due date